



# C Connections

MAY – AUGUST 2011

A NEWSLETTER FOR THE MEMBERS OF MASS AUDUBON

*Explore*

*Escape*

*Play*

*see page 2*



 Mass Audubon  
*Protecting the Nature of Massachusetts*  
**Connections**

A NEWSLETTER FOR THE MEMBERS OF MASS AUDUBON

Volume 9, Number 2

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# Keeping Promises

by Chris Leaby, Gerard A. Bertrand Chair of  
Natural History and Field Ornithology at Mass Audubon

Given the cascade of conflicts in North Africa and the Middle East and the budget wars that have hijacked our attention during the early months of 2011, even the most ardent conservationists may be forgiven for overlooking the release in February of the Obama administration's *America's Great Outdoors (AGO) Initiative*. Subtitled *A Promise to Future Americans*, the report and call to action is the product of nearly a year of listening—through over 50 sessions with more than 10,000 participants—to a broad spectrum of constituencies throughout the United States. The result is a series of objectives intended to reflect how Americans envision the future of the environment that we, our children, and grandchildren will inhabit as the century unfolds.

The full report, available at [www.americasgreatoutdoors.gov](http://www.americasgreatoutdoors.gov), is well written and certainly worth an hour or two of your time to peruse and digest. But several of its themes are especially relevant now, and it is striking that these themes seem to be taken directly from Mass Audubon's current playbook. As has so often been the case in the history of the conservation movement in the US, endeavors that have started on our home turf have a way of showing up sooner or later on the national stage.

**Consensus.** Protecting our natural resources is urgent and important. Given our increasingly hectic schedules, the intensifying blizzard of media distractions that envelop us, and the well-documented fact that Americans—especially young



## Everyone's Invited: Free Discovery Days

This summer and fall, join us for free fun-filled events across the state. There will be special activities for all ages, including animal demonstrations, crafts, guided walks, nature talks, and more. Please bring your family and friends—everyone gets in free at Mass Audubon Discovery Days!

**June 4 — Pleasant Valley in Lenox  
Family Adventure Day**

**June 18 — North River in Marshfield  
Garden Tours and Open House**

**July 16 — Broad Meadow Brook in Worcester  
Wilds of Worcester**

**August 6 — Drumlin Farm in Lincoln  
Nature Play Day**

**September 10 — Blue Hills in Milton  
Fall Bird Migration**

**October 1 — Attleboro Springs in Attleboro  
Grand Opening of the Reflection Trail**

For more information, visit  
[www.massaudubon.org/sanctuaries](http://www.massaudubon.org/sanctuaries)



Mass Audubon's Free Discovery Days are sponsored by the Environmental Insurance Agency.

Mass Audubon members save 10% on green auto insurance! Get a free quote at [www.enviroinsuranceagency.com](http://www.enviroinsuranceagency.com) or call 877-999-9342.



and urban Americans—spend far less time outdoors than they have in the past, it must be a hopeful sign that a strong majority of our citizens continue to put a high value on accessible open space, clean air and water, preservation of wilderness and agricultural landscapes, and protection of wildlife.

**Crisis as Opportunity.** In his remarks, the President pointed out that Abraham Lincoln set aside the Yosemite Valley at the height of the Civil War and that both Theodore and Franklin Roosevelt preserved significant tracts of parkland and landmarks despite severe financial constraints during their time in office. Perhaps the message here is that, in times of crisis, we tend to reexamine our values and recommit to our fundamental priorities.

**A False Choice.** There are always those—and their numbers swell during hard economic times—who argue that we can't afford clean air and water

and protection of ecosystems and endangered species, that we must free industry from “burdensome government regulation” or see our economy collapse and jobs disappear. But, we must and can have both a thriving economy and a healthy environment. The AGO report provides some direction and encouragement for both.



**Individual Responsibility.** It is important for the President to lead and to mandate a coherent program of conservation and environmental protection that addresses not just current problems but also a vision of what kind of place we want the United States to be at the end of the century and beyond. That's what the AGO initiative is meant to do. But, President Obama emphasized that, while Washington can point the way and provide some support, individuals and groups at the community and state level will largely determine their own quality of life and that of the country as a whole. He cited land trusts and nonprofit conservation organizations as critical partners in these grassroots movements. There is a special Youth Report section of the AGO document that makes it clear that many teens and young adults are among the strongest environmental advocates and activists—a very hopeful sign.

**No Child Left Indoors.** Kids today spend half as much time outdoors as their parents did, and this results in a host of ills, including the national obesity epidemic, as well as the loss of spiritual and recreational opportunities essential to childhood development. There are many reasons for the rise of the indoor child: the prevalence of video games and other electronic distractions, fear of crime and infectious disease (largely unfounded in most cases), and a simple lack of opportunity. Children in urban environments in particular are deprived of free play in the outdoors because often there are no accessible recreational spaces close to home or on public transportation routes. It is hard to imagine that a generation that has no experience of nature, except in the virtual world, will feel much responsibility to protect it.

**The Sprawl Frontier.** The economic downturn and associated housing bust may seem to imply reduced pressure on the development and fragmentation of open space. But consider these three national statistics: (1) About one-third

of the open space developed during our country's entire history was lost in the last three decades; (2) Despite the slow economy, we continue to lose about 1.6 million acres of farms, forests, and other open lands each year; and (3) The US Census Bureau estimates that by the end of the century the population will have grown more than 30 percent from the present 309 million to about 400 million. In order to fund land protection initiatives, AGO recommends full funding of the federal Land and Water Conservation Fund for only the third time in its history, to be paid for by existing oil and gas revenues.

For Mass Audubon members, many of the themes sounded in *America's Great Outdoors*—individual and community responsibility, getting kids back into nature, the need to keep saving land, among others—will sound very familiar indeed. And a glance back at the fall 2010 issue of *Connections* in which we set forth our own vision for the decade ahead should convince anyone that we are poised to *keep our promise to Americans*—and especially the 6 million of them fortunate enough to live in Massachusetts.

Dear Friends,

As members of Mass Audubon's family, you know, or are getting to know, the different ways that we help connect you with nature. There are hundreds of thousands of people right here in Massachusetts involved in our causes. At the same time, we feel a sense of urgency to broaden this community, helping even more people to enjoy the outdoors and protect the environment.

That's why, about a year ago, we took an in-depth look at our public face. We found that while many people were aware of Mass Audubon, fewer truly understood the full story. We asked ourselves, how can we be even more relevant and compelling in today's world? How can we encourage even more people to get involved? We learned that there is more we can do.

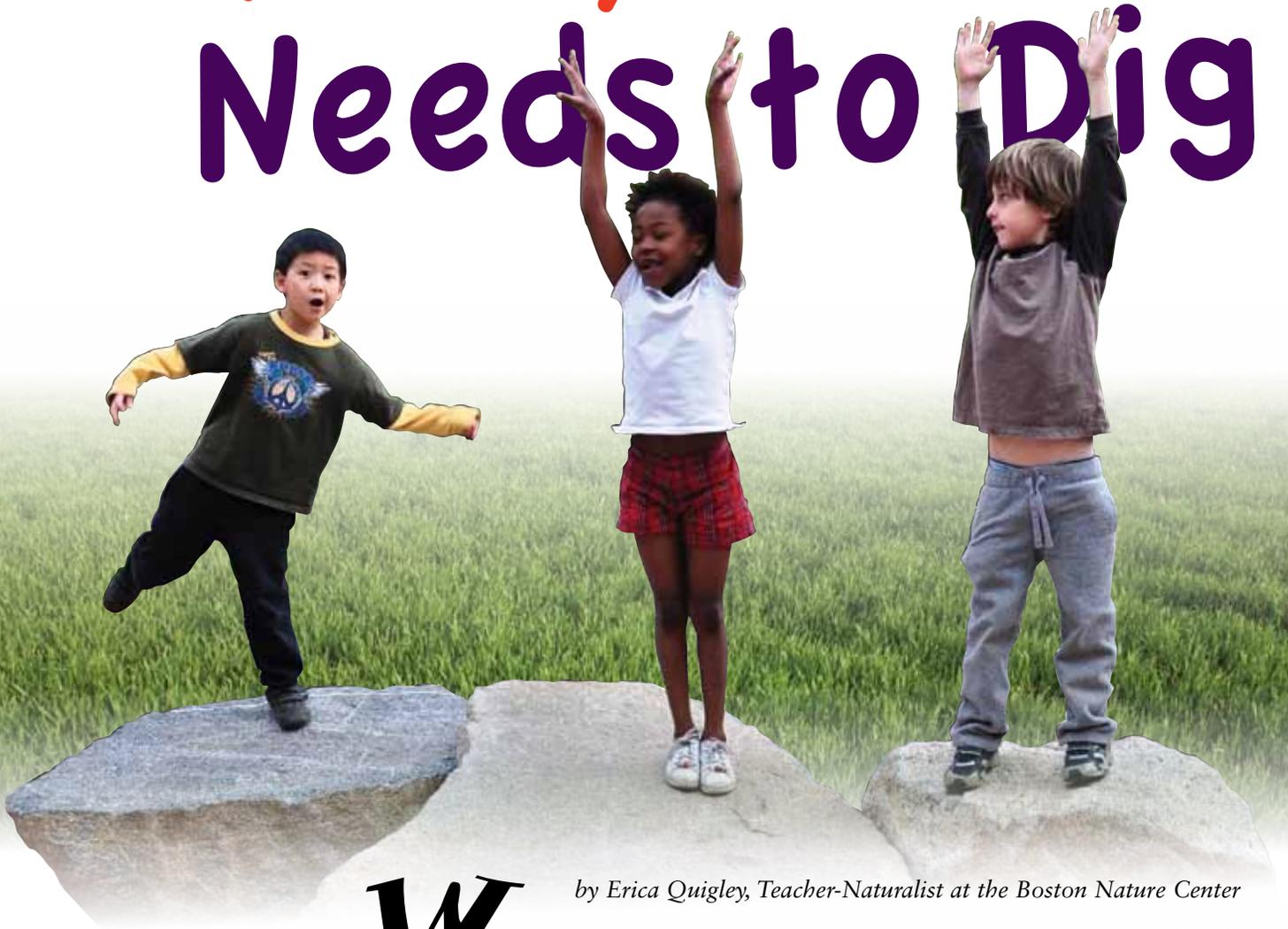
The result: *Your great outdoors*, a campaign to help spread the word and inspire generations of people to connect with nature. Over the next few months, you may hear us on the radio, or see more of us online, and I hope that you will be reminded that you always have an invitation to explore, escape, and play with Mass Audubon.

Find out more at [www.massaudubon.org/greatoutdoors](http://www.massaudubon.org/greatoutdoors)

Thank you,  
Laura Johnson  
Mass Audubon President



# Why Every Kid Needs to Dig



**W**e knew our new nature play area at Mass Audubon's Boston Nature Center was a hit when we saw that kids just didn't

*by Erica Quigley, Teacher-Naturalist at the Boston Nature Center*

want to leave at the end of the day. And the staff couldn't pull themselves away either as they witnessed the amazing transformation that takes place when children are given a few key ingredients like dirt, water, sticks, and shovels. Shoes are tossed, mud squishes between toes, and branch-stuffed forts pop up around every tree. Squeals of delight ring loudly as a big bucket of water is emptied, flooding channels and leading to a frenzy of dam construction.





critical to enhancing our connection to the natural world. Do you recall a special outdoor place where you played for hours? According to Richard Louv, author of *Last Child in the Woods*, many environmentalists attribute their conservation ethic to a combination of many hours spent outdoors as a youngster in a keenly remembered wild place and an adult

who taught him/her respect for nature.

Mass Audubon's wildlife sanctuaries continue to be places for quiet nature observation and active learning through education programs, but thanks to dedicated and innovative staff, we've recently added more ways for people to connect with nature by encouraging self-directed, informal play. During the last year, education staff developed a set of guidelines for creating "keenly remembered" outdoor spaces, which has leapt from paper to reality. Staff, volunteers, and even a Trail Crew from the Student Conservation Association/AmeriCorps helped transform stumps, boulders, logs, branches, sand, and dirt into welcoming areas for kids (and adults!). The work continues and our vision is to have play spaces at a majority of our wildlife sanctuaries so visitors can enjoy hours of spontaneous outdoor play. We hope you'll come outside and join the fun!

## The ABCs of Nature Play

It is widely believed that children solidify significant relationships with nature by playing: they build, dig, crawl, and create miniature worlds. Through these repeated experiences, they develop an appreciation for their natural world that lasts a lifetime. How is this type of play different from activities on a traditional playground? Most places where children play are designed so that nothing can be changed. Nature play gives children the chance to solve problems and construct their surroundings. Just watch a group of kids creating a system of channels and dams at the beach.

## Outdoor Fun

A major trend of the late 20th and early 21st century is an erosion of the bond between people and nature, and this is especially true for children. What we may have once taken for granted—unstructured time to play outdoors—is

**Calling All Shutterbugs**  
*Mass Audubon's Photo Contest returns!*

**Picture This:**



*Your Great Outdoors*

Contest ends September 5.  
[www.massaudubon.org/picturethis](http://www.massaudubon.org/picturethis)

## Come and Play!

Here is a sampling of activities at current nature play spaces. Visit [www.massaudubon.org/ecokids](http://www.massaudubon.org/ecokids) for more details.

### **Arcadia, Easthampton:**

Explore a sunken boat

### **Boston Nature Center, Mattapan:**

Mix and pour sand, soil, and water

### **Broad Meadow Brook,**

**Worcester:** Relax in a tree chair

### **Drumlin Farm, Lincoln:**

Climb through a natural tunnel

### **Felix Neck, Edgartown:**

Picnic at the butterfly table

### **Joppa Flats, Newburyport:**

Explore the wrack line sandbox

### **North River, Marshfield:**

Create a mini-world with sticks and rocks

### **Oak Knoll, Attleboro:**

Hide in a giant bird nest

### **Wachusett Meadow, Princeton:**

Build a shelter in a hidden spot

### **Visual Arts Center, Canton:**

Jump, dig, climb, and design

## Nature Play is:

- Digging, mixing, pouring, building, climbing, crawling, jumping;
- Moving over, under, across, and through;
- Sounds of water, wildlife, digging, drumming, and voices;
- Art, science, music, engineering, and foremost fun!



# Rainbows

Do you feel lucky?  
Then, at the end of a rainfall,  
you might see a rainbow. Mist, spray, and  
dew can also create a rainbow effect near  
waterfalls, fountains, or anyplace water is spraying  
in sunlight. Have fun with these rainbow projects.

## Create a Rainbow

### Inside

Completely fill a glass with water and set it on a sunny windowsill. Put a white sheet of paper on the floor, where the sun streaming through the glass casts its light. The glass of water acts as a prism, creating a rainbow.

### Outside

Set a garden hose nozzle to a fine mist. Stand with your back to the sun, hold the hose up, and look at the spray. Do you see a rainbow as the sun strikes the water droplets? Tip: This works best in early morning and late afternoon.

ready,  
set,  
Go Outside!

### Skills Learned:

*Observation and comparison:* color and shapes, and physical properties of light

*Experimentation:* measurement, forming and testing hypotheses, and comparing results

*Creative expression:* vocabulary and creating a myth

*Critical thinking:* problem solving

## Magical Myths

In Amazonian cultures, some believe they should close their mouths when they see a rainbow to prevent bad spirits from entering their bodies. And well-known Irish folklore tells of leprechauns hiding their pots of gold at the end of a rainbow. Why?

When one walks toward the end of a rainbow, the pot appears to move farther away! Now make up your own rainbow myth.



## Psst! Get the Cool Science Behind Rainbows

We tend to see the sun as yellow, but sunlight is actually made up of every color in the rainbow—red, orange, yellow, green, blue, indigo, and violet. After a rainstorm, and if it's still raining somewhere in the sky, the sunlight will be **refracted** (bent) and **reflected** (bounced back) by the raindrops. The drops of water act like tiny prisms, breaking up the sunlight into all its colors and displaying a rainbow.

### Did You Know?

Seven colors appear in every rainbow, but we usually see only four or five colors clearly because they blend together. In single rainbows, red is always on the outside of the arch and violet is on the inside.

## ONLINE BONUS!

Learn more at  
[www.massaudubon.org/go](http://www.massaudubon.org/go)

- ▶ Experiment with bubble rainbows
- ▶ Recipes for bubbles
- ▶ Fun facts about moonbows and sea-dog rainbows

# EXPLORING THE NATURE OF MASSACHUSETTS

by Lucy Gertz, Visitor Education Coordinator



**Twelve-spotted skimmer**  
(*Libellula pulchella*)

This familiar dragonfly, with its striking white and black wing spots, is commonly seen at ponds and marshes from mid-June to September.

Visit a pond shore on a calm sunny day, summer through early fall, and you will likely see and hear dragonflies and damselflies zipping about. Whether hunting at great speeds or depositing eggs on the pond surface, dragonflies are both graceful and ferocious. Their large heads are almost all eye, enabling 30,000 different lenses on their massive compound eyes to see almost all the way around. Their legs, close to their large, efficient jaws, enable dragonflies to securely hold prey while skillfully tearing it apart, even while flying.

Four powerful wings move independently, allowing for superb maneuverability. Whatever their speed,

Flying over ponds, streams, and fields from May to October, these dragonflies never seem to rest. In fall, they swarm by the thousands and migrate south.



**Green darter**  
(*Anax junius*)

## An Ode to Dragons and Damsels



**Eastern forktail (*Ischnura verticalis*)**

This is the most common damselfly in New England, found near ponds, streams, and rivers mid-May to October.

dragonflies can stop immediately to change direction. They hover in midair to position themselves before colliding with prey at flight speeds of up to 25 miles per hour. These incredible flight skills inspired early helicopter designers. More recently, aeronautic engineers have determined that dragonflies generate lift amounting to seven times their body weight, four times better than most airplanes!

The spritely colors and delicate build of the smaller, more slender damselflies make them appear to flit like butterflies as they forage along shorelines. When perching, they hold their wings together above their bodies. Upon close observation, you may see that their eyes are farther apart than those of dragonflies.

For years, dedicated Mass Audubon staff and volunteers have monitored



**Blue dasher**  
(*Pachydiplax longipennis*)

From late-June to September, this widespread dragonfly can be seen around ponds, marshes, and sluggish streams.

“odes” at our wildlife sanctuaries. At last count, we documented 147 of the 166 odonate species found in Massachusetts. Witness for yourself the abundance and diversity of these acrobatic, beautiful insects dwelling in protected wetlands and adjacent open habitats.

**Common whitetail**  
(*Libellula lydia*)



Aptly named for its abundance and its chunky white abdomen, this common dragonfly can be found near ponds, grassy swamps, and gardens, and perching on walking paths, from early June to September

Illustrations by Ed Lam, from *Mass Audubon's A Guide to Northeastern Dragonflies and Damselflies*, available for \$4.95 at the Audubon Shop at Drumlin Farm.

## Visit a Mass Audubon wildlife sanctuary and enjoy the “air show.”

**Ashumet Holly, East Falmouth**—Hike the Pond Trail to the sandy shores of a classic coastal plain pond, home to two rare species of bluets (damselflies). In summer, more than 40 species of odonates skim over Grassy Pond.

**Boston Nature Center, Mattapan**—Skimmers such as the ruby meadowhawk and the twelve-spotted skimmer can be seen foraging in the meadows near Fox Trail. Observe green darners and common whitetails in the open fields along Snail Trail.

**Broadmoor, Natick**—Explore the Hemlock Trail, winding along a stream in the cool shade of hemlocks, and watch dozens of ebony jewelwings hover over the water in the dappled sunlight.

**Daniel Webster, Marshfield**—Gazing from the observation blinds offers photo opportunities of common whitetails, ebony jewelwings, and other species darting across the wet panne or perching on a branch. Take a short walk on the River Loop boardwalk, and they may dance at your feet.

**Pleasant Valley, Lenox**—From the deck at Pike's Pond, “odes” can be observed laying eggs, while the fields bordering Bluebird Trail provide excellent vantage points from which to watch them hunting their insect prey.

**Wachusett Meadow, Princeton**—An abandoned beaver wetland on West Trail attracts the diminutive elfin skimmer, the smallest dragonfly in

North America. Over 70 species of odonates have been documented—the most at any of our wildlife sanctuaries.

**Wellfleet Bay, Wellfleet**—Look for Needham's skimmers haunting Goose Pond Bridge and the tidal-marsh-specialist seaside dragonlets, which are common at the Salt Panne Overlook. A trail brochure highlights our most visible dragonflies and their habitats. Want to learn more? Sign up for Wellfleet's Odonate Field School running July 24-25, 2011.

▶ [www.massaudubon.org/sanctuaries](http://www.massaudubon.org/sanctuaries)

▶ [www.massaudubon.org/odonates](http://www.massaudubon.org/odonates)

## PROTECTING LAND AND HABITAT



# Happy Trails to You

by Bob Wilber, Director of Land Protection

**A**t a recent event celebrating the opening of a Mass Audubon wildlife sanctuary, a speaker proclaimed, “It’s been said that good fences make good neighbors, but *trails* make good *friends!*” How true! Like any good friend, trails can expand your knowledge, challenge you when you need to be challenged, offer you a chance to connect, and, when you need it, they can provide you an escape from a hectic world. With so many roles to fill, putting a good trail together is sometimes a more intricate process than it seems. Mass Audubon’s approach blends equal parts recreation and science.



### **Laying the Groundwork**

What’s involved in laying out a nature trail? When Maurice Broun, the first sanctuary director of Pleasant Valley Wildlife Sanctuary, set out to create the trails in the 1950s, all went well until he came upon a massive rock that he couldn’t figure out how to move. The Boston native was so accustomed to the straight lines of city streets that it didn’t immediately occur to him to work around nature.

Today, it’s par for the course. The first step for Central West Property Director Ron Wolanin, who has worked on Mass Audubon trails for the past 27 years, is to take advantage of subtle-yet-interesting natural features. “I look for moss-covered boulders, a beautiful view, the sound of a stream, or a special tree, and then lay the trail out to cut the least number of trees and avoid sensitive natural areas and species,” he says.

## Take a Walk

**Boost** physical, mental, and spiritual health

**Connect** with nature

**Find** quiet time in a busy world

**Engage** all your senses

**Learn** more about the natural world

**Spend** quality time with family and friends



Wolanin also factors in how a trail may be used. Many of our educational programs take place on these pathways, which requires having a different perspective during the planning process. “I look for elements like comparing tree species or taking people through an unexpected landscape.”

Just as important as “the how” is “the who.” Will a trail be used for adults as well as children? What about the visually or hearing impaired? Accessibility is on the forefront of all of our trail designers’ minds. Currently, Mass Audubon has 10 ADA-accessible trails, and, in August of 2010, we were awarded a three-year \$100,000 grant from the U.S. Institute of Museum and Library Services (IMLS) to add multisensory features to existing ADA-accessible nature trails at eight of our wildlife sanctuaries—the first of which will open this fall.

### “Mulching” the Way

Once the planning is complete, our team heads to the field to get the job done. For Wolanin, the old-fashioned way works just fine. “I do almost all of my trail work with hand tools,” he says, noting that fine-tuning a trail continues even after it has opened to the public.

Building trails and repairing boardwalks provide wonderful opportunities to harness the energy and skills of volunteers. In recent years, dedicated crews of

18- to 25-year-olds from the Student Conservation Association and AmeriCorps have offered tremendous support across the state accomplishing so much more than we could have without the extra hands.

At the same time, our education team and regional scientists collaborate to produce displays that deliver informative and enjoyable nature education for trail users.

The result of all this hard work? A vast network of easy-to-navigate adventures that spark natural curiosity in all who experience them. Just ask John Galluzzo, a teacher-naturalist at our South Shore Sanctuaries who’s on a personal quest to walk every Mass Audubon trail by year’s end. “No matter how many times I’ve walked the same trail, I’m constantly surprised by what I see,” he says. “Nature

is constantly changing and the same trail can bring a different story every day.”

So, whether you’re looking for hilltop hikes, coastal jaunts, or a walk in the woods, you’ll always find new “friends” at Mass Audubon.

### Beyond our Borders

With Mass Audubon’s talented team in place, it’s no surprise that landowners and organizations seek our expertise when it comes to developing trails on their properties. Enter the Ecological Extension Service (EES), a Mass Audubon program that offers its skills and services to conservation partners. Using the latest technological advances, the EES team can assist not only with trail design but with ecological inventory, restoration, mapping, and conservation restrictions as well. For more information, visit [www.massaudubon.org/ees](http://www.massaudubon.org/ees)

## 10 Great Trails for...

**Spotting spring wildflowers:** The Dutch and Mary Barnard Trail, High Ledges Wildlife Sanctuary, Shelburne

**Taking in the Boston skyline:** The Red Dot Great Blue Hill Trail, Blue Hills, Milton

**Adding a rare bird to your life list:** Warbler Trail, Marblehead Neck Wildlife Sanctuary, Marblehead

**Breaking a sweat:** Overbook Trail, Pleasant Valley Wildlife Sanctuary, Lenox

**Seeing a porcupine:** Porcupine Ledge Loop, Rutland Book Wildlife Sanctuary, Petersham



**Pushing a stroller:** Marsh Boardwalk, Broadmoor Wildlife Sanctuary, Natick

**Watching a vernal pool come to life:** Vernal Pool Loop, Moose Hill Wildlife Sanctuary, Sharon

**Using all your senses:** Sensory Trail, Stony Brook Wildlife Sanctuary, Norfolk

**Getting away from it all:** Beaver Bend Trail, Wachusett Meadow Wildlife Sanctuary, Princeton

**Looking for otter tracks:** Marsh Trail, Felix Neck Wildlife Sanctuary, Vineyard Haven

Get details on these and other great hikes at wildlife sanctuaries around the state at [www.massaudubon.org/trails](http://www.massaudubon.org/trails)

8TH ANNUAL  
**DUCK DERBY**

SATURDAY, AUGUST 20  
CELEBRATE ALLENS POND  
WILDLIFE SANCTUARY'S  
25TH YEAR!

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Saturday, June 4  
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Wildlife Sanctuary

We're flipping the  
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41 KW solar panel!

Celebrate solar power  
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all ages 10 am-2 pm

Free sanctuary admission all day!

[www.massaudubon.org/wellfleetbay](http://www.massaudubon.org/wellfleetbay)  
508-349-2615

## SUMMER PROGRAM SAMPLER

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

**Pleasant Valley Family Fun Day**

June 4: 10 am-4 pm  
BERKSHIRE SANCTUARIES, Lenox,  
413-637-0320

**Ponkapoag Bog Walk**

July 23: 10 am-noon  
BLUE HILLS, Milton, 617-333-0690

**Moths: Beauties of the Night**

June 3: 7-9 pm  
BOSTON NATURE CENTER, Mattapan,  
617-983-8500

**Bats at Moore State Park**

June 24: 7-9 pm  
BROAD MEADOW BROOK, Worcester,  
508-753-6087

**Father's Day Weekend Canoe  
and Breakfast**

June 18: 7-11:30 am  
BROADMOOR, Natick, 508-655-2296

**Discovering Native Shrubs at Arcadia**

May 21: 10 am-2:30 pm  
CONNECTICUT RIVER VALLEY SANCTUARIES,  
Northampton, 413-584-3009

**Friday Evening Hayrides**

June 17 & July 15: 4-5:30 pm or 6-7:30 pm  
DRUMLIN FARM, Lincoln, 781-259-2206

**Moonrise Kayak Tour**

July 15: 7:30-9:30 pm  
FELIX NECK, Edgartown, 508-627-4850

**Boston Harbor Islands Exploration**

June 12: 8:45 am-2 pm  
HABITAT, Belmont, 617-489-5050

**Audubon Nature Festival**

June 5: 10 am-4 pm  
IPSWICH RIVER, Topsfield, 978-887-9264

**SCAMP (Summer Conservation and  
Marine Program)**

Four weeks in July and August, starting July 5  
JOPPA FLATS, Newburyport, 978-462-9998

**Aquatic Explorations Cruises  
of Nantucket Sound**

Thursdays, July 7-August 18: 9-11 am  
LONG PASTURE, Barnstable, 508-362-7475

**Dad and Me (parent with child,  
ages 4 and up)**

June 19: 11 am-3 pm, ongoing  
MOOSE HILL, Sharon, 781-784-5691

**Fairies & Trolls**

May 28: 10-11:30 am  
OAK KNOLL, Attleboro, 508-223-3060

**Allens Pond Open House  
at Stone Barn Farm**

July 24: 1-4 pm  
SOUTH COAST SANCTUARIES, Dartmouth,  
508-636-2437

**Family Toe Jam Puppet Band Concert  
at Daniel Webster**

June 3: 5:45-7:30 pm  
SOUTH SHORE SANCTUARIES, Marshfield,  
781-837-9400

**Owls in Massachusetts**

May 20-22: call for times  
STONY BROOK, Norfolk, 508-528-3140

**A. J. King: Exquisite Miniatures**

May 28-September 25  
VISUAL ARTS CENTER, Canton, 781-821-8853

**Drop-in Day: Summer Wildlife**

June 25: 11 am-3 pm  
WACHUSETT MEADOW, Princeton,  
978-464-2712

**The Field Program: High School  
Summer Program**

Tuesday through Thursday starting July 26:  
10 am-4 pm  
WELLFLEET BAY, Wellfleet, 508-349-2615

[www.massaudubon.org/programs](http://www.massaudubon.org/programs)

## New Pools for Cool Toads

**East Falmouth**—The rare eastern spadefoot toad is getting some help from two-legged friends. Staff from Long Pasture Wildlife Sanctuary are leading an effort at **Ashumet Holly Wildlife Sanctuary** to create two vernal pools this spring and then reintroduce the species (one of the rarest frogs in Massachusetts and part of the amphibian order Anura) in an area where it was last found 20 years ago. Prior to release, young spadefoot tadpoles will be raised by students on Cape Cod and in the metro Boston area (the latter coordinated by educators at Drumlin Farm). After they are let go in the wild, the toads will be monitored for five years.



The project will offer ample educational opportunities for local students while creating new habitat to give this special amphibian a leg up. Our partners include MassWildlife, Bryan Windmiller PhD, the Center for Wetlands and Stream Restoration, and the US Department of Agriculture.

For more information, contact [longpasture@massaudubon.org](mailto:longpasture@massaudubon.org) or call 508-362-7475.

## Paddle the Day Away

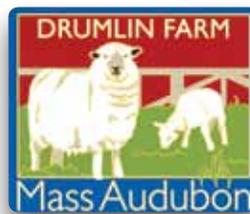
**Princeton**—**Wachusett Meadow Wildlife Sanctuary** now offers canoe rentals for exploring Wildlife Pond. From May through October, paddlers can catch glimpses of dozens of species, including river otters, great blue herons, and belted kingfishers. Canoes are rented on a first-come, first-served basis for \$10 per canoe per hour for members, \$14 for non-members. Great for individuals, families, scout troops, seniors, and community or homeschool groups, or perhaps a romantic date. For more information, email [wachusett@massaudubon.org](mailto:wachusett@massaudubon.org) or call 978-464-2712.



# Field Notes

## A LEEDer in Green Building

**Lincoln**—Visitors to **Drumlin Farm** now have a new state-of-the-art green building to explore. Funded by the Campaign



for Drumlin Farm, the new Farm Life Center brings together Drumlin Farm's key elements of farm and nature by creating a bridge between the farmyard and wildlife habitat. The building (which is applying for top-

level Leadership in Energy and Environmental Design [LEED] certification) includes two classroom spaces, a commercial kitchen, a bathroom, an indoor visitor area, and an outdoor covered gathering space. A teaching tool for environmentally responsible construction, this extremely energy-efficient facility includes natural materials, lumber that was milled from red pine and larch harvested at the farm, and a solar energy array. Come visit! For more information, visit [www.massaudubon.org/drumlin](http://www.massaudubon.org/drumlin) or call 781-259-2200.

## Bird-a-thon 2011: The Original Tweet May 13 & 14

26 Teams Compete to Record  
the Most Species in 24 Hours!

There's still time to make  
a donation and support  
important conservation work.



[www.massaudubon.org/birdathon](http://www.massaudubon.org/birdathon)

# A Good Neighbor

## VOLUNTEER SPOTLIGHT

In the 1990s, when Mass Audubon was working to establish a nature center in Boston, we reached out to the Haley School in Roslindale looking for volunteers. Several parents of students at the school signed up, including Cathy Campbell of Roslindale (pictured front row, left). At the time, Campbell's son, Chris, was in kindergarten at the Haley School, and her daughter, Caytie, was in preschool.

Campbell welcomed a chance to help expand access to nature education and open space in the city for her children, as well as other residents of nearby neighborhoods. And fortunately for Mass Audubon, she found time in her busy life as a mother and labor attorney to join the advisory committee. Its first order of business was to help establish Mass Audubon's Boston Nature Center, a 67-acre wildlife sanctuary in Mattapan, just two blocks from her son's school.

Thanks in part to the work of this committee, which subsequently became the sanctuary committee for which Campbell has served as co-chair, much has been accomplished in the last 15 years. Highlights include establishment of a trail system that is mostly wheelchair accessible; programs reaching out to 40 schools and 230,000 residents within a two-mile radius; and, in partnership with the city of Boston, creation of the George Robert White Environmental Conservation Center, which models environmentally sound building practices.

"Whether she's leading the sanctuary committee or designing bird crafts, Cathy is thoughtful, caring, and energetic," says Julie Brandlen, Anne and Peter Brooke Director of the Boston Nature Center. "And she's encouraged her entire family to become involved—mom, dad, siblings, and friends, too."

"The Boston Nature Center has become a part of my family history," says Campbell. "My parents celebrated their 50th wedding anniversary at the nature center (pictured), and my family

assists with the annual Rappin' with Raptors festival." Caytie and Chris, now in high school and college, grew up spending lots of time at this special urban sanctuary. Both Campbell and her husband, Jack Orrock, were Scout leaders, and they brought their children's troops to take part in birdwatching and service projects. "Chris did his Eagle Scout project at the Boston Nature Center," says Campbell, "building a 'fish weir' along the stream to trap trash and debris."

Campbell is now a Mass Audubon board member, and, inspired in part by the sustainable design of the nature center, Caytie plans to become a green architect. Furthermore, both of Campbell's children count on having a sanctuary close by. "They have learned to appreciate the opportunity to visit open space in the city," says Campbell. "That's their expectation."



"The Boston Nature Center has become a part of my family history."

—Cathy Campbell



[www.massaudubon.org/volunteer](http://www.massaudubon.org/volunteer)

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# The Natural Inquirer

by John Galluzzo, South Shore Sanctuaries Education Coordinator

## Q. What is mile-a-minute vine and how does it spread?

A. It was a desire to have our yards showcase exotic and unusual plants that brought the mile-a-minute vine (*Persicaria perfoliata*) to the United States from Asia. Two early invasions in Oregon and Maryland were averted more than half a century ago. A third invasion, emanating from Pennsylvania in the late 1930s, was a more serious problem. Since that time, the vine has spread more than 300 miles and was first discovered in Massachusetts in 2006.

Also known as Asiatic tearthumb, which reflects both its origin and its thorny stems, mile-a-minute vine sports leaves shaped like equilateral triangles and round, cup-shaped ocreae (or sheaths) which form at nodes on the stems. The flowers are inconspicuous, but the clustered berries display a beautiful deep blue, each one containing a seed. This aggressive vine can grow up to six inches per day.



mile-a-minute vine

The seeds may be transported long distances by birds and short distances by ants. The fruit can float on water for more than a week, allowing easy travel up and down rivers. Once rooted, mile-a-minute vine can entirely overtake and smother plants, blocking sunlight and even breaking limbs under its heavy weight. The seeds can remain active, germinating sporadically, for six years, making eradication a multiyear effort.

Learn more at [www.massaudubon.org/invasives](http://www.massaudubon.org/invasives)

**Natural fact:** Using a thick pair of work gloves, remove the mile-a-minute vine by its roots early in the season, before flowering takes place.

Illustration: Elizabeth Farnsworth©

Have a question for the Natural Inquirer? E-mail [inquirer@massaudubon.org](mailto:inquirer@massaudubon.org)

## 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](mailto: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](mailto:membership@massaudubon.org).

### Photography:

- |  |   |
|--|---|
| Cover Broadmoor boardwalk view—<br>Rob Alexander©  | p. 6 Stump jumpers—Brendan Quirk©                                       |
| pgs. 1-2 Girls walking a wooded path—Shawn Carey©  | p. 9 Family strolling—Shawn Carey©<br>Trail builders—Richard Johnson©   |
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| p. 5 Kings and queen of the rock—<br>Henrietta Yelle/Mass Audubon©<br>Sand diggers—Mass Audubon© | p. 12 Marsh wren—Frank Leung BirdImages©                                |
| p. 6 Sand table sculptor—Erica<br>Quigley/Mass Audubon©  | p. 13 Campbell family—Courtesy<br>of Cathy Campbell©                    |
|  | p. 15 Hungry camper—Mia Kheyfetz/<br>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 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](http://www.massaudubon.org)



# Summer Saunters

## at a Mass Audubon Sanctuary Near You

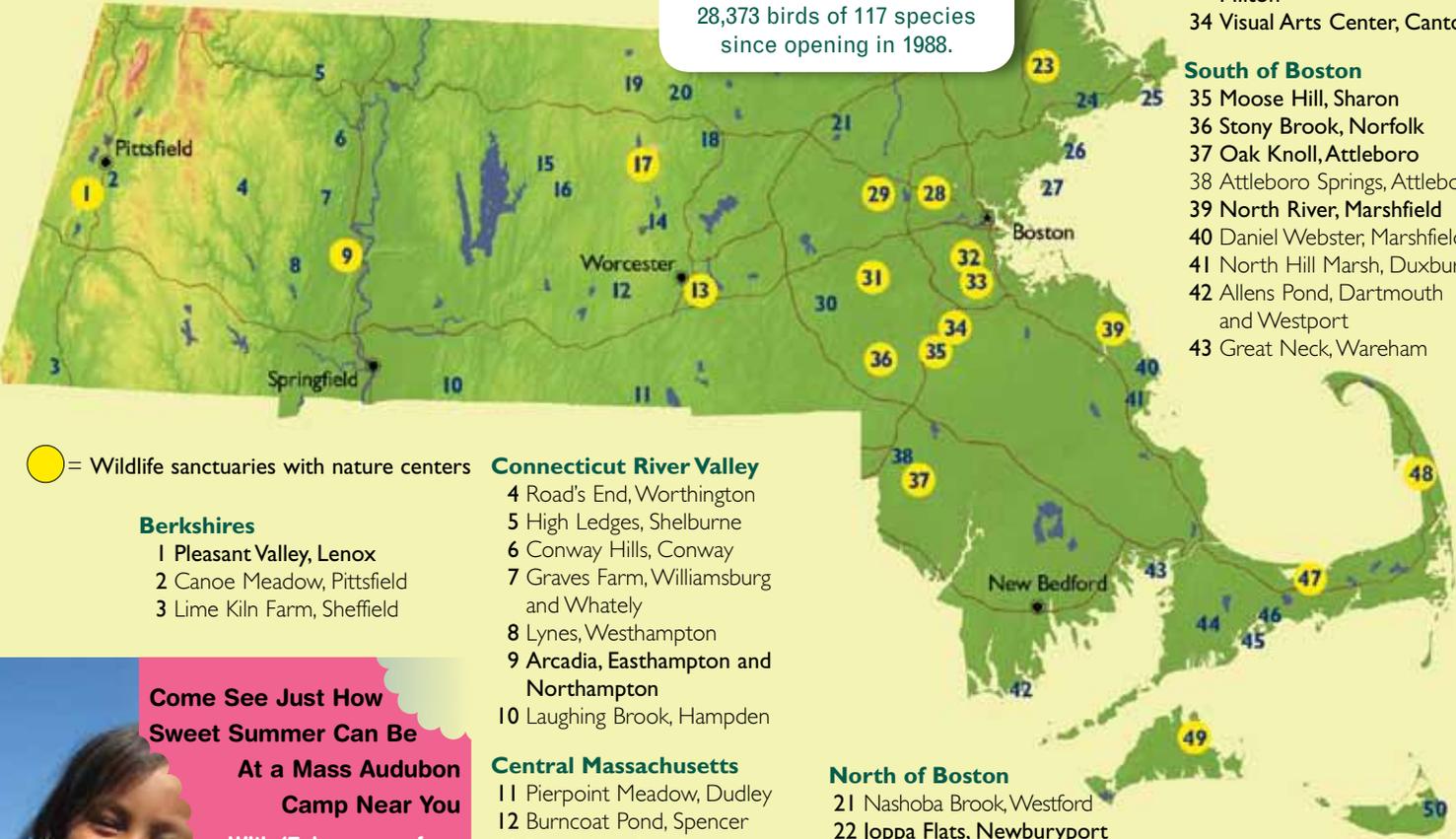


Mass Audubon has 50 wildlife sanctuaries open to the public year-round. They provide important habitat for wildlife and opportunities for you to enjoy and appreciate nature.

**Joppa Flats**  
Our bird banding station has recorded 28,373 birds of 117 species since opening in 1988.

- 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 Meadow, 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 Pierpoint 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
- 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 Skunknett River, Barnstable
- 47 Long Pasture, Barnstable
- 48 Wellfleet Bay, Wellfleet
- 49 Felix Neck, Edgartown
- 50 Sesachacha Heathlands, Nantucket



**Come See Just How Sweet Summer Can Be**  
At a Mass Audubon Camp Near You  
With 17 day camps from the Berkshires to the Cape and Islands, and Wildwood, Mass Audubon's overnight camp

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