

Mass Audubon *Protecting the Nature of Massachusetts*

Connections

SEPTEMBER – DECEMBER 2010

A NEWSLETTER FOR THE MEMBERS OF MASS AUDUBON

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Mass Audubon works to protect the nature of Massachusetts for people and wildlife. Together with more than 100,000 members, we care for 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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A Vision for the Future

by Laura Johnson, President

When I first came to Mass Audubon nearly 12 years ago, there were huge piles of rubble where the Boston Nature Center (pictured) now stands and the site of the Joppa Flats Education Center was an empty parking lot. We had not begun our efforts to “green” Mass Audubon infrastructure, and we had no photovoltaic (solar) installations on any of our facilities. Now, by year’s end, we will have 21 sites with solar energy systems, and we built a LEED-certified platinum nature center—the highest level of green building—at Wellfleet Bay in 2008.

Over the last decade, our summer camps have also grown—the number of children attending camps has doubled. Now, nearly all of our nature centers are ADA accessible, and in October we will open our tenth all-persons’ trail at our newest sanctuary in Attleboro (see page 5). The Coastal Waterbird Program is also more effective as a result of an expanded volunteer base and additional community outreach and education programs, and the acres of ecologically important land we’ve protected has increased substantially to 34,000 acres.

Of utmost importance: our sound science and advocacy expertise is respected internationally, not only for our steadfast innovative work to engage citizens and legislators to protect threatened turtles, birds, and other wildlife, but also for addressing more recent threats, including encroaching invasive species and how clean energy technologies may affect wildlife.

We remain committed—as we have been for more than 114 years—to protecting important wildlife and habitat. The core of our success is the dedicated members, volunteers, staff, board and council members, and partners who are Mass Audubon. Ultimately, Mass Audubon is part of, and a builder of, community, as demonstrated through our recent *Connecting People and Nature Campaign*.

Laying the Foundation

In the summer of 2005, Mass Audubon launched the \$55 million campaign, focusing on: Building Conservation Communities, Protecting Land and Habitat, Preserving a Common Wealth of Birds, and establishing a Fund for Nature. As is true of most things at Mass Audubon, our success is the result of superb teamwork throughout the organization as well as with the Mass Audubon Board, the Campaign Steering Committee, and Campaign Cochairs Franz Colloredo-Mansfeld and Anne Brooke—and most of all our generous donors. Looking back over what has been

a spectacularly successful campaign, the picture is bright. We have:

- **Forged** new conservation bonds throughout the Commonwealth, with additions to programs including in underserved urban communities;
- **Preserved** more than 5,000 acres of biologically significant and aesthetically magnificent land;
- **Enhanced** the visitor experience throughout our sanctuary system by improving facilities as well as “greening” them;
- **Created** one of the most aggressive, multifaceted bird conservation programs in our history;
- **Supported** the passage of important legislation, including the first-in-the-nation Ocean Management Act;
- **Continued** comprehensive inventories of plant and animal species at our sanctuaries; and
- **Developed** a meaningful, yet practical response to climate change.

The accomplishments of the campaign have advanced our conservation mission significantly (read about other successes at www.massaudubon.org/connecting). Yet, there's more to do.

Building a Flourishing Future

It is perhaps even more inspiring to realize that the experience of the last five years has created a foundation for still greater achievement and crystallized a vision that will form the basis of our conservation strategy over the next five years.

Connecting People and Nature. One of the greatest challenges we face is the



erosion of the bond between people and nature. Increasingly, people are disconnected from the natural world that sustains them. This is especially true for our children. We must heal this breach not only because nature enriches our lives aesthetically and spiritually, but because our mental, emotional, and physical health depend on it. Therefore: Using our remarkable statewide network of wildlife sanctuaries and nature centers, we will redouble our efforts to engage and motivate people to learn about and enjoy the natural world and to act to preserve it.

Protecting and Stewarding Massachusetts Habitats. Massachusetts is losing unprotected open space at an alarming rate. Critical wildlife habitat such as salt marshes, coastal heathlands, and vernal pools continue to be destroyed and fragmented as a result of poorly planned development. Protecting and managing habitat is the most effective strategy for reversing the loss of biodiversity. Therefore: We

will mobilize and focus our science and land protection resources and, together with our members and partners, accelerate our work to protect our state's diminishing natural heritage.

Responding to Climate Change. Mass Audubon recognizes that the disruptive effects of rapid climate warming are a major threat to people and wildlife in the Commonwealth and on the planet. Current scientifically based expectations for the coming changes in the earth's climate patterns predict severe challenges for our economy, security, and health. Therefore: Through energy conservation, public outreach, policy initiatives, and scientific research, Mass Audubon will be a leader in helping people learn to live sustainably and respond to the threats posed by the changing climate.

Our goals are ambitious and urgent. We know we will need to attract ever more volunteers, members, and financial resources to achieve them. And, to protect the nature of Massachusetts, we need to continue widening our circle to be even more welcoming to all people. Please read the next six pages for more details of some of our (and that includes you!) accomplishments of the recently completed campaign and of specific goals we've set for the next five years. May it inspire you to roll up your sleeves and help Mass Audubon continue to lead by example as one of the top conservation organizations in the United States. In short, may it inspire you to *take action!*

Read the Strategic Plan at

▶ www.massaudubon.org/strategicplan



PROTECTING LAND AND HABITAT

The essential element in Mass Audubon's land conservation vision is people. We understand and celebrate the deep connections between people and special properties—linking each of us to nature and to past, present, and future generations. Mass Audubon's efforts to preserve and care for land across the Commonwealth through the Connecting People and Nature Campaign was made possible through the generosity of our members, donors, and landowners.

What We Did

Since 2005, we have made great strides in caring for the wild lands of Massachusetts. With your help, we:

- *Preserved* more than 5,000 acres of magnificent land, from the Berkshires to the Outer Cape, and in 40 communities in between. And we got a lot for your investment, spending \$5,791,750 to acquire lands cumulatively valued at \$51,992,910. Or, for every \$100 spent we protected nearly \$900 worth of land.
- *Opened* more than 15 new miles of public trails for birding, hiking, snowshoeing, and other passive recreational uses for your enjoyment.
- *Ensured* permanent protection of an amazing 300-acre mosaic of properties fronting on Buzzards Bay in Wareham—home to the eastern box turtle and numerous other rare species—through the Great Neck Conservation Partnership (Wareham Land Trust, state Department of Conservation and Recreation, town of Wareham, and Mass Audubon). After the new trail

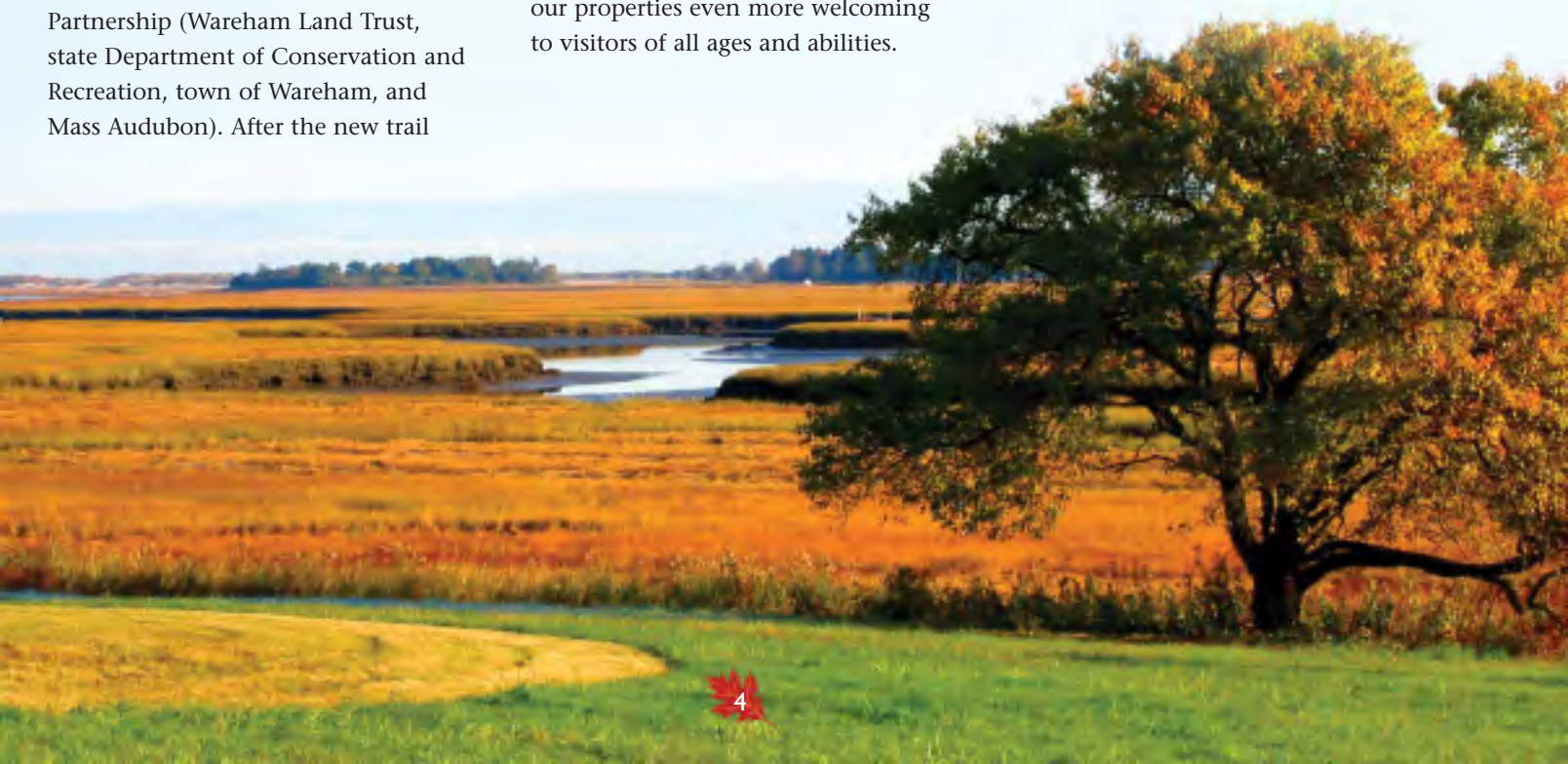
network is completed, the property will open to the public later this year and be managed by Mass Audubon.

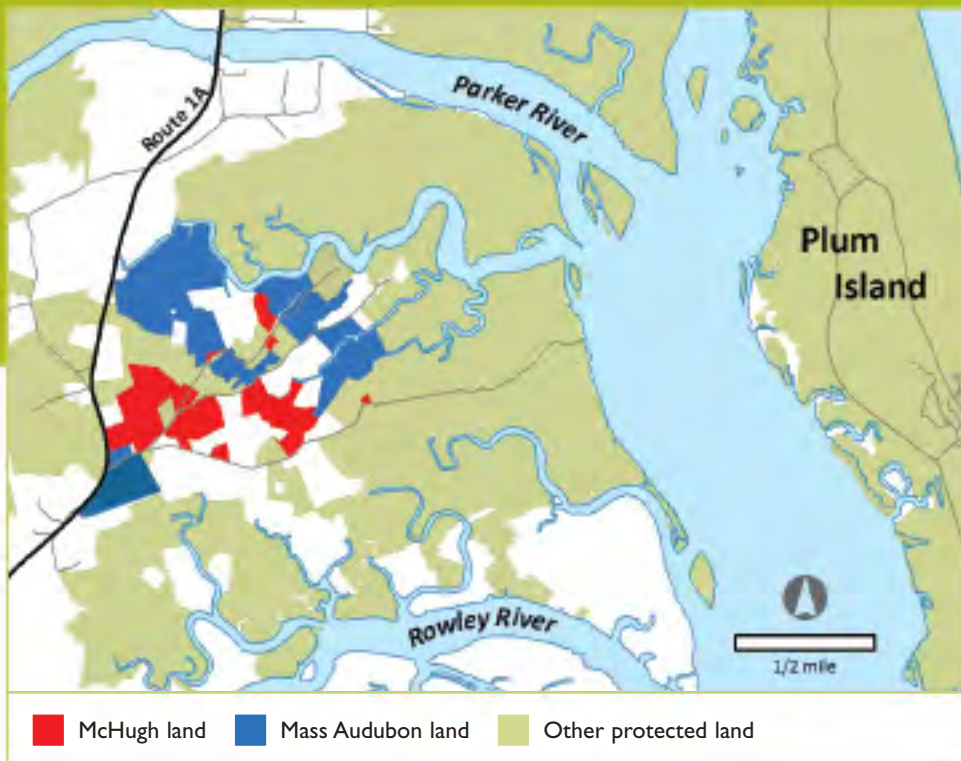
- *Guided* a community effort to permanently protect 21 acres of pastureland, woods, and wetlands adjacent to our Drumlin Farm Wildlife Sanctuary. Through an innovative partnership among the town of Lincoln, the Rural Land Foundation, Mass Audubon, and the Commonwealth's Agricultural Preservation Restriction Program, this spectacular property, valued at \$2.98 million, will remain a key link in an open space corridor stretching from Weston through Lincoln to Walden Pond.
- *Enhanced* the quality and function of already-conserved land at dozens of our wildlife sanctuaries by restoring native grasslands, removing invasive species, and adding amenities to make our properties even more welcoming to visitors of all ages and abilities.

Why It Matters

Strategic conservation of land, combined with good stewardship, is one of the most effective ways to protect the Commonwealth's important natural areas for people and wildlife. We need to increase the rate of protection *now* because habitat loss continues to be the number one factor causing loss of plants and animals in the Bay State.

Land preservation is not something done in one step; it requires a continuing long-term commitment. Thoughtful stewardship can reduce stressors such as invasive species, making ecosystems more resilient as the impacts of climate change become more pronounced. Natural land serves as essential green infrastructure—continuously generating a wide range of life-sustaining benefits including clean drinking water and fresh air.





What's Next

Our work is not done. Preserving the natural world for this and future generations requires innovative strategies and resources to meet emerging challenges. Here are a few highlights of what we see ahead.

1. We are revising land conservation strategies to best respond to climate change. We will establish important linkages among existing conserved lands, work with partners to preserve large areas of intact forest, and protect less common habitats (such as cold-water streams and salt marsh) that will become more vulnerable as climate changes, putting native species such as the brook trout and various migratory birds at risk.

2. To increase our ability to respond quickly to urgent land opportunities, we created the Mass Audubon Land Fund. This “land rescue fund” will leverage additional resources through matching challenges and significantly enhance our ability to protect ecologically valuable property throughout Massachusetts.

3. It is a rare opportunity in Massachusetts that would connect more than 8,000 acres of salt marshes, coastal oak woodlands, tidal creeks, and estuaries. Yet, we have a bold initiative to establish a new wildlife sanctuary at the Great Marsh—the largest contiguous area of salt marsh north of Long Island and most significant coastal ecosystem in Massachusetts. The Great Marsh Conservation Initiative focuses on the McHugh land (see map), an 80-acre property on the North Shore in Rowley threatened with both foreclosure and development. We are working to conserve this special land, which is adjacent to 125 acres already protected by Mass Audubon. The McHugh property supports numerous rare and endangered species, serves as critical migratory bird habitat, and may accommodate salt marsh migration as sea level rises resulting from climate change. At a total cost of more than \$3 million, the project represents a significant challenge with extraordinary potential. *Learn more about Mass Audubon's efforts to preserve this land at www.massaudubon.org/connecting.*

Explore New Sanctuaries

Thanks to a generous gift of 100 acres from Helen Allis Maniatty, Mass Audubon has a new presence in Conway, one of the hilltowns of western Massachusetts. A former family farm now permanently protected, **Conway Hills Wildlife Sanctuary** includes rolling hayfields, wetlands, and a mixed hardwood and coniferous forest, as well as protects the headwaters of the Mill River. This sanctuary links large segments of unfragmented land, ensuring a contiguous corridor for wildlife, and maintains a large woodland for forest-nesting birds. Oh, and there's also a short forest trail we established for your enjoyment.

The official opening of **Attleboro Springs Wildlife Sanctuary at La Salette**, managed by Mass Audubon, is October 2 (see page 7 for special events). Situated between downtown Attleboro and Oak Knoll Wildlife Sanctuary, this 117-acre urban sanctuary owned by the National Shrine of Our Lady of La Salette is home to a variety of turtles, dragonflies, and frogs, and also a wonderful haven for migratory birds. An accessible trail leads to scenic Brothers Pond and a vernal pool. Our partners included the city of Attleboro, the Attleboro Land Trust, La Salette, and the Commonwealth. Come explore the trails, wetlands, woods, and rich history of this land.

www.massaudubon.org/sanctuaries

BUILDING CONSERVATION COMMUNITIES

How best to ensure a bright future for the nature of Massachusetts? Inspire and empower children and adults to form and strengthen positive connections with their natural environment. Through the Connecting People and Nature Campaign, we expanded programs and enrichment activities to encourage people from all walks of life to do just that.

What We Did

Many hands came together to care for our natural resources. Due to your generosity, we:

- *Introduced* more than 4,500 elementary-school students to the Housatonic River in the Berkshires through the Housatonic Environmental Literacy Program (HELP). With partnering organization Housatonic Valley Association, our Berkshires Sanctuaries staff delivered cross-curriculum classroom lessons reinforced by canoeing on the river to these youth, and also sponsored free public canoe trips (pictured) for more

than 650 people. Over the past three years, children and adults once fearful or distrustful of the polluted waterway have now become committed caretakers. The project was funded by the Massachusetts SubCouncil of the Housatonic River Natural Resource Trustees.

- *Improved* our nature centers for visitor enjoyment and to serve as learning tools about sustainable technologies. For example, our new energy-efficient educational facility at Joppa Flats Education Center in Newburyport also includes advanced features, such as an innovative water catchment system that

will provide 70 percent of the center's annual water needs. Another green milestone: By year's end, with support from the Massachusetts Technology Collaborative, we will have installed 30 solar energy systems, significantly reducing our use of fossil fuels.

- *Engaged* hundreds of volunteers through initiatives such as Baby Boomer grants at Connecticut River Valley Sanctuaries. These grants, funded by the Massachusetts Service Alliance, also allowed us to develop a guide on best practices for tapping the enthusiasm and skills of this generation.

- *Completed* the fourth edition of *Losing Ground* to document changes in land use and the impact of development on habitat loss. To complement *Losing Ground*, we launched the Shaping the Future of Your Community program to help citizens and municipalities chart a more sustainable future for both people and wildlife. Residents in more than 30 communities facing intense development pressure in southeastern and central Massachusetts have taken action. Using planning tools such as Open Space Residential Design, they are preserving critical open space and historic properties. This program was funded through the initiative and generosity of longtime Mass Audubon board member Judy Samelson. If additional funding is received, we will build on our success, helping more communities plan for appropriate development as well as effects of climate change.





Why It Matters

Making a connection and then deepening the bond between people and nature is essential for optimal health—for humans and for the earth. We do that through our interactions with more than 750,000 children and adults annually.

Yet, we know that to protect the nature of Massachusetts, we need *everyone* to innovate, educate, and motivate. Although our wildlife sanctuaries are our hubs, the impact of Mass Audubon is what happens as a *result* of our centers—both within our boundaries and for miles around.

By teaching about green living, providing citizen science and volunteer opportunities, and sharing and learning with others about nature, we raise awareness of how to tread lightly on the land while building community. This knowledge, followed by action, sustains plants, wildlife, people, and—ultimately—our planet.

What's Next

1. Creating more accessible trails and boardwalks will offer pathways to nature for people of all abilities. Next year, using Stony Brook and Broadmoor sanctuaries as models, we will begin adding sensory-rich content to enhance accessible trails at eight additional sanctuaries.

2. Natural play spaces encourage unstructured outdoor enjoyment to improve health and stimulate children's imagination. Drumlin Farm's Forest

Discovery Trail and Boston Nature Center's recently completed nature playground are the first of such sites at our sanctuaries that use natural elements, such as climbing logs, shelter-building areas, stump jumps, and giant "nests."

3. Greening campaigns are underway for Wellfleet Bay Wildlife Sanctuary and Broadmoor Wildlife Sanctuary. Highlights of improvements we will make with your assistance include the following:

Wellfleet Bay

- A new 40 kWh solar array that will generate 70 percent of electricity use there
- Solar hot water
- A study to assess the impact of small-scale wind on birds and bats
- If appropriate, a small wind turbine

Broadmoor (pictured above)

- Upgrade the mechanical systems so the center can continue to serve as a model for energy conservation and green technology
- Quadruple the program space for adult and children's education in the Saltonstall Nature Center
- Improve visitor services by creating a new pavilion and reception area
- Improvements to trails and wildlife habitat to enhance visitor experiences



www.massaudubon.org/connecting



Free Fall Discovery Days



As part of our commitment to community, we're hosting Discovery Days at select sanctuaries on the following Saturdays from 10 am to 3 pm, rain or shine. The days are free for everyone, so round up your family and friends and join us.

September 11

Ipswich River, Topsfield

River and Wetlands Investigation

Take a guided canoe paddle up the Ipswich River, discover pond creatures, and explore the famous "Rockery."

October 2

Oak Knoll/Attleboro Springs, Attleboro

Grand Opening of Attleboro Springs Wildlife Sanctuary at La Salette

Watch a live owl presentation, participate in hands-on ponding, and make a fun nature-inspired craft.

October 16

Arcadia, Northampton

Fields and Grassland Discovery

Explore an unvisited part of the sanctuary, build bluebird and American kestrel boxes, and see live birds up close.

October 23

Blue Hills Trailside Museum, Milton

Wildlife's Winter Preparations

Find out how our local wildlife prepares for the cold months. Programs will feature live animals.

The Environmental Insurance Agency is the proud sponsor of Mass Audubon's Free



Discovery Days. Get a free quote on green auto insurance at www.EIAinsurance.com or call 877-999-9342. Mass Audubon members save 10%!



PRESERVING A COMMON WEALTH OF BIRDS



Whether it's an osprey soaring overhead, a hermit thrush singing its flutelike song, or a bluebird at a backyard feeder, birds inspire us. For over a century, Mass Audubon has protected birds, and the Connecting People and Nature Campaign continued that legacy.

What We Did

Over the last five years, we provided compelling insight and data-driven research to aid bird conservation. Together, we:

- *Involved* more than 1,000 citizen science volunteers in the Breeding Bird Atlas (BBA) II statewide survey. The terrific "Atlasers" have collectively logged more than 33,000 hours in the field to confirm 190 breeding bird species. We look forward to the fifth—and final—year of data collection in 2011.
- *Created* the Birds to Watch program to monitor common birds in decline and act *before* they become endangered. In 2010, thousands of people from more than 90 percent of the communities in the Commonwealth submitted their observations on Baltimore orioles, adding to our already-impressive baseline.
- *Expanded* the education and outreach component of the Coastal Waterbird

Program (CWP) to engage local residents and governments in stewardship of piping plovers, oystercatchers, terns, and other vulnerable coastal species. The CWP is recognized internationally as an effective collaborative model in protecting threatened coastal bird populations.

Why It Matters

Mass Audubon's passion for birds is demonstrated through education, advocacy, and sound scientific contributions by our staff, members, volunteers, and partnering organizations. Through our initiatives, birders of all ages, abilities, and backgrounds can become a unified and committed voice for birds. Bird conservation is directed at both individual species and the broader ecological health of our environment. With habitat loss accelerating and climate change taking hold, this approach is now more important than ever.

What's Next

1. Mass Audubon will develop a series of reports identifying the highest priorities for maintaining biodiversity in Massachusetts. To begin, the *State of the Breeding Birds of the Commonwealth* report will synthesize BBA II and other bird data to provide the first comprehensive overview of changes in breeding birds resulting from habitat loss, climate change, and other drivers since BBA I in the 1970s. Target release date: Fall 2011.

2. Information and data on the Important Bird Area (IBA) website will be updated and expanded, and educational posters and signs for our properties that are designated IBAs will be created.

3. The Birds to Watch program, which currently includes Baltimore orioles, whip-poor-wills, and American kestrels, will be expanded to include other bird species as informed by our research.

4. The oil disaster in the Gulf and increased erosion of beaches driven by rising sea levels will necessitate increased diligent monitoring of shorebirds through our Coastal Waterbird Program. Mass Audubon will work to determine how best to protect stressed coastal bird populations in the wake of urgent challenges. Mass Audubon will also increase community education about nesting coastal birds through school programs, guided beach walks, and enhanced web content based on a pilot project conducted in Chatham this past summer.



www.massaudubon.org/connecting

THE FUND FOR NATURE

Mass Audubon weaves together innovative ideas, individual commitments, and inspirational partnerships to advance conservation. The Connecting People and Nature Campaign strengthened our role and impact as a leading environmental organization in the nation.



What We Did

The Fund for Nature was an incubator for new concepts *and* the catalyst to bring cutting-edge programs to fruition. Your support has helped us to:

- **Remain** a vigilant voice on key environmental legislation and public policy issues. Our advocacy team continues to work tirelessly to defeat attempts to drastically water down the state law protecting rare and endangered species.
- **Initiate** a rigorous scientific inventory of flora and fauna on our sanctuaries. Our staff scientists and citizen volunteers are contributing reliable data on how species are changing in response to climate change, which will help determine how best to assist wildlife in the face of this global threat.
- **Create** and expand our model for delivering urban environmental education to meet the needs of underserved communities. For example, this past summer we were thrilled to provide an outdoor education and job experience for at-risk youth in collaboration with the NorthStar Learning Centers, a social service agency in New Bedford, and our staff and volunteers at Allens Pond Wildlife Sanctuary in Dartmouth.

Why It Matters

The world is always in flux. While our focus on protecting the nature of Massachusetts remains constant, we know that our success requires Mass Audubon to be nimble and creative.

Testing new ideas, conducting purposeful independent research, and inviting all voices to help us

advance our conservation mission will allow us to meet the most daunting environmental challenges.

Our founders Harriet Hemenway and Minna Hall—passionate in their quest to protect birds when they founded Mass Audubon in 1896—would expect no less. And we are confident that they would be pleased to see how their mission has flourished.

What's Next

We are excited about the future! We will build on our successful efforts to preserve land, pursue new paths

in environmental education, and remain dogged in our advocacy efforts. Toward that end, we will:

1. Strengthen the tenuous bond between people and nature by engaging, inspiring, and empowering individuals to be caretakers of the earth.
2. Be ever-more welcoming and make our sanctuaries accessible to all people.
3. Help people live sustainably and protect the environment by continuing to shrink our carbon footprint and share real-life examples so others can do the same.

We Did It!

We met our \$55 million goal for the *Connecting People and Nature Campaign*. You and your generous donations enable us to accomplish so much. **Thank you** for your vote of confidence and **please stay involved!**

- **Follow** us on Facebook (www.facebook.com/massaudubon) and Twitter (www.twitter.com/massaudubon)
- **Sign up** for a free e-newsletter from the sanctuary or program of your choice, including *Explorations*, our recently launched statewide e-newsletter at www.massaudubon.org
- **Become** a volunteer! Find fun ways to help at www.massaudubon.org/volunteer
- **Keep up** your membership and invite family and friends to join at www.massaudubon.org/membership
- **Explore** our sanctuaries through the Passport to Nature program at www.massaudubon.org/passport

Seeds

What are special wrapped packages of future plants with coverings designed to protect and then disperse them to suitable habitats? *Seeds!* Some seed coverings are fruits or berries, enticing animals to eat them, after which they discard or eliminate

the seeds. Other seeds travel in the wind, float on water, or hitchhike on animals. Still others are dispersed by animals such as squirrels that store acorns in different caches, inadvertently planting future trees. So look at seeds and discover the ingenious ways nature has designed to disseminate them. After trying these activities, continue

experimenting with seeds at www.massaudubon.org/go.

ready, set, Go Outside!

Close Look

Collect berries, fruits, nuts, and other seeds. Spread them out on a table and sort them by size, color, protective covering, how they disperse, and other categories you choose. Look at their coverings with a magnifier or under a microscope. Cut open the berries and fruits to find the seeds inside. How many seeds are there? Do the seeds inside have additional protective covering?

Parent/Teacher Note







Skills Learned: Concepts—habitat, plant physiology, plant adaptations, ecological relationships, seasonal changes, and life cycles

Skills—Observation, counting, sorting, and experimentation; forming and testing hypotheses; and comparing results

Safety Note: After walking through fields, check your clothing for ticks. If you're exposed to poison ivy, wash your skin and clothing immediately.

Seed Search

How many of these things can you observe in your backyard or neighborhood?

-  A fruit or berry that could be food for an animal
-  A seed with a very protective covering like a husk, shell, or nut
-  A grass or flower with hundreds of seeds still attached
-  A milkweed or dandelion releasing seeds into the wind
-  A plant with hitchhiker seeds
-  A place where an animal left some remains after eating seeds

Hitchhikers

Go to an open field that has not recently been mowed; or walk along the edge of a farm field, road, or yard. The grasses and other plants are trying to disperse their seeds before the first big frost. Look for seeds with hooks or barbs designed to attach to the fur or feathers of passing animals and eventually fall off elsewhere, known as hitchhiker seeds. Try these experiments.

Give a Ride—Wearing long pants, walk through the grasses and other tall plants. (Light-colored sweatpants and leggings work great, as do high socks pulled over your pant legs.) After a while, look at your legs. Do you see a few hitchhiker seeds? Release the seeds in the same field since they will fare best if they remain in this habitat, but not too close to their parent plants.

Grow Your Own—Take home a small variety of the seeds you find. Grow them in soil with periodic watering and see what happens!



Winterberry
(*Ilex verticillata*)

This native wetland holly is deciduous, losing its leaves each autumn and coloring the winter landscape with its bright red berries. It's a favorite with wintering robins.

Autumn is a season of unparalleled visual beauty. Look closely and you can observe an amazing example of two different types of organisms interacting for mutual benefit. Migratory birds need foods with high fat and sugar content to sustain them on their long journeys. Plants need to spread their seeds widely to ensure that at least some will successfully germinate the following spring. Fruits are one botanic strategy to accomplish this. When a fruit ripens, often turning a bright color, it is eaten and the seed is transported to a new—ideally suitable—location.



Large Cranberry
(*Vaccinium macrocarpon*)

This Thanksgiving staple was originally called the “craneberry” because the flower, when nodding in the breeze, resembles the head and neck of a crane.

EXPLORING THE NATURE OF MASSACHUSETTS

by Lucy Gertz, Visitor Education Coordinator

The Fruits of Fall



Northern Bayberry
(*Morella [Myrica] pennsylvanica*)

Tree swallows depend on these wax-covered berries to fuel up for their fall migrations, and yellow-rumped (myrtle) warblers consume them to survive our winters.

“Fruit” and “berry” mean different things in different contexts. To a botanist, a fruit is the seed-bearing part of a flowering plant. So technically, tomatoes, beans, corn kernels, and walnuts are all fruits. In contrast, a berry is a fruit produced from a single ovary—like a grape, but also an eggplant! In common usage, however, a fruit is a fleshy, sweet part of a plant that can usually be eaten raw, and a berry is a kind of small fruit.

Confoundingly, many plants called berries have multiple common names. “Indian berry” was used by European settlers to refer to any unfamiliar berry used by Native Americans. Other berries were named for their medicinal properties, purgeberry, goutberry,



Common Blackberry
(*Rubus allegheniensis*)

Rich in vitamin C, these roadside and fencerow drupes nourish chipmunks, wild turkeys, migrating songbirds, and people willing to brave the thorns in late summer:

and jaundiceberry; household uses, candleberry and teaberry; habitats, fenberry and mountain berry; what eats them, deerberry and partridgeberry; and how they grow, bunchberry, dangleberry, and dewberry.

No matter what we call them, the abundant fruits of fall yield a bountiful harvest. Migratory birds and other wildlife will continue to be nourished on these seasonal foods if we continue to support their native, diverse, and healthy habitats.



Partridgeberry
(*Mitchella repens*)

Berries not devoured by birds remain on the plants all winter: Mice, ruffed grouse, quail, and wild turkeys will eat the berries, especially when other fruits are scarce.

Illustrations by Barry Van Dusen©

Learn more: *The Berry Finder* by Dorcas S. Miller is a pocket-sized key available at the Audubon Shop at Drumlin Farm.

Find fall fruits, including some “true berries,” at these sanctuaries

Allens Pond, Dartmouth—Walk the Beach Loop Trail in early fall to view swarms of tree swallows. They mass together, sometimes in the thousands, modifying their mostly insect diet to feast on bayberries during migration.

Boston Nature Center, Mattapan—Join songbirds and butterflies as they visit the thimble-shaped common blackberries, the brambles of red and black raspberries, or the trailing “whips” of northern dewberry.

Broadmoor, Natick—Along the All Person’s Trail, look for the fruits of silky dogwood, marsh rose, and cranberry viburnum. Take in the aroma of wild grapes. For a multisensory experience, dial 508-530-0002 or download the audio tour at www.massaudubon.org/broadmooraudio.

Drumlin Farm, Lincoln—Native plant gardens in the entrance area and along the hill pathway demonstrate ways home gardeners can incorporate berry-producing plants including dogwoods, viburnums, and blueberries into their landscaping.

Felix Neck, Edgartown—Search for elderberries near the marshes and ponds. These juicy dark-purple berries can be used in syrups and teas as a natural remedy for many ailments.

Long Pasture, Barnstable—Meander down to the Salt Marsh Boardwalk and discover clusters of bayberry and beach plum, two plants that survive the salt spray and dry sandy soil of the Cape shore. Large, oval, purplish beach plums and small, waxy, green bayberries entice migrating birds.

▶ www.massaudubon.org/sanctuaries



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First created in 1897 by Louise B. Graves, Mary Sage Shakespeare (formerly of Mass Audubon) and her cousin, Charlotte Greenwalt, have continued the tradition. Printed on recycled paper; presented in a gold gift box.

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 at Drumlin Farm Wildlife Sanctuary
 781-259-2214

Cuttyhunk Cruise

Escape to the unique Elizabeth Islands off the coast of Cape Cod. Discover the windswept landscape of Cuttyhunk and step back to a simpler time.

September 19—9 am-5 pm ~ Cruise leaves from Woods Hole
 Long Pasture Wildlife Sanctuary ~ www.massaudubon.org/longpasture
 Preregistration required. For information and to register call 508-385-7657.



Memories of summer to last the winter through

Join us again next summer at one
of our 16 day camps, or
 Wildwood, our overnight camp



Information on summer 2011
 will be available in January
 on our website

www.massaudubon.org/camp



FALL PROGRAM SAMPLER

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

Annual Butterfly Census & Walk

September 18: 10 am-12:30 pm
 ALLENS POND, Dartmouth, 508-636-2437

Hawley Bog in the Fall

October 2: 10 am-noon
 ARCADIA, Northampton, 413-584-3009

Exploring Lime Kiln Farm Sanctuary

November 27: 10 am-noon
 BERKSHIRE SANCTUARIES, Lenox, 413-637-0320

Hawk Migration at Chickatawbut Hill

September 18: 10 am-5 pm
 BLUE HILLS, Milton, 617-333-0690

Rappin' with Raptors Festival

September 25: 1-4 pm
 BOSTON NATURE CENTER, Mattapan,
 617-983-8500

Boo Meadow Brook

October 15 & 16: 6:30-8:30 pm
 BROAD MEADOW BROOK, Worcester,
 508-753-6087

Fall Foliage Canoe and Breakfast on the Charles

October 9: 7-11 am; preregistration required
 BROADMOOR, Natick, 508-655-2296

Tales of the Night

October 28 & 29: 6:30-9 pm
 (hayrides start at 7 pm)
 DRUMLIN FARM, Lincoln, 781-259-2206

Sustainable Book Club

A discussion of *The Secret Life of Plants*
 by P. Tompkins & C. Bird
 October 13: 6-7 pm
 FELIX NECK, Edgartown, 508-627-4850

Western Greenway New Trails Walk

October 23: 8-11 am; appropriate
 for teens and adults
 HABITAT, Belmont, 617-489-5050

Big Woods Hike

November 21 (every 15 minutes from
 noon-1:30 pm); preregistration required
 IPSWICH RIVER, Topsfield, 978-887-9264

Wednesday Morning Birding

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

Farm Day 2010: Preserving the Past, Sustaining the Future

October 10: 10 am-3 pm
 LONG PASTURE, Barnstable, 508-362-7475

Halloween Prowl

October 22, 6:15-8 pm;
 October 23 & 24, 5:30-8 pm
 MOOSE HILL, Sharon, 781-784-5691

Getting the Most from Your Digital Camera with Bob Speare

October 16: 8 am-4 pm
 NORTH RIVER, Marshfield, 781-837-9400

Autumn Art and Fun Fest

October 23: 10 am-4 pm
 VISUAL ARTS CENTER, Canton, 781-821-8853

North Monomoy Island Tours

Every weekend through Columbus Day;
 call for schedule and details
 WELLFLEET BAY, Wellfleet, 508-349-2615

Hike to Wachusett Mountain

October 9: 10 am-3 pm
 WACHUSETT MEADOW, Princeton,
 978-464-2712



www.massaudubon.org/programs



The Next Generation

When it comes to win-win situations, it doesn't get better than this. For the past three years, Mass Audubon and the Student Conservation Association (SCA) have worked together to enhance our wildlife sanctuaries, teach young children the benefits of nature, and offer invaluable training to the next generation of conservation leaders.

The SCA has a long and fruitful history of educating young adults on conservation science in real-time settings. It first began in the late 1950s, placing a handful of volunteers in two national parks. Fast forward a half-century and some 4,000 interns and volunteers in all 50 states provide more than two million hours of conservation service per year. But it wasn't until 2007 that Mass Audubon came to be on both the receiving and giving ends, thanks to a generous private grant. Mass Audubon and the SCA joined forces to create a program that brings thirty 18 to 25 year olds to Massachusetts annually. To date they've logged an astounding 12,330 hours with Mass Audubon!

"The stewardship impact as a result of this partnership is remarkable," says Gail Yeo, Central West regional director

for Mass Audubon. "These young energetic crew members from all over the country have helped us take care of as much as 20 years of stewardship backlog or have tackled new projects while inspiring us with their interests, talents, enthusiasm, and idealism."

During the winter, the crew members spend their time in local school systems, getting children excited about nature and conservation. They also work on projects such as programming for towns where there is Mass Audubon land but no staff or new trail systems at our wildlife sanctuaries. When spring arrives, they head outdoors, embarking on weeklong projects—aka "hitches"—from building new trails to repairing boardwalks.

After an ice storm one winter, Pleasant Valley Wildlife Sanctuary was in desperate need of help. "SCA was just what the doctor ordered at just the right time," says Rene Laubach, sanctuary director. "Without their help, we would have been hard-pressed to clear massive amounts of woody debris blocking our trails."

Throughout the process, Mass Audubon's staff meets with the SCA crews, teaching

them valuable lessons on land stewardship and environmental education. "The enthusiasm and support from Mass Audubon has been tremendous," says Jonah Keane, director of SCA Massachusetts. "The level of staff involvement is much more than we anticipated and adds so much."

The interns concur: "This program has exceeded my expectations; I've realized I'm capable of so much more than I thought," says 23-year-old Andrew Bourett of Maine. "Working with Mass Audubon, I feel like I'm part of something important. We spent the winter planning a trail system [with Central West Property Manager Ron Wolanin], and then we actually built it. And the research we did on natural play areas is being put to use."

But the biggest takeaway? "The most significant skill I've learned is how to be an effective teacher," Andrew says. "Now I can help inspire the next generation of environmentalists." Passing the torch is what the program is all about.

▲ Hillary G. Truslow

More on SCA work at our sites:



www.massaudubon.org/connections

IN WITH BOTH FEET—TIMES TWO



For a long time Sally Avery wanted to take part in the popular long-running Friday Morning Birders program held weekly by Mass Audubon's North River Wildlife Sanctuary. So the first Friday after she retired she joined the group. That was 14 years ago, and she and her husband, Dick, have been involved at South Shore Sanctuaries ever since. "It cascaded," says Sally. "One thing led to another. Now I'm in with both feet. And Dick is too."

Being a gardener, Sally had always been interested in her neighborhood birds. And being musical, she knows birdsong instinctively—the subtleties in notes and melodies—and easily recognizes a bird species by its song. In fact, her director of the Choral Arts Society has taken to calling her Sally "Aviary." Assisting other bird walk leaders, Sally started helping new birders listen to the birds, identify them by song, and locate them. Then a garden club friend asked Sally to give a talk on birds. Soon she was giving presentations all over eastern Massachusetts on Birds and Birdsong, Landscaping for Birds, and Habitats at

Risk, based on Mass Audubon's centennial book, *The Nature of Massachusetts*.

With nearly 2,000 volunteer hours and counting, Dick and Sally help with South Shore Sanctuaries' special events such as Farm Day, Bird-a-thon, and Walk for Wildlife, as well as volunteering a day a week for the sanctuary. On

Wednesdays Sally works the front desk, and every Tuesday Dick assists Property Manager David Ludlow with building boardwalks, constructing bird boxes, reroofing sheds, clearing invasive plants, baling hay, repairing machinery, putting in gardens, spackling and painting, and the list goes on. "I wouldn't miss it for the world," says Dick.

If that weren't enough, Dick is president of the Cohasset Lightkeepers

Corp and the Straits Pond Watershed Association, and treasurer of the Cohasset Conservation Trust and the Cohasset Land Foundation. Not surprisingly, he was recently named Citizen of the Year in Cohasset.

Sally and Dick are Mass Audubon Leadership Friends and Sanctuary Committee Members for South Shore Sanctuaries. In 2004 they visited every Mass Audubon wildlife sanctuary, and last year, through Mass Audubon Tours, they took a Costa Rica birding trip led by South Shore Sanctuaries Director Sue MacCallum. "What I enjoy most about Sally and Dick is their varied interests—from botany to birding, travel to gardening, building boardwalks to brainstorming about a long-range vision," says MacCallum. "The Averys are inspiring with their calm and thoughtful approach, dependability, willingness to help with almost any project, and kind and compassionate manner."

As a citizen scientist for Breeding Bird Atlas II, Sally confirmed the American woodcock for her "block" when a line of babies walked right through their

"The Averys are inspiring with their calm and thoughtful approach, dependability, willingness to help with almost any project, and kind and compassionate manner."

— Sue MacCallum, director, South Shore Sanctuaries

yard. In fact, the Avery's yard bird list is up to 120 species, boosted by the berry-producing shrubs they planted to replace their vegetable garden. "We stopped growing food for our table," says Dick, "and started growing food for the birds."

There's no end to their generosity.

▲ Ann Prince



www.massaudubon.org/volunteer

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The Natural Inquirer

by John Galluzzo, South Shore Sanctuaries Education Coordinator

Q. Can a woolly bear caterpillar really forecast the severity of winter?

A. People hold dear to weather-related folklore. We watch for red skies at night and red skies in the morning. And some of us even believe that the woolly bear caterpillar—commonly seen along roadsides and woodland edges—can predict the nature of the coming winter:



Woolly bear caterpillar

The larval stage of the yellow-orange Isabella tiger moth, the woolly bear is distinctively striped: black at both ends with a rusty band in the middle. According to legend, a narrow middle band on the woolly bear portends a cold, long winter. In actuality, at least two factors influence the width of the woolly bear's middle band. Members of any brood emerging from their eggs can display a wide range of coloring, from mostly black to mostly rust. Second, as the larva matures and undergoes a series of molts, the middle band expands.

Even though the woolly bear is not an actual weather forecaster, we can still celebrate this winsome caterpillar; just as folks do in Vermilion, Ohio; Beattyville, Kentucky; and Banner Elk, North Carolina. Every autumn, they throw a Woolly Bear Festival in their towns, complete with woolly bear costumes, a parade, and competitions!

Natural Fact: If picked up, a woolly bear will curl up in a fuzzy ball.

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

Illustration: Gordon Morrison©

Riverboat on the Amazon River, Peru:
January 28 – February 6, 2011

Uganda Birding and Gorilla Safari:
February 9 – 25, 2011

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MASS AUDUBON'S ANNUAL
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THURSDAY, OCTOBER 14,
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For more information, contact
Kristin Barr at 781-259-2101 or
email kbarr@massaudubon.org.

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Mass Audubon has 49 wildlife sanctuaries (www.massaudubon.org/sanctuaries) open to the public year-round. They provide important habitat for wildlife and opportunities for you to enjoy nature.

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

27. Nahant Thicket, Nahant

Greater Boston

28. Habitat, Belmont
29. Drumlin Farm, Lincoln

38. Attleboro Springs, Attleboro (Grand Opening Oct. 2, 2010)
39. North River, Marshfield
40. Daniel Webster, Marshfield
41. North Hill Marsh, Duxbury
42. Allens Pond, Dartmouth and Westport

Cape Cod and the Islands

43. Ashumet Holly, Falmouth
44. Sampsons Island, Barnstable



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