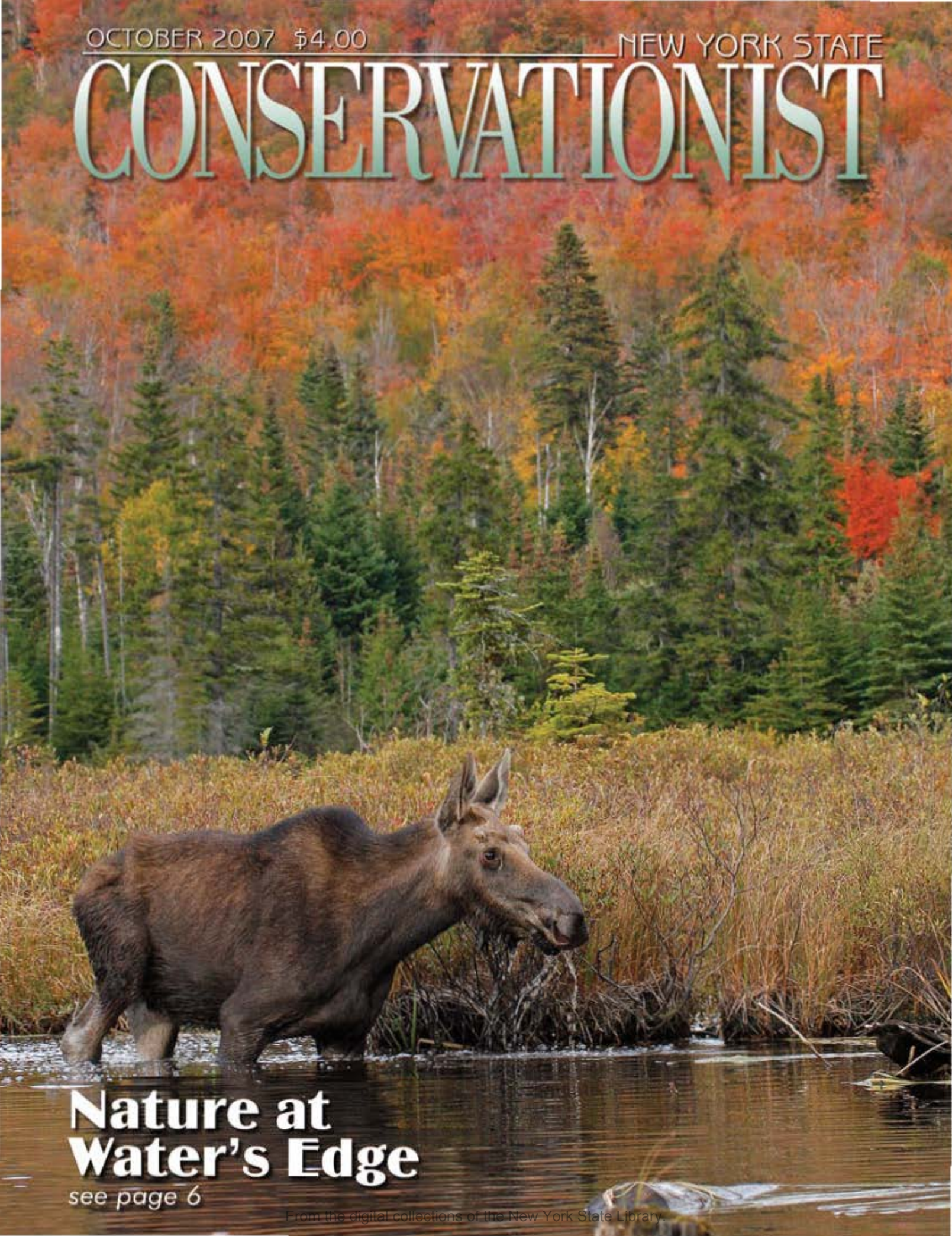


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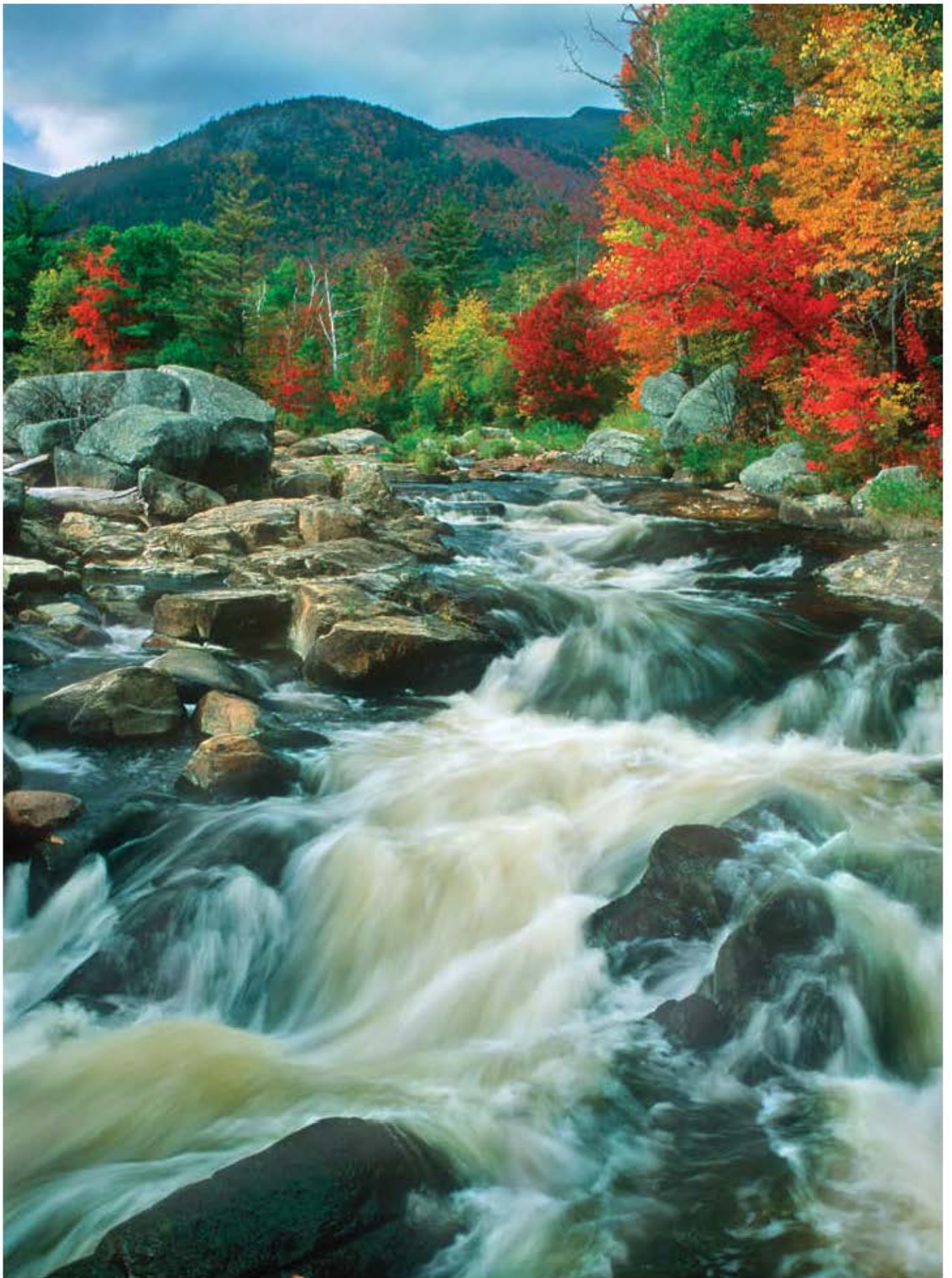
NEW YORK STATE

CONSERVATIONIST



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Water's Edge**

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The Flume in Autumn
Joe LeFevre

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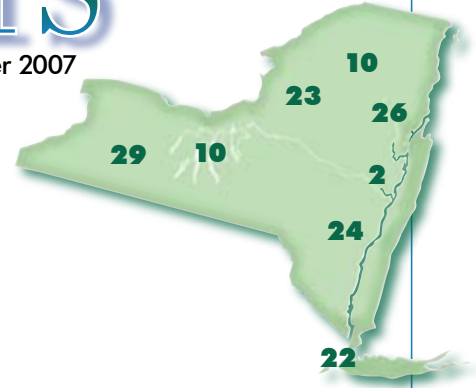
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A Century of Seedlings

By Karin Verschoor



The Saratoga Tree Nursery in the early 1940s

Late fall is quiet season in the fields at the DEC Saratoga Tree Nursery. Irrigation pipes have been lifted and stacked for the winter, deer fences have been erected, and the overwintering tree seedlings are settling into their winter dormancy. The constant activity of cultivating, fertilizing and transplanting is done for the year.

Looking across the fields, it's hard to imagine that over a billion tree seedlings have been grown in these fields. In the days when most work was done by hand, men and women worked shoulder to shoulder during seedling harvest, digging, sorting and packing the conifer seedlings destined for huge plantations across the state. In peak years, the nursery was shipping more than 20 million seedlings a year. They left by train, in wooden crates, to various destinations to grow timber, provide windbreaks for soil conservation and flood protection, farm woodlots, Christmas trees, wildlife habitat and to protect water supplies. The resulting trees are woven into the history and the landscape of New York State, witnesses to the beginnings of forest conservation.

Exploitation to Sustainability

At the turn of the 20th century, New York State's forests were in bad shape. With a lot of land already cut for timber and cleared for agriculture, the Forest and Game Conservation Commission warned that New York would soon run out of timber. Their concerns were valid: as timber companies continued to cut trees at an alarming rate, less than 25 percent of the state was forested. In addition, a series of warm, dry summers made forests unusually vulnerable to fire. The expansion of

railroads into the Catskills and Adirondacks brought spark-spewing steam locomotives and tourists who carelessly dropped cigarette butts. The woods didn't stand a chance. Forest fires burned thousands of acres, leaving hillsides bare, accelerating runoff, and increasing flood frequency and severity. Few attempted to replace logged or burned stands until the Commission began to plant seedlings on state land.



Workers planting trees at the Saratoga Nursery.

New York State Conservationist, October 2007

Since no sizeable North American sources existed, seedlings were imported from huge European nurseries. Europeans had a history of forest management, and grew many trees, including North American species, in tightly managed plantations.

The high demand for European seedlings resulted in multiple introductions of a deadly fungus disease, white pine blister rust. This disease was a major impediment to early reforestation efforts, and continues to be a serious forest problem today.

The United States needed to develop its own seedling sources, grown near where they would be planted, and free of imported pests and diseases. Federal and state nurseries were deemed the best way to supply the millions of seedlings needed, at reasonable cost. New York State's tree nursery system was founded in 1902, making it the oldest state-run nursery in the nation (see the February, 2003 *Conservationist* for a detailed history). In the early years of the state nursery system, seedlings were grown for state land, with as many as nine nurseries scattered across the state. A small nursery, started in Saratoga in 1911, was the beginning of the present Saratoga state tree nursery.

In 1972 all of the state nurseries were consolidated at the Saratoga nursery on land originally bought by the state to protect the mineral springs in Saratoga State Park.

Seedlings for People

With much of the state's land deforested, those in power saw a need to replace cleared acreage. "If our people could get trees at cost I have no doubt that many would commence planting immediately. To my mind it would be practicable and very desirable to have the State



While clothing styles have changed, the spirit of conservation remains strong. Above, the Saratoga Nursery today, where workers sort seedlings.

furnish seedling trees to all who would plant..."

—Conservation Commissioner James Whipple, 1907.

Acting on this suggestion, the state legislature passed a law that offered seedlings to the public at cost. The first year of seedling sales brought only a modest response, but by the second year orders increased by several fold. Within five years, the state nurseries sold almost two million seedlings and could have sold more had they not run out. Seedlings were shipped all across the state to a wide range of buyers, including timber companies, private estates, water departments and private landowners. One of the first big commercial customers was the Great Bear Spring Company, which bought hundreds of thousands of seedlings to protect the watershed around their springs. The majority of buyers were private landowners and some of the trees grown from these early seedlings are still alive today (see sidebar).

The Nursery Today

In fall and winter, nursery staff gather and process seed of more than 50 different species, prepare cuttings, take phone orders for seedlings, maintain equipment, get ready for planting season and prepare for the main seedling harvest in April.

Almost every species grown at the nursery comes from New York seed sources, many from the nursery's own seed orchards. Seed for most of the conifer species come from small plantations at the nursery, stands on state forest lands, and at sites of former regional nurseries. Picking cones from tall conifers can be challenging, but pickers get a break when they harvest Norway spruce cones. Red squirrels dash energetically through the spruce crowns, biting off all the cones they can reach. The cones pile up under the trees—making it easy to fill the picking bags.

In January, seed is extracted from cones and fruits, cleaned, sorted and graded. The large room in the seed processing plant is crowded with machinery: hoppers, dryers, sorters, conveyers and arcane sounding devices like dewingers. Tall air stacks and ducts, all made of galvanized stovepipe, dominate the upper part of the room and give the seed plant a decidedly industrial look. In the adjacent cold room, the processed seeds are packed in big glass bottles, and stored on their sides in long racks of steel shelving. When stored at 28 degrees F., conifer seeds maintain their viability for up to ten years. Most hardwood seeds do not store as well, and only last two to three years.

The nursery starts taking seedling orders for spring delivery in January, and competition for some species is intense. The phones ring constantly and half a dozen nursery staff take seedling orders nonstop.



Millions of seeds are kept in cold storage until they are planted and nurtured into seedlings on the farm.

Seedlings destined for areas with early planting dates, such as Long Island, are harvested in November, graded and packed, and kept in a refrigerated storage building until spring. Since the late 1950s, seedlings have been stored over the winter in walk-in coolers. Steady, controlled temperatures increase seedling survival tremendously. Although it seems as though the green-needled conifers surely must need some light, they are kept cold enough to go into a deep dormancy—almost akin to hibernation in animals. Inside the dark cooler, wooden crates are stacked to the ceiling, each holding thousands of sleeping tree seedlings waiting for spring.

The main seedling harvest begins as soon as the ground is soft enough to dig, usually the beginning of April. In earlier years, seedlings were dug, graded and packed in the field. Today, bare root seedlings are brought inside immediately after they are dug, to be kept moist and cool while they are sorted and packed. The nursery grows some species as “plugs” in seed flats with long, deep compartments. Seedling plugs are removed from their container and shipped complete with soil.

State Fair Seedlings

A popular program at the New York State Fair, held in August each year, is the tree seedling giveaway at DEC's Log Cabin. A limited number of seedlings are

given away each day, and anxious fair-goers line up early. To get a free seedling, they must first answer a short quiz based on the exhibits in the Log Cabin. Children and adults alike wander through the building with their quiz cards, examining the exhibits for answers. Hoping for a perfect score, they wait while a DEC staffer checks their answers. Many people really care about getting all the answers correct, even though a perfect score isn't required to get a seedling.

When the day's supply of seedlings runs out, disappointment is intense. Some people will actually return the next day to try again. For some families, planting a new seedling each year has become a tradition, and they speak proudly of their row of trees that represent years of planting state fair seedlings. Some bring pictures to support their claims.

The Future

Over the past 100 years, the nursery has adapted to the changing needs of forestry and land management. The days of planting huge conifer plantations are past. Although there will always be a steady, if smaller, market for conifers, there is increasing demand for native species grown from local seed sources, particularly those with value for wildlife, riparian buffers and wetland restoration. Many of the native shrubs are extremely challenging to grow, partly because there is so little information on them. Some species have seeds with a tricky double dormancy and may require two seasons to germinate. Nursery staff test various seed germination and cultivation methods for these challenging species, and then document the results; in effect, writing their own book where none previously existed.

The experience gained from working with difficult native species has paid off in the ability to grow



Rows of seedlings still grow on the Saratoga farm.

crops of new species quickly, an ability which could be used to meet new challenges. For example, there is promising research about the use of sentinel trees



Teaching our children the importance of sustainability and stewardship is one of the DEC's primary goals.

to attract Asian longhorn beetles to verify their presence. A couple of Asian maple species appear to be irresistible to the beetles. If further research proves the value of these maples for Asian longhorn beetle control, the Nursery has the facilities for rapid response to help control this invasive insect. Our future may literally depend on trees and other plants

FDR's Forests

While Theodore Roosevelt's forest legacy was the preservation of lands by putting them into public ownership, Franklin D. Roosevelt restored lands by planting forests. His massive tree-planting programs employed thousands during the Great Depression, including the Civilian Conservation Corps, whose buildings and trails can still be seen today in many public forests and parks.

To Roosevelt, tree-planting was more than just a public work project; it reflected his personal belief in the importance of reforestation. He knew from his own experience that reforestation was the best way to reclaim land. As a young man, he was keenly interested in the practice of scientific forestry, and began to buy farmland adjacent to Springwood, the Roosevelt estate in Hyde Park. His first plantation was completed in 1912 with white pine seedlings from the state tree nursery. Over the next 30 years, he planted more than half a million seedlings bought from the nursery, primarily conifers such as white pine, red pine, scotch pine, Norway spruce, white spruce, larch, balsam fir, white cedar and Douglas fir. Although the Saratoga Tree Nursery did not routinely grow hardwoods until the 1970s,

because of their tremendous potential to help us meet today's environmental challenges, such as renewable energy production, reduction of urban heat island effects, lowering heating and cooling costs and flood control. Many of the impacts of changing climate can be mitigated by wider use of plants to moderate local temperature extremes, and to capture increased precipitation run off.

Today, landowners who want to plant trees and shrubs in quantity can do so at a reasonable cost. The Saratoga Tree Nursery's primary mission is to provide New York State citizens with high-quality seedlings, most grown from local seed sources, at cost. Even landowners with limited financial resources can afford to plant trees on their land. Regardless of its intended use, whether for timber, for Christmas trees, for beauty, for wildlife, for flood protection or to buffer climate change, each seedling contributes toward a better future for New York.

A lifelong student of plants, **Karin Verschoor** works for DEC's Division of Lands and Forests in Albany.



Franklin D. Roosevelt's forester stands in front of Norway spruce trees that started out as seedlings in his nursery.

staff did grow occasional crops of various species. In the 1920s, FDR planted a stand of tulip poplar, his favorite tree, from seedlings grown there.

Although much of the farmland was sold off after his death, the core remains relatively undeveloped. Fortunately most of the land has been bought by Scenic Hudson, a nonprofit conservation organization dedicated to land preservation. Much of the preserved land is forested, and FDR's 1912 white pine plantation still stands. (For further reading, see *FDR's Trees* in the April 1995 *Conservationist*.)

Nature at Water's Edge

Article and photos by Jeff Nadler



Paddling a kayak or canoe is a perfect way to explore habitats where land and water meet—and photograph fauna and flora found there.

Natural life is especially abundant where land and water meet—along wetlands, creeks, rivers, and shorelines. Paddling a kayak or canoe is a perfect way to explore these habitats and photograph fauna and flora found there. You may encounter beaver, muskrat, frogs, turtles, and a variety of bird species. Fascinating wetland plants, shoreline flowering shrubs and wildflowers make enticing nature photo subjects. Perhaps you'll come upon a white-tailed deer, red fox, or even a moose. When approached by a silently floating boat, wildlife often seems unbothered and does not immediately flee.

Kayak or Canoe?

Any way to get on the water is fine, but kayaks (or solo canoes designed with kayak-type seating) offer numerous advantages for nature photography. A kayak's lower seating offers better stability, less wind effect, a lower shooting angle for more attractive eye-level compositions of creatures along the water, and better seating comfort. Lower seating position also

reduces a person's profile to potentially nervous wildlife. With more spacious cockpits and a shorter length than touring and sea kayaks, recreational kayaks sacrifice some speed and efficiency in travel. However, they offer a more stable, maneuverable, and roomier watercraft from which to use a camera.

When shopping for a kayak, it's best to test paddle first. You'll be happier if you splurge a bit on a lightweight paddle made of wood, fiberglass, or carbon. Avoid heavy, aluminum-shaft paddles. Select a comfortable personal flotation device so that you'll wear it at all times. Proper clothing, especially for the cooler water temperatures encountered in spring and fall, is a must. Even when air temperatures are mild, you must be prepared for an unexpected spill into chilly water.

The Camera

Today's compact point-and-shoot cameras, especially the water-resistant or waterproof models, are excellent for taking photos of scenery and people. For most

Iris



nature subjects, however, they are inferior to single lens reflex (SLR) cameras. Point-and-shoots suffer from noticeable shutter lag, a detriment when a subject or a pose may only be present for a fraction of a second. The camera's tiny sensors record undesirable digital "noise" (like film grain) at modestly high ISO settings. Yet higher settings are a tremendous benefit during

early morning and late afternoon hours, when light is low and wildlife is active. The lenses on point-and-shoots are also considered "slow," meaning that a slower shutter speed is automatically set to gather enough light for proper exposure. Slow shutter speeds are not desirable when the camera is moving, on a boat in water. Although some point-and-shoots feature an impressive telephoto range, most lenses are incapable of magnifying wildlife or bird subjects as large as desired. SLR cameras are the best choice, even though they are bulkier and difficult to waterproof. Telephoto or zoom lenses of at least 300mm are favored for wildlife. Teleconverters of 1.4x are commonly used to increase magnification. For shots of plants, the same telephotos can be used to isolate subjects. Wide-angle zooms are effective to portray nature subjects in the environment. More expensive but very helpful for boat photography, two camera makers offer lenses with stabilization to reduce the effect of camera "shake."

Film or Digital?

Digital offers so many advantages that most nature photographers have adopted it as their preferred choice. One of the best features is the instant feedback you get on your technique. You can review your exposure, composition, and sharpness on screen, and shoot again if necessary. Today's digital SLRs are also fairly quiet. In low light, you can easily use 400 and even 800 ISO settings without the grainy look that equivalent films produce.

Loon





Painted turtle



Keeping Gear Dry

A wide variety of “dry bags” and waterproof cases are available in which to stow your gear while paddling. However, waterproof housings to enclose an SLR when taking photos are expensive and bulky. Since SLRs are not waterproof, you do risk water damage from use in the field. You can minimize risk with some precautions. Always wear the camera or lens neck strap. Avoid taking your camera out when wind and waves get rough. Visit smaller and more intimate bodies of water and stay close to shore, where you are more likely to encounter nature subjects. Keep a small towel handy to wipe off any water that gets on your equipment.

Keep it Sharp

It is certainly more difficult to steady a camera on a boat than on land. To minimize a boat’s movement, I seek out the calmest water I can find. That is usually the upwind shore. I often paddle into nooks and crannies; protected coves and channels where wildlife might be found. Early morning and late-day paddles often have the calmest conditions. I try to position my boat within shoreline vegetation or on a natural beach where the boat can rest. Some people use a monopod or small tripod within the cockpit. I prefer the ease of handholding, using my head and hands to solidly brace the camera. Use the highest shutter speed conditions allow. Increasing the camera ISO setting helps. If I am not worried about depth of field, I might use the widest aperture to force the fastest possible shutter speed.

Beaver



Exposure and Metering

Today's automated cameras handle exposure well, especially when your subject is set against a uniform background of blue sky, green vegetation, or dark water. When your subject is against a background of bright sky or water, the camera often underexposes your subject. An SLR camera has several ways to overcome this tendency, through use of a spot meter or by compensating to adjust exposure. Photographers with more experience switch to manual mode under these conditions.

You might think that bright sunny skies produce the best pictures. Actually, mid-day sun creates harsh shadows and washes out details on many nature subjects. Overcast skies can produce nice muted lighting on your subject; just keep it out of the photo or adjust for it. The nicest lighting is often just after sunrise and before sunset, coinciding with the time that wildlife is most active.

Know Your Subject

Much of the time, I go paddling with a camera, but without any special goal. Instead, I enjoy the element of surprise in discovering what lies around the next bend. At other times, I set out to find a certain

Least sandpipers



subject, whether a kind of bird or shoreline wildflower in bloom. Time spent in advance learning about your subject's natural history, behavior, and habitat preference, will increase your chances of success. Field guides, nature books, and *Conservationist* articles can all add to your appreciation of nature, and to your success in recording your experiences with your camera on the water. For further reading, see *Conservationist* June 2003: "Hunting With A Camera."

Free-lance nature photographer **Jeff Nadler** specializes in birds. More of Jeff's work can be seen at www.jnphoto.net.

Moose



Autumn *Inspiration*



Dry Creek Cascades, Fillmore Glen



Green Lakes



O hushed October morning mild,
Begin the hours of this day slow
Make the day seem to us less brief.

—Robert Frost, *October*



West Branch Ausable River cliffs



Sunset, Wakely Pond



As I stood and watched the mists slowly rising this morning I wondered what view was more beautiful than this.

—Hal Borland, *Book of Days*

Delicious autumn! My very soul is wedded to it, and if I were a bird I would fly about the earth seeking the successive autumns.

—George Eliot

Sunrise, Blue Mountain Lake



Tamarack, Old Forge



Taughannock Falls



Snowy Mountain



There is no season when such pleasant and sunny spots may be lighted on and produce so pleasant an effect on the feelings, as now in October.

—Nathaniel Hawthorne



Whetstone Gulf State Park



I sometimes think that the other months were constituted mainly as a fitting interlude between Octobers.

—Aldo Leopold, *A Sand County Almanac*

The maple wears a gayer scarf, the field a scarlet gown. Lest I should be old-fashioned, I'll put a trinket on.

—Emily Dickinson, *Nature 27 - Autumn*

Joe LeFevre is an award-winning photographer from Oswego. His work has been exhibited at the Everson Museum of Art in Syracuse as part of the 2006 and 2002 Everson Biennials. His images have been published in *Outdoor Photographer*, and in numerous regional publications including *Adirondack Life* and *Conservationist*.

LeFevre will make two presentations on landscape photography along with photographers Nancy Rotenberg, Eric Dresser, Raymond Klass, and Mark Bowie at a three-day conference May 9-11, 2008 at the Westchester Renaissance Hotel in White Plains.

These photographs and many others are available as fine art prints. Go to www.joelefevrephoto.com, and click on "Fine Art Prints" for more information, or write: Joe LeFevre Photography, 25 Candlewood Dr., Oswego, NY 13126.

Beaver

Wayne Trimm



Castor canadensis-Year adopted: 1975

New York's state mammal, the beaver is our largest rodent. Adult beavers average 3-3.5 feet long and 30-50 pounds. Active at night, beavers build mud and stick dams and lodges on waters across the state. Lodges are usually elaborate domed structures with the entrance below the waterline to provide protection from predators. To keep the animals dry and snug, the living quarters are above the waterline. While beaver dams produce habitat for a wide variety of fish and wildlife, these dams may also cause damaging flooding.

Beavers use their large front incisors to fell trees for food and building. These teeth continue to grow throughout the animal's life, and so constant gnawing is important to keep the teeth from growing too long. Beavers eat a wide variety of plant material, such as soft, aquatic vegetation and the twigs and bark of trees. Their preferred foods are poplar, aspen, birch and willow. Highly aquatic, beavers use their broad, flat tails and webbed feet to propel them through the water. When disturbed they will slap their tail on the water's surface.

Beavers mate for life. In late March to early May, females generally give birth to four, one-pound babies, called kits.

How Something Becomes a State Symbol

State symbols provide a snapshot of what makes a state special. Each of New York's symbols pays tribute to a species or product of great importance to the state.

S

tate symbols are the result of a concerted effort by citizens to have a significant item recognized. To accomplish this, citizens, organizations or school children often research a particular symbol and make a request for a bill. If approved by the Legislature, the bill is enacted and there is a new state symbol.

Since 1955, New York has adopted 15 official state symbols; 11 are depicted here. The other four are: apple (fruit); milk (beverage); lilac bush (bush); and apple muffin (muffin).

State Motto: New York's state motto is "Excelsior" which means "ever upward."

State Flag: Adopted in 1778, New York's state flag depicts the state coat of arms. The figures represent Liberty and Justice. The three-masted, square-rigged ship and Hudson River sloop signify commerce.



NEW YORK STATE SYMBOLS



New York State Department of Environmental Conservation

Text by Eileen Stegemann
Layout design by Frank Herec

New York's state gem, the garnet gets its name from the Latin word for pomegranate, *malum granatum*, because of the gems resemblance to red pomegranate seeds. With hard, sharp edges, most garnet is used as an industrial abrasive for waterjet cutting, airblasting, polishing TV glass and to filter drinking water, but occasionally gem-quality stones are found. New York produces more garnet than any other state. Crystals up to three feet long have been found here, though most measure only five inches. Most garnet is red, but it can also be green, orange, brown, yellow and purple.



Year adopted: 1969
Wayne Trimm

Eurypterid



Frank Herec

Eurypterus remipes-Year adopted: 1984

New York's state fossil is the eurypterid. A close relative of horseshoe crabs, scorpions and spiders, the eurypterid lived more than 400 million years ago. Known as water scorpions, eurypterids are thought to be among the most fearsome swimming predators of the Paleozoic Era. They were found along the bottom of the shallow, brackish sea that extended from what is now Buffalo to Schenectady and south to Poughkeepsie. The fossils are rare worldwide, and only found in a few states in America. In New York, they are locally abundant in dolostone and shale that is 400 to 415 million years old. Most eurypterid fossils measure 4 to 8 inches in length.

Bay Scallop



Argopecten irradians-Year adopted: 1988

New York's state shell is the bay scallop. Native to New York, bay scallops may be found in the small embayments and tributaries of Long Island Sound, as well as in the Peconic Bays. They occur in shallow water and in eelgrass beds. After hatching from eggs, bay scallops go through a free-swimming stage before attaching themselves to submerged supports via secreted stems (byssal threads). They remain there until they reach one inch wide, at which time they change into free-roaming animals that move around by rapidly opening and closing their shells. Accompanied by a jet of water, these shell flaps can move smaller scallops several feet. Bay scallops feed on phytoplankton that they take in with the water used for breathing. These scallops are a favorite of seafood enthusiasts.

Striped Bass



Frank Herec

Morone saxatilis-Year adopted: 2006

New York's state saltwater fish, striped bass are important sport and commercial fish. Their speed, power and size make them a favorite of anglers. Striped bass are big, ranging from 18 to 55 inches in length and 3 to 70 pounds in weight. Anadromous, they move from the sea to freshwater to spawn. They generally occur around rocky areas near jetties and drop-offs. Strippers are migratory, seasonally entering New York's tidal portion of the Hudson River and coastal waters around Long Island. Smaller bass generally travel in large schools; larger bass usually move in small pods. Adult stripers are voracious feeders, primarily eating fish and invertebrates, especially crabs and squid. The Hudson River estuary is an important spawning ground for stripers.

Bluebird



Wayne Trimm

Sialia sialis-Year adopted: 1970

New York's state bird, the bluebird is one of the first birds to return north in the spring. Members of the thrush family, they occur in open areas, like fields, orchards and gardens, where they dine on a variety of insects and occasionally fruit. Male bluebirds are striking with a rusty-orange breast and bright blue head, back, wings and tail. Females are duller.

Bluebirds nest in bird boxes and in holes in trees made by other birds like woodpeckers. Once considered rare, the Eastern bluebird is more common today because of factors that include the ban of the pesticide DDT, protection of open spaces, and volunteer efforts to provide nesting boxes. Many people put up special nesting boxes along fence rows for bluebirds, to supplement natural nesting cavities. Along U.S. Route 20, there is a trail of bluebird boxes that stretches nearly 400 miles.

Sugar Maple



Wayne Trimm

Acer saccharum-Year adopted: 1956

New York's state tree is the sugar maple. It is a magnificent forest tree that is abundant everywhere upstate. The tree is best known for its "helicopter" seeds, the sugar and syrup made from its clear spring sap, and its brilliant red or yellow-orange fall foliage. A mature sugar maple can be 60 to 80 feet tall and have a trunk more than two feet in diameter. It makes an excellent shade tree.

Maple sugar and syrup are made from the sweet sap that flows through the trunk of the sugar maple; something the northeastern Native Americans were making before Europeans arrived. It takes 40 gallons of sap to make one gallon of maple syrup!

In addition to syrup, the sugar maple is prized for its wood. It is hard, strong, close-grained, and tough with a fine, satiny surface, and is in great demand for furniture, flooring, veneer, interior finish, and as a high-quality fuel wood.

Brook Trout



Wayne Trimm

Salvelinus fontinalis-Year adopted: 1975/2006

First adopted as the state fish in 1975, the brook trout was re-adopted as the state's freshwater fish in 2006. Symbolizing pure, cold water, brook trout are found in hundreds of lakes and ponds in the Adirondack and Catskill mountains and are scattered in cool, clear streams throughout the state. Also called speckled trout, these New York natives are beautiful fish with pink or reddish spots inside blue halos on their sides.

Hatched in coldwater streams, brook trout move downstream into larger stream sections or coldwater lakes as they mature. In late summer and fall, adults move upstream to spawn in areas where waters flow through gravel and rubble. Females deposit eggs in nests (or redds). Tiny fry emerge in 50 to 100 days.

Brookies seldom live longer than five years. Although some can weigh more than eight pounds, fish weighing more than two pounds are uncommon. Wary and scrappy, they are highly popular gamefish.

Ladybug



Coccinella novemnotata or Ladybird Beetle
Year adopted: 1989

The nine-spotted ladybird beetle (or ladybug) is New York's state insect. Brightly colored, relatively small beetles, they are generally a favorite of children. There are a number of different ladybug species, and as a group they are common throughout much of the state. Adults live two to four months. Ladybugs are highly regarded because both larvae and adults feed on pest aphids. A single ladybug can eat 100 aphids a day. It is this fact that probably accounts for the old superstition warning people that to kill a ladybug is unlucky, and to release one brings good luck.

Adult ladybugs frequently overwinter in groups, sometimes indoors where they will congregate at windows in spring and fall. Because of their beneficial qualities, several different species of ladybugs have been introduced into New York as a method of aphid control. Unfortunately, many native ladybugs (such as the nine-spotted) are now rare because of these exotic introductions.

Wild Rose



Wayne Trimm

Rosa carolina-Year adopted: 1955

The wild rose is New York's state flower. There are a number of different species that grow in various open spaces across the state. Some grow in wetlands while others like the pasture rose are found along dry roadsides and in hedgerows. All are characterized by having five usually pink petals above five sharp, green sepals. Most species are armed with sharp prickles which discourage browsing by cattle and deer. Preferring full sun, this flowering plant can grow in dense colonies from roots and underground stems. As a low shrub in windbreaks or hedgerows, the wild rose enhances both the landscape and wildlife habitat. Its pink flowers bloom from May through August. Beginning in July, the wild rose produces hips (or fruits) which often remain through the winter. Rose hips are high in vitamin C and are valuable as food for many species of birds and small mammals.

Snapping Turtle

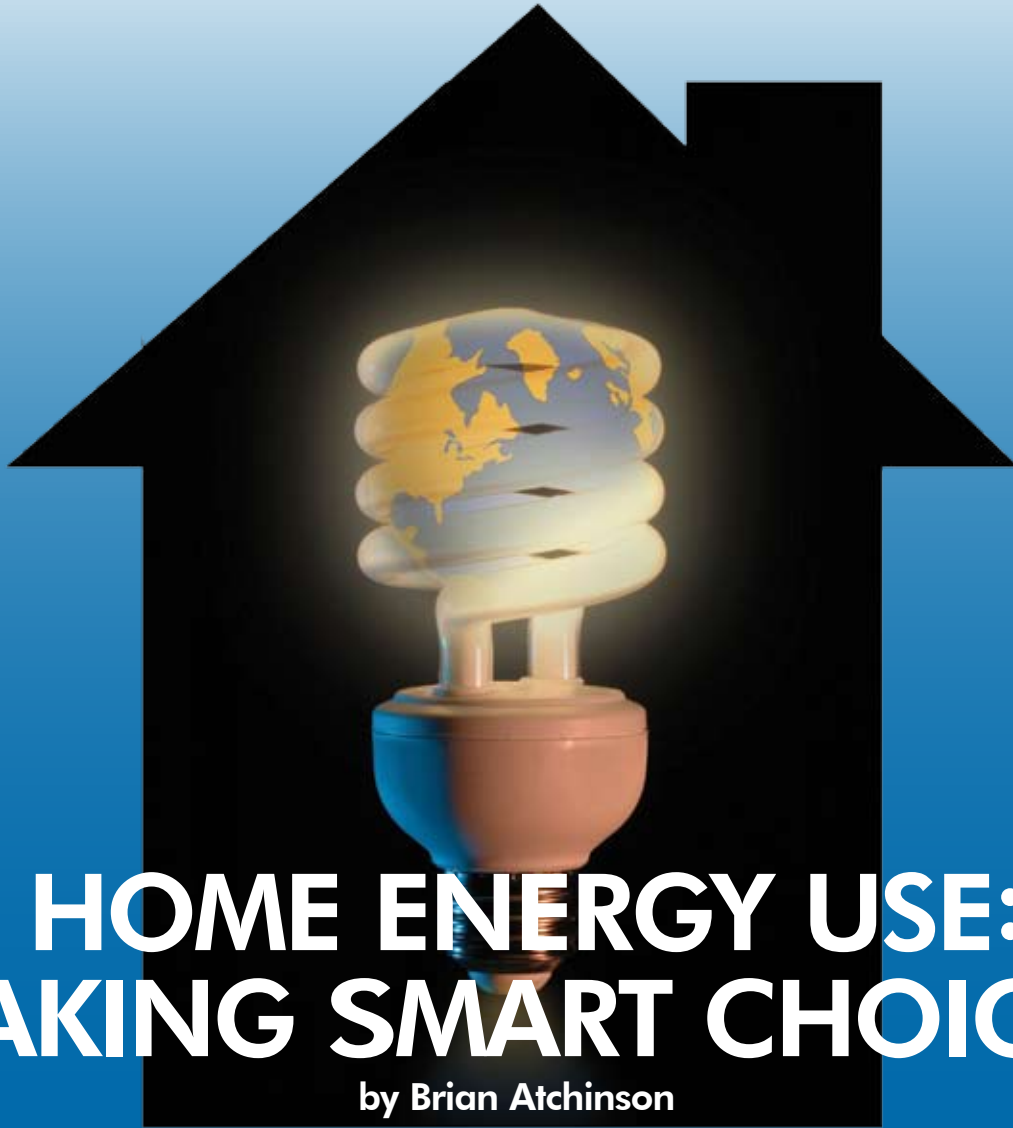


Jean Gawalt

Chelydra serpentina-Year adopted: 2006

New York's state reptile, the snapping turtle is the state's largest freshwater turtle with some adult snappers reaching 35 pounds in weight, and having a shell length of 20 inches or more. Often seen in or near lakes, ponds, rivers, streams and marshes, they are easily identified by their distinct saw-toothed tails and jagged, saw-toothed rear edge of their shells. These turtles are known for their aggressive nature and if threatened, will attack on land, but prefer to flee in water. Snappers often scavenge, but they also take live food ranging from small invertebrates to young waterfowl or small fish.

Between April and November, female snapping turtles lay 20-40 Ping-Pong-ball-size eggs in a hole in sandy soil near water. The eggs hatch in 80-90 days, and the quarter-sized young immediately head for the safety of water. Snapping turtles can live 30-40 years.



HOME ENERGY USE: MAKING SMART CHOICES

by Brian Atchinson

Energy efficient choices at home can cut families' greenhouse gas emissions and energy bills by about a third without sacrificing features, style or comfort.

The energy we use in our homes often comes from the burning of fossil fuels in power plants, a process that contributes to smog, acid rain and global warming. In fact, according to the U.S. Environmental Protection Agency (EPA), the typical home adds more greenhouse gas pollution to the atmosphere every year than the average car. However, energy efficient choices at home can cut families' greenhouse gas emissions and energy bills by about a third without sacrificing features, style or comfort.

Small Changes Help

New Yorkers have access to many state resources that help us use less energy at home and live a life more in tune with the environment. From changing a light

bulb to installing a photovoltaic (PV) electric system, the New York State Energy Research and Development Authority (NYSERDA) is the first place residents should turn to for ways to make smart energy choices for their homes and, ultimately, the environment.

“Investing in energy efficiency at home is a big step towards protecting the environment,” says Peter R. Smith, former President and CEO of NYSERDA. “Some people want to make small changes, like upgrading energy-efficient lighting and products. Other people are interested in wind power, geothermal heating and cooling, and solar electric power. NYSERDA has programs for both ends of the spectrum and virtually everything in between.”

Smart Energy Options for Existing Homes

The Home Performance with ENERGY STAR Program is one of the most practical ways to improve the environment inside and outside of an existing home. Through this program, homes of any size or style can be improved to use up to 40 percent less energy, significantly reducing their greenhouse gas emissions.

Through the Home Performance with ENERGY STAR Program, a participating Building Performance Institute (BPI) accredited contractor will test a home's energy performance and overall health and safety. During the assessment, the contractor will test the home for air leakage and will look for opportunities to improve the home's insulation, heating and cooling systems, windows, appliances and lighting. The contractor will also inspect and test combustion appliances such as heating equipment, ovens and water heaters to make sure dangerous combustion gases like carbon monoxide are not leaking into the home. When the assessment is complete, the contractor will identify what improvements can be made, the cost of making those improvements, and what kinds of financial incentives—such as low-interest financing—are available to homeowners. BPI accredited contractors use what they learned in the assessment to complete the energy-efficient improvements.

Multifamily buildings can also be improved to use less energy, increase comfort and safety, and reduce environmental impact. Thanks to NYSERDA's Multifamily Performance Program, energy efficiency services and incentives are available to owners, developers, and facility and property managers of existing and new residential buildings with five units or more. The energy efficiency and performance of existing multifamily buildings are assessed and improved much like a single-family home would be through Home Performance with ENERGY STAR.



Inadequate or improperly installed insulation can lead to wasted energy. Contractors participating in Home Performance with ENERGY STAR are trained to check insulation levels and make sure it is installed properly.

Thanks to investments made by homeowners and NYSERDA financial incentives, more than \$110 million in home improvements have been completed in recent years. This program has helped the state remove nearly 52,000 metric tons of carbon dioxide from the atmosphere every year. That's like taking an estimated 10,300 cars off the road for a year.

Smart Energy Options for New Homes

New Yorkers are becoming increasingly interested in green construction when it comes to buying and building a new home. Although sustainable products and materials are becoming more popular, energy efficiency is the best place to start when it comes to creating a green home.

NYSERDA works with a network of builders from all across New York State to construct energy-efficient new homes. These completed homes earn the title, "New York ENERGY STAR Labeled Home." A home earning this label is built to the highest energy standards, ultimately using approximately 30 percent less energy than a conventionally-built new home.

New York ENERGY STAR Labeled Homes achieve these benefits by using improved air sealing and insulation techniques, high quality windows and doors, high-efficiency heating and cooling systems, well-sealed duct systems and ENERGY STAR qualified lighting and appliances.

Most importantly, each New York ENERGY STAR Labeled Home must pass a stringent evaluation that involves a computer-based energy analysis, inspections of systems and the way they work together as a whole, and certification testing. This advanced whole-house performance testing helps ensure that the home is properly insulated, doors and windows are installed correctly, cracks and gaps in a home are sealed, and carbon monoxide gases from appliances and heating and cooling systems are vented properly.

As a result, New Yorkers benefit from not only reduced emissions from household pollution but also reduced energy use and lower monthly energy costs, lower operating and maintenance costs, increased health and safety in the home, and a quiet, more comfortable and durable living environment.

More than 9,000 New York ENERGY STAR Labeled Homes have been built in New York, resulting in eliminating more than 40,000 metric tons of carbon dioxide from the atmosphere every year, the same as taking approximately 8,000 cars off the road for a year.

Newly constructed buildings with five units or more can also earn the ENERGY STAR label. A New York ENERGY STAR Multifamily Building must meet a set of energy standards and use at least 20 percent less energy than those built to standards set by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The energy savings and performance standards are met by using techniques similar to the single-family New York ENERGY STAR Labeled Home.

Smart Energy Options for All Homes

A simple way to cut energy use in any home is to use products that have earned the ENERGY STAR label. ENERGY STAR qualified lighting, appliances and home electronics can cut energy bills by up to 30 percent and reduce greenhouse gases generated from energy consumption. Additionally, unplugging home electronics such as TVs, VCRs, DVD and CD players, or using a power strip to turn them off when not in use, is an easy way to make a positive impact on the environment.

To reap even greater environmental benefits and energy savings, New Yorkers can combine a whole-house approach to energy efficiency with renewable technologies such as PV electric systems, wind power and geothermal heating and cooling systems. These systems are best suited to homes that are already operating efficiently.

PV systems convert energy from the sun to power homes. Today's PV systems are primarily grid-connected, meaning that the home has an electric meter. On days when power demands exceed the output of the solar system, the home can draw power from the electrical grid. On days



Combining a whole-house approach to energy efficiency with renewable technologies like solar electric systems, wind power and geothermal heating and cooling systems reap even greater environmental and energy-saving benefits.

when the PV system generates more power than is needed, the electricity produced is subtracted from a home's utility bill. The meter actually spins backwards and the homeowner gets credit for the energy.

Wind turbines can be used to produce electricity for a single home or building, or they can be connected to an electricity grid for more widespread electricity distribution. They can even be combined with other renewable energy technologies.


Geothermal systems take advantage of the earth's ability to store heat in the soil. Even in northern climates, the soil maintains a temperature of approximately 50 degrees four feet beneath the earth's surface. Heat pumps move this heat energy from the soil to the house in the winter and operate in reverse in the summer, pulling heat out of the house and into the soil. Ground-source heat pumps can use much less electricity than conventional electric heating and cooling systems.

NYSERDA provides incentives for the purchase of grid-connected PV systems through an eligible installer to help offset the total installation costs by 40 to 70 percent. Additionally, cash incentives and tax credits for new grid-connected wind energy systems are also available in New York and vary depending on the installation. When combined with NYSERDA's other residential energy-saving programs, cash incentives for wind power could help reduce the total installation costs by 15 to 70 percent.

As more homeowners take advantage of products and services that help them better manage household energy, it will be easier to protect New York State's most cherished natural resources from the comfort of our own homes.

To learn more ways to help protect the environment by making smart choices about energy use at home, visit www.GetEnergySmart.org or call toll-free 1-877-NY-SMART. For more information about renewable technologies, visit www.PowerNaturally.org.

Brian Atchinson is a project manager at NYSERDA and works to develop the infrastructure for building performance and residential ENERGY STAR market transformation programs.



A simple way to decrease wasted energy and the emissions it causes is to choose products that have earned the ENERGY STAR label, such as this compact fluorescent bulb.



On Patrol

Real stories from officers in the field

Compiled by Lt. Ken Didion



EDITOR'S NOTE: *Environmental Conservation Officers (ECOs) are police officers sworn to uphold the laws of New York State with an emphasis on the Environmental Conservation Law. These are actual accounts.*

Dumb Prank—Livingston County

While on patrol, ECO Brian Wade monitored a 911 call reporting a drive-by shooting. A Time Warner cable installer had just been shot with a pellet gun. The suspects had shot the man while driving around in a Dodge Neon. ECO Wade was patrolling nearby and managed to meet the suspect vehicle at an intersection. The officer followed the Neon until a Village of Geneseo police unit joined him. Using the two police vehicles, the officers made a felony vehicle stop. Upon securing the Neon's occupants, ECO Wade located what appeared to be a military assault rifle. Closer inspection revealed the rifle to be a fully automatic Crosman air rifle. The gun fired hard plastic pellets at a high rate of speed and the red barrel of the gun had been covered with black tape to make it look more realistic. The Time Warner employee identified the individuals in the Neon as the ones who had shot him. He was relatively unhurt, but his back was covered with welts from the pellets. Geneseo police charged the suspects with assault in the 3rd degree, menacing, criminal mischief, and reckless endangerment. ECO Wade issued the individuals a ticket for possession of a loaded firearm in a motor vehicle.

Fishy Felon—Kings County

While monitoring fishing activity along Coney Island Creek in Brooklyn, ECO Matthew LaCroix came upon a fisherman with an undersized striped bass in his bucket. A police database check indicated the fisherman was wanted on an outstanding felony warrant. The man insisted that he was not the person on the warrant, but was taken into custody. Members of the New York Police Department's Brooklyn warrant squad arrived at the precinct with the warrant and

pictures of the defendant. The fisherman was positively identified and arrested for promoting dangerous drugs, a Class B felony. ECO LaCroix also issued the fisherman a ticket for illegal possession of undersized striped bass.

Crab Pot Blues—Westchester County

While patrolling the Hudson River, ECOs Steve Shaw and John Helmeyer encountered a man pulling crab pots near Verplank. Officer Shaw recognized the man and his vessel from previous patrols. The man was suspected of taking crab over the limit and selling crabs commercially without a license. The ECOs watched with binoculars for a time and then followed him to a local marina. At the marina, the fisherman was checked thoroughly and found to be in possession of 275 blue crabs—225 over the daily limit! A number of the crabs he possessed were under the size limit. He admitted to selling the crabs locally for \$6 a dozen. The crabs were seized and the ECOs charged the violator with illegal commercialization of blue crabs, taking blue crabs over the daily limit, and taking undersized blue crabs. He was subsequently fined \$500.

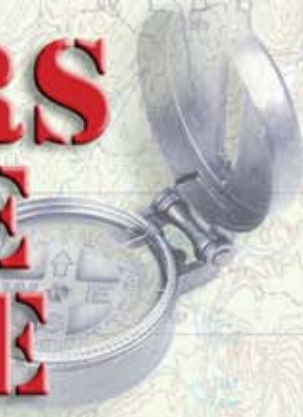
Ask the ECO

Q: Can I carry shotgun shells loaded with bird shot when I am hunting deer?

A: Yes, you may carry bird shot of any size with you when you are hunting deer during the regular season. Conservation Law prohibits you from hunting deer with a shotgun loaded with shells other than shells loaded with a single round ball or a single slug. But there is no law that prohibits you from stopping your hunt for deer when you see small game, unloading your slug(s), loading shotgun shells of your choice, and hunting for small game.



RANGERS TO THE RESCUE



Compiled by Lieutenant Chris Liebelt

Editor's Note: *These are actual accounts about DEC Forest Rangers and their work.*

Dehydrated—Essex County

During August, an experienced group of hikers planned to hike the Northville-Placid trail from Long Lake to Lake Placid. On the second day, nine miles into their hike, a 41-year-old member of the group began to experience mild nausea and felt tired. The group decided to take a break at the Seward Brook lean-to to give their companion some rest. It was late afternoon and the hiker wisely decided to spend the night in the lean-to hoping his illness would abate. He felt somewhat better in the morning and hiked for approximately five miles. When he reached the lean-to at Duck Hole, his condition took a turn for the worse and he could not continue. His nausea was severe and he was very weak. Another group hiking the trail arrived at the lean-to and called the Forest Ranger Dispatch Center in Ray Brook. Ranger Joe LaPierre was delivered to the scene by helicopter and determined an immediate evacuation was necessary. The subject was flown directly to the hospital and was treated for severe dehydration and electrolyte imbalance.

Close Call—Lewis County

Forest Ranger John Scanlon was on routine patrol in Lewis County on a day when weather conditions were just right for a wildfire. Sure enough, during mid-afternoon, a radio call went out reporting a fire in the town of Watson. The fire had started when a wind gust blew burning debris from a residential burn barrel. The fire spread quickly. By the time Ranger Scanlon arrived, the fire had spread into the woods and consumed more than an acre of forest. The fire was headed for the owner's home and barn, making a bad situation potentially disastrous. Local fire departments responded and rapidly helped Ranger Scanlon set up an effective pump system. Decisive action by Ranger Scanlon and the fire departments brought the fire under control quickly, and additional property loss was prevented.

New York State Conservationist, October 2007

Signal Shot—Washington County

Diane Litynski planned on spending the day enjoying the views of Lake George from the top of Buck Mountain. Ms. Litynski hiked to the summit by mid morning. She spent some time there looking out over Lake George and the surrounding area, and started her climb down the mountain. During her descent she became disoriented and lost the trail. Bad weather was approaching quickly and she decided to stop and call for help. Forest Rangers responded and began searching for her. Forest Ranger Laczko contacted the subject by phone and, using landmarks and his knowledge of the area, was able to determine her general location. Other Rangers were called in to search that area. When Ranger Laczko arrived in her vicinity, he contacted her by phone a second time. He fired a signal shot, and Ms. Litynski described where the sound came from. Using that information, rangers located her a short time later. She was unhurt and required only an escort out of the woods.

Back Country Tip

Campfire Safety

If you feel a campfire is necessary in the back country, keep it small and safe. Use a stone fire ring to contain your fire. If a safe fire ring is available, use it instead of building a new one. Remove all flammable material, like leaves and sticks, from a three-foot radius around the ring. Avoid placing your campfire over shallow tree roots or under low, hanging branches. Keep your fire away from your tent or other flammable objects. Burn only dead and downed wood. Do not burn garbage or start your fire with liquid fuel. Make sure your fire is completely out before you leave the site. If you built a fire ring, wait for the stones to cool off and return them to where you found them.

New York's bear population is on the rise. At the same time, human development has expanded further into bear habitat.



BEAR with us

By Alex Hyatt

What would you do if you saw a black bear rambling through your back yard?

This question faces a larger number of New Yorkers each year. With increasing bear populations, DEC wildlife biologists are confronted with a growing challenge of educating the public about what to do when encountering a bear and how to avoid problem situations.

It's not an easy task, according to DEC's bear management team, a group comprised of DEC bear specialists from across the state. In fact, a study conducted to judge the effectiveness of the bear team's efforts to educate the public showed it was hard to get people to do their part to avoid conflicts with bears.

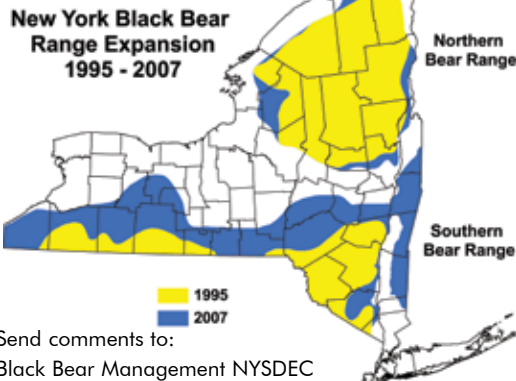
"Very few people changed their actions after being given information. And while the study documented some individual-level change, community-wide change

is critical in reducing bear attractants and thus effectively decreasing bear-human conflicts," said Jeremy Hurst, DEC's big game biologist in Albany.

To combat the problem, DEC produced a new DVD that provides tips on how to keep back yards free of attractants, and practical advice on what to do when encountering a bear. It also provides a wealth of information about the black bear, one of New York's most misunderstood mammals.

What Causes Bear-Human Conflicts?

Bear-human conflicts typically occur when people inadvertently give bears a food source. Bears can become conditioned and will return again and again to an area where they have previously found food. In those suburban areas that are close to bear habitat, the path of least resistance for a bear to find food is often a bird feeder, garbage can or an outdoor pet food dish.



Send comments to:
 Black Bear Management NYSDEC
 Division of Fish, Wildlife and Marine Resources
 625 Broadway, 5th Floor, Albany, NY 12233-4754
 or fwwildlife@gw.dec.state.ny.us

Bear Tales Wanted

Black bears have increased their range substantially in New York during the past decade. While bears are occasionally seen in every upstate county, the map details the primary areas where black bears occur. (These ranges are based on records of breeding female bears.)

If black bear populations continue to expand, the potential for bear-human conflicts increases. This poses a management challenge for DEC, who needs to find a balance between an increasing and expanding bear population and minimizing conflict.

DEC would like your input on the impacts of black bears living in your area. If you have any comments about bears in your area, let us hear from you.

“Anywhere there are bears and people that intentionally or unintentionally provide a potential food source, there can be problems,” Hurst said.

Even a dirty barbecue grill can attract bears from miles away. Keeping garbage contained, cleaning up cooking areas, removing bird feeders during spring and summer, and being careful not to leave food outdoors are important steps that help avoid most problematic bear situations.

Biologists point out that during a dry summer—when bear’s natural food sources are diminished—the potential for conflicts increases. “Since black bears adjust their habits according to where they can find food, if you eliminate the food source, you can usually avoid a problem situation,” explained Lou Berchielli, DEC’s wildlife damage specialist.

In some cases, biologists may undertake a series of aversive actions to discourage bears from returning to certain human environments. These steps include harassment with noisemakers, the use of pepper sprays specifically designed for bears, shooting the bear with non-lethal rubber bullets, and if necessary, capture and relocation. Relocating problem bears, however, rarely works in the long run, Berchielli said, because relocated bears will usually return to their home range. Sometimes repeat offenders must be put down.

Increased Opportunities for Sportsmen

Another option available to wildlife managers is to reduce bear populations through hunting. “Hunting is the most effective tool DEC has to reduce bear populations and so is essential for reducing bear-human conflicts,” said Hurst.

To that end, DEC continuously assesses, and adjusts if necessary, bear hunting seasons and areas as one method of managing the state’s bear population. To get a handle on the current size of the state’s bear population and bear-human conflicts, DEC uses a variety of management

tools, including public input. This input is important in identifying impacts associated with bears, and biologists use this input to help determine what management actions will be taken, such as expanding bear hunting areas or adjusting season dates.

Since 2004, DEC has expanded hunting opportunities in the southern range to increase the black bear harvest and reduce bear-human conflicts.

For more information about black bears in New York, and for information about the bear hunting seasons, visit www.dec.ny.gov.

Alex Hyatt is assistant editor of *Conservationist*. He lives in North Greenbush.

DEC Releases Award-winning Bear DVD

DEC and its partners confront the challenges of black bear management head-on in a new DVD entitled *Living with New York Black Bears*. Funded by a grant from the U.S. Fish and Wildlife Service, the award-winning DVD is available at public libraries and DEC regional offices across the state.



Food, from garbage to bird seed to barbecue grills, will attract bears.

BECK'S BIG BUCK



By William Beck

I can vividly remember Sunday hunts with Dad. I was probably about six or seven years old when these outings began. Sunday afternoon was about the only leisure time he had, since his job as a mason required him to work six days a week. Attendance at church was a "must," and was followed by a quick lunch. Then we were out the back door; he with his Montgomery Ward double-barrel and me with a stick.

Photos provided by author

Dad emigrated from Germany, from a family of farmers. He told me he never would have been able to hunt in Germany, since only the affluent were afforded that privilege.

Game was plentiful near our home in Rensselaer County. Our dog, Jippy, would normally run rabbits past Dad. As I grew older, I swapped my stick for a BB gun. We would always traipse through the nearby orchard, grapevines and hedgerows in the late afternoon, to try to find grouse feeding. Occasionally, Dad would shoot a grouse, never an easy task. I can still recall a beautiful cock pheasant that our dog Jippy flushed. Dad missed with both barrels...and I couldn't believe it.

At the age of fourteen, I bought a 20-gauge Iver Johnson single-barrel shotgun. I soon discovered that, although it was easy to carry, it wasn't the ideal upland gun. I can still remember a sunny, warm, gorgeous October afternoon when Jippy's replacement, a beautiful female English Setter, pointed a cock pheasant. Dad slowly approached the bird, flushed it for me, and I killed it with that gun.

As I grew into an adult, Dad and I shared other outdoor experiences. On opening day in 1951, I took him to the Adirondacks to hunt deer. Before that time, he had never hunted outside of our Rensselaer County town. In those days, the trip north took between three and four hours. We left home in the morning, and when we got to our destination, we each went our own way. Dad found an abandoned pasture to watch over, fell asleep and awoke to find a big buck and doe feeding. He shot at the buck, which soon disappeared into the thick underbrush. Since it was almost dark, Dad marked the spot and told the story when he returned to camp.

The next morning, I quickly found a massive set of antlers and a huge deer lying on its side very near the pasture where Dad had been hunting. Word spread quickly after we returned to camp with his prize. A number of other hunters came to admire the deer, take pictures, and meet Dad. Boy, was he proud. And I was hooked on Adirondack deer hunting.

Today, Dad's trophy rack (a non-typical 17 points) is the centerpiece over the mantel in our Adirondack cabin, flanked by four of my best racks. The cabin is only about a mile from where Dad shot that deer. Unfortunately, we lost Dad in 1959 and he never saw the cabin.

Time passes, and now I'm the old man in this story. Unfortunately, my son and I don't have the time to share regular hunts. I taught him to fish and hunt and like his late grandfather, he shot a trophy buck which



Hunters from neighboring properties came to admire the 17-point buck. Dad was a proud hunter with this once-in-a-lifetime trophy buck.

is recorded in the New York State Big Buck Record Book. We still manage a couple of fall hunts together, but the bulk of his time is spent with family: skiing, horseback riding and motorcross racing.

Our daughter showed no interest in guns or shooting, although both her boys have learned to shoot skeet and upland birds. Perhaps because of the electronic age, they find it difficult to muster the patience required to sit on a deer stand or spend hours afield in search of game.

Today, my wife of 52 years, Evah, has become my hunting partner. For years, she organized family activities around my hunting schedule. Sometimes I wonder about the timing of our son's birth—three days before the opening day of deer season.

It was about 15 years ago that I encouraged Evah to take the New York State hunter safety course. I couldn't have predicted how serious a hunter she would become. This one-time city girl, who had never held a gun, now goes on hunts with me. (Or is it me with her?) I could call our story "The Old Lady and the Old Man" but I don't think that would be in my best interest. She is a good shot.

I have many fond memories of hunting with my dad, my son, my friends, and now my wife. They were all made possible by my father, Wilhelm Beck, who took the time to share his passion, and his leisure time, with me. Thanks, Dad.

William Beck is a lifelong resident of West Sand Lake, and spends as much time as possible with his wife Evah at their mountain camp near Schroon Lake.

Befriending Wildlife



4-H leader Dick Orth and his Tioga County club have been putting some elbow grease into helping their local bat and bluebird populations. Last year, the club—made up of nine teenaged girls—built bluebird nesting boxes and donated them to an Owego park. This past winter the club constructed bat houses and donated them to Oakley Corners State Forest in Owego. Prior to mounting the bat houses, club members and parents met with Mr. John Clancy, a senior forester with DEC, Mr. Al Snover, a Vestal resident and a DEC Adopt-A-Natural Resource volunteer steward, and Tom Harvey, another volunteer. Mr. Clancy talked about bat habitat and the importance of maintaining New York State's wildlife. In July 2007, the club created a bat display for the public and showed it at the Tioga County Fair. It won blue and purple (Grand Champion) ribbons.

Officer Awarded

DEC Environmental Conservation Officer (ECO)



Michael C. Terrell has been named the 2006 New York Officer of the Year by the Northeast Conservation Law Enforcement Chiefs Association (NECLECA). NECLECA is an association of Conservation Law Enforcement agencies from 13 states.

ECO Terrell is a lifelong resident of Greene County and currently works in DEC's Region 4 and was also recognized in 2004 by the National Wild Turkey Federation as "Wildlife Enforcement Officer of The Year," testifying to his commitment to both wildlife law enforcement as well as his outstanding efforts in support of sportsman education and youth outreach.

Turkey Survival Study

In January 2006, DEC began a four-year wild turkey banding project designed to estimate harvest and survival rates of male wild turkeys ("gobblers") in New York. This study is being conducted in cooperation with the Pennsylvania Game Commission, Ohio Department of Natural Resources, researchers from Pennsylvania State University, and the National Wild Turkey Federation.



In winter 2007, DEC staff and volunteers banded 383 gobblers, far exceeding the annual statewide goal of 300 birds. During the spring season, 120 bands were recovered (109 hunter-harvest birds, 11 non-hunting mortalities). This includes bands from 41 birds that were banded during winter 2006 and 79 banded



during winter 2007. Whereas last year DEC recovered bands from about 27% of the gobblers banded (81 of 296 gobblers), this year the recovery rate dropped to about 21% (79 of 383 gobblers). In

either case, recovery rates have thus far been similar to rates observed elsewhere. If you are interested in participating in the study, please contact your regional DEC office.

Hunting Advocate Honored

DEC Environmental Conservation Officer (ECO)



Thomas F. Flaitz has been named the 2006 Conservation Officer of the Year by the New York Chapter of the National Wild Turkey Federation (NWTF). ECO Flaitz was selected by a statewide committee of New York State Environmental Conservation Police Officers and Investigators to receive this recognition. ECO

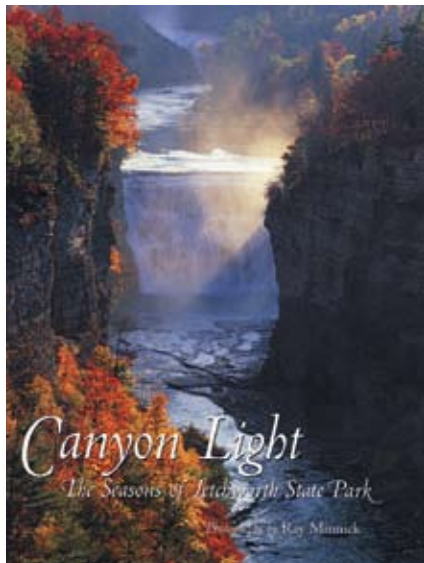
Flaitz has been active in sportsman education and the promotion of youth hunting opportunities throughout his career as an ECO.

In 1993, Officer Flaitz worked with the Orleans and Genesee County Federation of Sportsmen, local

sportsmen clubs, and individual hunters to introduce the NWTJ J.A.K.E.S. program (Juniors Acquiring Knowledge Ethics and Sportsmanship) to the two counties. In 1994, ECO Flaitz helped organize a three-day resident youth camp for bowhunters, with the first camp held at Letchworth State Park. Using this program as a template, other DEC regions now offer a similar three-day youth camp. In 2001, ECO Flaitz organized a youth turkey hunt at Iroquois National Wildlife Refuge. Thanks to his work, in 2004 the state-wide two-day youth turkey hunt became a reality.

A Walk in the Park

Many *Conservationist* readers have inquired about Ray Minnick's photography in the August 2007 issue (Unforgettable: Letchworth State Park). Those



readers are in luck. Minnick's brand-new book of photographs, *Canyon Light: The Seasons of Letchworth State Park*, is now available at regional bookstores. Published in partnership with the New York State Office of Parks, Recreation and Historic Preservation,

the book is a solid choice for your coffee table. It sells for \$19.95 and weighs in with 108 colorful pages. The photographs it contains are top-notch and offer an excellent and comprehensive look at one of New York State's most attractive state parks. Visit www.burlinghambooks.com.

Rifles Allowed

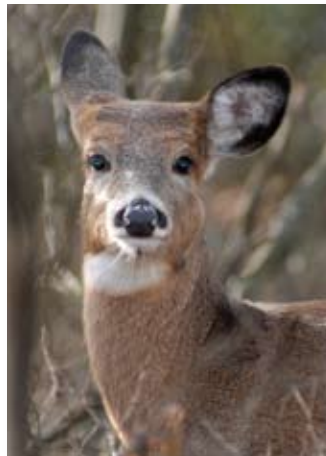
A new law allows deer hunters to use rifles in three Southern Tier counties beginning this year. Governor Eliot Spitzer approved the legislation, which allows rifle use for big-game hunting in Chemung, Steuben and Yates counties. It is similar to legislation enacted in 2005 for 10 counties in central New York and the

Southern Tier. However, this measure expires in one year and would have to be renewed in 2008 by state lawmakers.

The law will be in effect for the upcoming hunting season. Regular deer season in the Southern Zone, including all of Chemung, Steuben, and Yates counties, runs from Nov. 17 to Dec. 9. Regular bear season in the Allegany Bear Range, including portions of Chemung and Steuben counties, runs from Nov. 24 to Dec. 9; the rifle authorization applies to bear hunting in those portions of Chemung and Steuben.

White-tailed Deer Study

In January 2007, DEC initiated a study to look at the breeding activity of New York State's white-tailed deer. The last statewide study of this kind was completed by



the department in 1974 by William Hesselton and Larry Jackson. DEC biologists felt it was time to repeat this work to determine if changes in habitat and human activity in the last three decades have had an impact on reproduction in our deer herd.

The study is designed to measure conception rates, the timing of breeding, and the number of fawns that are conceived per female. The easiest way to gather this information is to check road-killed deer during late winter and early spring. Wildlife staff involved in this project worked with state and local road crews who routinely remove deer that meet their demise on our highways. After these deer are collected, wildlife technicians and biologists examine the reproductive tracts of female deer, and then determine the age and note the physical condition of each animal. By counting and measuring the fetuses found in these deer, DEC can estimate the conception rates, the dates when conception occurred, and the birthing period for this year's fawns.

In 2007, 319 female deer were examined for this project. The study will conclude next year following a second season. The results of the study will be made available on DEC's website at www.dec.ny.gov and in a future issue of *Conservationist*.

Bald Is Beautiful

One evening last July, my wife and I were driving by the Ashokan Reservoir and stopped to take a walk. We were both armed with our digital cameras, and had the great fortune to see a mature bald eagle flying over the water.



I managed to snap several photos before he flew into the water and caught a fish. The eagle then landed in a tree, too far away to get a good picture. Shortly thereafter, the bird retraced its flight right back past us with a fish in its talons.

Tom Richichi
Greenville, Greene County

You've sent us an incredible photo! Carrying a camera on your outdoor excursions is a great habit. In this case, you snapped shots of an event that many people may never have the opportunity to experience—even though the bald eagle is making a comeback in New York State (see Conservationist, December 2005). Our readers are always welcome to submit photos and questions for this section. To find out how, visit us online at www.TheConservationist.org

—Alex Hyatt, Assistant Editor

Mystery Mass

I need your expertise. I was kayaking on a small lake between Warrensburg and Chestertown and I came upon this strange-looking solid mass near an outlet. It was in about 18-24 inches of water. I won't swim in this lake again until I hear from you! P.S. I enjoy the magazine!

Dorothy Hughes
Ballston Lake, Saratoga County



You have found a bryozoan colony. Most occur in salt water but one group occurs in fresh water. They are filter feeders, not unlike coral animals, feeding

on tiny creatures they extract from the water. They are fairly common in ponds, streams and bogs, and are usually attached to twigs and submerged plants. Since they are of no danger to people you can safely resume swimming.

—Frank Knight,
Environmental Educator, Albany

High Peaks Query

Our trio was hiking in the High Peaks area of the Adirondacks last October, and upon reaching the summit of Lower Wolf Jaw we noticed this interesting growth on this spruce. We were wondering if you could help explain this phenomenon?



Larry Thomas
Saratoga Springs,
Saratoga County

Thank you for your interesting question and photo. First of all, your tree is a balsam fir and not a spruce. Spruce cones hang down and fir cones point up like candles. What you photographed are last year's cones that had shed all their bracts except those at the tip. We keyed in balsam fir cones on a web search engine and got many photos as a result—including one very much like the one you sent us.

—Frank Knight,
Environmental Educator, Albany

Write to us at: Conservationist Letters, NYSDEC,
625 Broadway, Albany, NY 12233-4502
or e-mail us at: magazine@gw.dec.state.ny.us

LETTERS

White Crow

In June, I photographed this white crow in Rochester at Holy Sepulchre Cemetery. I thought you would like to see it.



Ron Sauter
Rochester

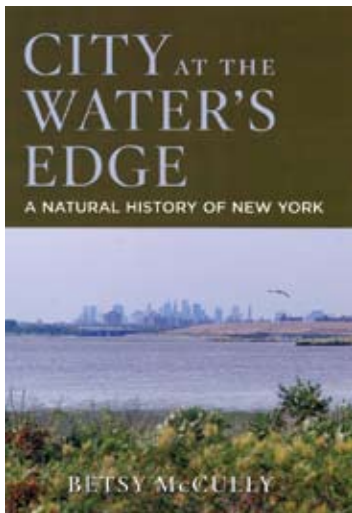
I shared your photo with Dr. Kevin McGowan of Cornell's Lab of Ornithology, who has extensively researched and written on crows and jays. He appreciated the photo and described it as "an unusual individual...that appears to be a complete albino." He has never seen one alive, but does have a specimen that looks identical to it. For more information on crows, and white crows specifically, I recommend visiting Kevin McGowan's pages on the Lab of Ornithology's website, www.birds.cornell.edu/crows/index.html and www.birds.cornell.edu/crows/whitecrows.htm

—Scott Stoner,
DEC Research Scientist, Albany

REVIEWS

City at the Water's Edge A Natural History of New York

By Betsy McCully
185 pages, hardcover \$24.95
Rutgers University Press
<http://rutgerspress.rutgers.edu>
Review by Angie Eddy



In Betsy McCully's *City at the Water's Edge* you'll find enough information about the Big Apple to last your lifetime. I was able to gain an appreciation of New York City's natural history, a history that is often overshadowed by the city's legacy as one of our world's greatest metropolitan hubs. It is very easy to pass the day by in New

York City gazing up at skyscrapers, peering into store windows, and tantalizing your taste buds with the plethora of ethnic food the city offers. It is no wonder that people tend to connect more with this man-made infrastructure rather than see themselves as part of the natural landscape. This book reminds us that the city did not always look as it does now, and that many different people have called it home.

McCully reviews how both the Lenapes and the incoming colonists managed the land in order to provide for their people and discusses the way in which they perceived property (private vs. communal). This alone is an interesting ponderance, and raises questions of its own.

The book also enables a reader to see that there were times of great environmental degradation in New York City. Far from negligent in taking an honest look at this issue, the book sheds light on the ways man has recognized his errors. It contends that general public awareness has been capable of taking these environmental problems and turning them around for the better.

City at The Water's Edge can seem like an overwhelming read due to the huge amount of information it contains—but the author does a great job providing the reader with interesting information, personal anecdotes, and supporting maps and photographs. McCully also provides the reader with examples of where to see evidence of past glacial episodes and seismic activity, where to spot the annual mating of the horseshoe crabs, and much more.

City at The Water's Edge certainly provides the reader with enough information to aid in an understanding of the natural history of the region. I'd recommend the book to anyone interested in learning more about one of the greatest cities on Earth.

Angie Eddy is a DEC environmental education assistant in New York City.

An Optimistic Look at Falling Leaves

By Russell Shefrin

Over the years, as I have witnessed the gorgeous autumn foliage in New York State, I have often been aware of contradictory feelings. On the one hand, the beauty of fall colors is a delight to the eye; on the other hand, there is more than a little wistfulness at the thought of the passing of all those leaves whose various shades of green brought such pleasure during the summer months. Indeed, though often beautiful, the leaves of autumn have been associated, in literature and song, with themes of old age and eventual death. One thinks, for example, of Shakespeare's Sonnet 73, which begins, "That time of year thou mayst in me behold, when yellow leaves, or none, or few do hang upon those boughs which shake against the cold." I suppose I am one of those eternal optimists, given to finding silver linings in clouds. So, I have been wondering if the association of falling leaves with the approaching "end" may be misplaced. As I have looked into this matter, I have become convinced that, in fact, the autumn leaves are evidence the tree is quite alive and doing what it needs to do to stay that way.

A very early snow storm (dubbed "The October Surprise" by the news media) in 2006, here in Western New York, gave me the opportunity to observe what others have described. Specifically, during the subsequent months, leaves on intact branches followed their normal cycle of coloration and shedding. However, leaves on branches which had been broken off entirely by the heavy snow simply withered on the branch but remained attached.

Apparently, then, typical leaf coloration and shedding is more likely on a tree which is functioning normally (though I have seen the process occur unusually early in the season on trees which eventually proved to be unhealthy). Some twenty years ago, Professor Brian J. Ford wrote that the leaf changes which precede leaf fall constitute a "precisely coordinated metabolic sequence" which does not seem to be what one would expect if the leaf was simply degenerating. The process appears to serve some function.



Several theories have arisen to account for the apparent purpose of leaf fall. Professor Ford proposed that deciduous trees move certain substances into the autumn leaves as an excretory process. The leaf is then shed to remove those substances. Another hypothesis is that leaf fall reduces the chance that deciduous trees will dry out during the winter. In winter, when the soil is frozen, the water so bound up in ice is not available to the tree. A warm winter day might be sufficient to cause evaporation from a leaf, but the tree would be unable to replace the water lost in the process. The tree may then be in danger of dying. Finally, it has been suggested that leaf shedding in autumn reduces the chance that snow load will damage the tree. (Those of us who endured "The October Surprise" can vouch for that idea!)

Perhaps evolution has selected leaf shedding for all these functions or some others not yet understood. There has also been some suggestion that, not only leaf shedding but autumn coloration, may serve a purpose and may not just be a by-product of leaf "senescence." For example, anthocyanins, the frequently red pigments manufactured in the fall by some trees, may serve as a natural sunscreen during bright autumn days. These same pigments are also produced in certain young plants to protect new tissues from sun damage.

It does appear, then, that the colorful falling leaves of autumn are actually a sign of health, not decay. This uplifting concept adds to my enjoyment of the fall season and the winter to come. I am reminded of the observation, by the biologist Bernd Heinrich, that the bare winter trees, while appearing dead, having shed their leaves, are, in truth, "vibrantly alive."



Psychologist **Russell Shefrin** enjoys fly fishing and nature study near his western New York home.

2006 Big Buck Club Winners

The New York State Big Buck Club, Inc. is a private organization that maintains records of large deer and bear taken in New York. Each year since 1972, the Big Buck Club has recognized the hunters who take the largest trophy bucks in New York State. The winner in each category receives an original painting by renowned artist and former *Conservationist* art director Wayne Trimm.

Largest Gun Deer

Taken in:
Chemung County
2006
Score: 209 $\frac{1}{8}$
Non typical
Points: 19
Taken by:
Bob Cuzzo



Largest Archery Deer

Taken in:
Niagara County 2006
Score: 175 $\frac{4}{8}$
Typical
Points: 12
Taken by:
Salvatore Alessandra

For more information write to:

NYS Big Buck Club
Records Office
PO Box 451
Vernon, NY 13476
or visit their website:

www.nys-big-buck.org

Artist and biologist Wayne Trimm has done paintings for each winner since the club was formed.



In This Issue:

Diligence-Yellow Lab by Anthony Padgett.
Image courtesy of Anthony Padgett,
Ducks Unlimited and Wild Wings.
800-445-4833 www.wildwings.com

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