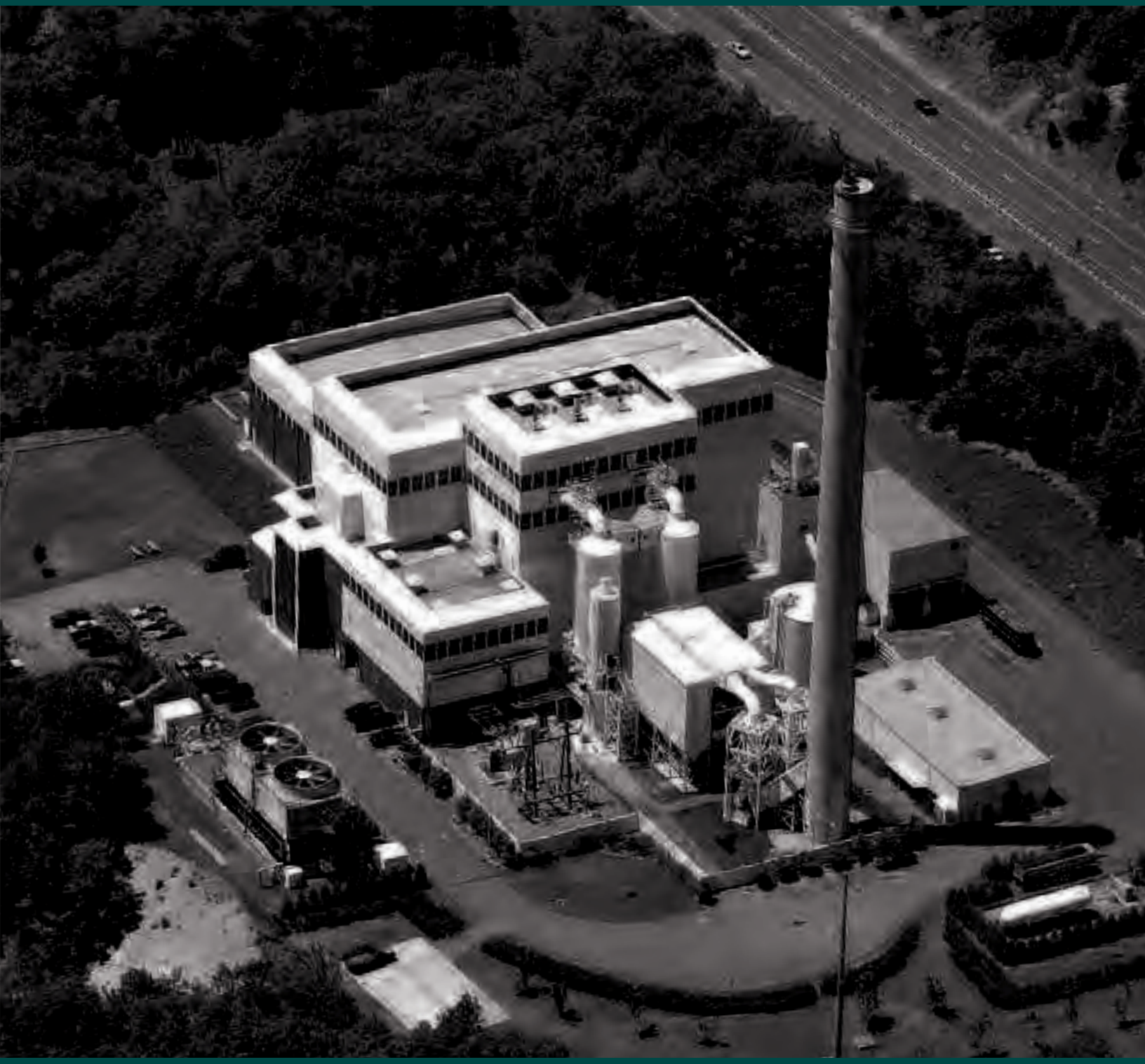
CONNECTICUT Woodlands



WASTE

HAS TRASH INCINERATION WORKED?
PHARMACEUTICALS IN THE WATER

The Magazine of the Connecticut Forest & Park Association Fall 2008 Volume 73 Number 3

CONNECTICUT
Woodlands

The Magazine of the Connecticut Forest & Park Association

Connecticut Department of Environmental Protection

In the next issue, local historian Marty Podskoch will write about the legacy of the Civilian Conservation Corps in Connecticut. Above, the CCC-built dam at Chatfield Hollow State Park.

Conserving Connecticut

The Connecticut Forest & Park Association is a private, non-profit organization dedicated since 1895 to conserving the land, trails, and natural resources of Connecticut.
The Connecticut Forest & Park Association is affiliated with the National Wildlife Federation, the National Woodland Owners Association, the American Hiking Society, and Earth Share.

Connecticut Woodlands

Published quarterly by the Connecticut Forest & Park Association, Middlefield, 16 Meriden Road, Rockfall, CT 06481-2961.
Indexed in the Connecticut Periodical Index, ISSN 00106257.
Telephone: 860-346-2372.
Fax 860-347-7463.
E-mail address: info@ctwoodlands.org
World Wide Web site:
http://www.ctwoodlands.org

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Printed on recycled paper

CONNECTICUT Woodlands

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On the Cover:
A trash-to-energy plant in Preston, seen from the air. Photo courtesy of The Day of New London.

CONNECTICUT Forest & Park ASSOCIATION

USE LESS. REUSE MORE. RECYCLE THE REST.

BY ERIC HAMMERLING

Whenever there's a school trip, we parents are encouraged to "pack a bag lunch, juice box, etc. that can be thrown away." This bothers me every time, and when I ask whether my son can use his reusable lunch bag, cloth napkin, beverage and sandwich containers that he brings to lunch every other day, I get that "Eric must be from outer space" look. Visit a fast food establishment's drive-through window and you start to understand the depth of our throwaway culture. At the end of your meal, you are left with an empty bag, too many napkins, a sandwich wrapper, a french fry holder, a straw wrapper, a straw, a cup, a lid, and a bevy of salt, pepper, and ketchup packets. Everything is designed to be once-through garbage.

CFPA Executive Director Eric Hammerling

This might bother me a little more than most people because I have some experience dealing with waste from a conservation perspective. Before working for Connecticut Forest & Park Association and the Farmington River Watershed Association, I was a part-time waste management specialist with the Center for Ecological Technology in Northampton, Massachusetts, where I coordinated a project known as the Massachusetts Materials Exchange. The Materials Exchange was set-up by CET to match businesses and institutions with excess materials with others interested in reusing by-products, surplus materials, used furniture, and unwanted equipment.

One Materials Exchange challenge was to find a way to reuse the thousands of furniture pieces that colleges would periodically discard and replace from dorms, labs, and classrooms. Working with charitable organizations such as the Institution Recycling Network, the Materials Exchange helped ensure that classroom desks and chairs were reused by schools in Haiti and Guyana, laboratory equipment was reused by a clinic in Jamaica, and residential furnishings were reused to help establish a college in Tanzania and orphanages in Liberia. In the first six months of 2007 alone, more than 36,000 items weighing over 2.8 million pounds were provided to 11 countries. Reusing donated items from more than 80 organizations in 12 states has eliminated the need for some 24,000 cubic yards of landfill disposal space.

Although this is a great success story of reuse, I remain amazed that before this solution, those reusable furnishings were simply thrown away. And isn't it strange that, for the most part, we had to send those items thousands of miles away to other countries because there wasn't a workable reuse solution in the United States? As we saw in the Beijing Olympics, America is a world leader in many ways, but the saddest way is in our waste. On the international scale, the average American consumes 10 times as much as the average person living in China and 30 times as much as the average person living in India.

Chris Jordan, a Seattle-based photographer, is using art to depict the enormity of waste in America through his "World of Waste: America's Mass Consumption in Images" exhibit. The pictures of amassed waste are amazing, but so are the statistics that he shares through his exhibit:

► Americans throw away an average of two million plastic bottles every 5 minutes;

► American shoppers use 60,000 plastic bags every 5 seconds; and

► Americans discard 426,000 cell phones every day.

The statistics on individual items that Chris Jordan features are compelling, but the overall numbers are truly overwhelming. According to the U.S. Environmental Protection Agency, U.S. residences, businesses, and institutions produced more than 251 million tons of municipal solid waste in 2006, which is approximately 4.6 pounds of waste per person per day. The largest portion of this waste is paper and paperboard products (85 million tons in 2006).

Recycling is good and reusing is better, but reducing the amount of "stuff" you consume and/or throw away is even better still. Just think, if all Americans reduced their waste output by just one pound to 3.6 pounds of waste per day (still 24 times as much as the average person living in India on a daily basis), *over a year's time, the national waste total would decrease by 55 million tons.*

I'm an optimist and believe strongly that the little actions that each of us take really do add up. If you would like to reduce your personal waste, here are a few tips:

► Purchase durable, long-lasting goods.

► Seek products and packaging that are as free of toxics as possible.

► Encourage the redesign of products to use fewer raw materials in production, have a longer life, or be used again after its original use.

Using less, reusing more, and recycling the rest will cut down on waste and help our natural resources to last for future generations to enjoy.

Eric Hammerling is the executive director of CFPA.

Connecticut Woodlands Moves to a New Level

BY DAVID PLATT

You can't pick up a newspaper or magazine these days without hitting upon an article on the serious things we are doing to our planet. A brief random sample of my reading over the past few weeks is instructive.

One article discusses ice mass research in Antarctica, which hosts practically all of the land-based ice mass on earth. Whichever account you believe about the rate of global warming and its effect on the rate of ice melt, a 1-percent reduction in the Antarctic ice mass would lead to a 2-foot rise in sea levels. Another discusses the effects of sprawl, particularly on our large forest blocks that are instrumental in processing carbon dioxide levels and hosting countless plant and animal communities. Yet another recounts the coming demise of the polar bear, which depends so heavily on ice to reach its food supply. Countless reports address the myriad of energy issues facing us, including that minor consequence, the price at the pump.

Christine Woodside

CFPA President David Platt

Solutions to these vexing problems are out there, but they are not easy and almost always involve significant advances in technology and sacrifices in the way we live and work. I am heartened to see some of the progress. Many of the largest corporations in the world have made changes in their corporate governance stressing sustainable business practices, including substantial reduction in waste and air and water emissions. Research budgets in the private section appear to be expanding rapidly with the aims of reducing the cost of doing business and taking advantage of the opportunities some of these gnarly problems present.

People are slowly changing these habits by driving less, walking and biking more, and refining their purchasing habits. Even the pope has gotten into the act, announcing the creation of a carbon-neutral economy at the Vatican through forest restoration efforts in Hungary.

I sense that a call to arms finally has been sounded, and that governments (at least some of them), businesses, and individuals are beginning to respond—not necessarily always because they want to, but because we have to. Although the problems we face may seem insurmountable at times, I am optimistic that action, on global, national, and local scales, is being taken. I know I speak for all of those involved in Connecticut Forest & Park Association when I say that CFPA will continue to do its part here in Connecticut in helping to continue to raise awareness of these issues and spur greater levels of action on all fronts.

Along these lines, I am delighted to introduce this inaugural issue of our new format for Connecticut Woodlands magazine. Though we may be biased, we at CFPA believe that our magazine has developed over time into the premier voice on environmental issues affecting Connecticut and beyond. With this issue, we are taking Connecticut Woodlands to a new level. Our magazine will now contain more feature articles on the weighty issues of the day. Most of the program announcements and other news of CFPA happenings will now be reported to you in a new newsletter we are launching to keep in touch with our members. We hope you enjoy these changes, and welcome your feedback.

The Dump, Historic Relic

Bring back dump-picking to save money and the environment

This is a partial list of items my husband, Nat, with almost no help from me, has acquired at the dump, more properly called the waste transfer station, in Deep River, where we have lived since 1992:

Wicker furniture, yard umbrella, trashcans, recycling bins, two or three coffee makers, silver bowl engraved with "Oak Ridge Golf Club 1925 Ladies Putting Contest," British landscape painting, dozens of stereo speakers, stereo electronics, audio turntables, vacuum cleaner, microscope, chemistry lab equipment, electronic test equipment, Renaissance Revival loveseat, antique dresser with marble top, various books, various LP records including all of Bob Marley's albums, roof shingles, lumber, scrap wood, bottles of wine (not very good), two enameled cast-iron Christmas tree stands, several cameras (some broken), camping equipment, an air popcorn popper in the original box, several folding clothes-drying stands (which the attendant began saving for me), a washing machine, latex paint, dollhouse, doll chest, and someone's wedding album, which we looked at somewhat wistfully and then took back.

Nat is so well known at our bulky waste pile at the edge of the town's landfill, one of the last in the state that still has room, that once when I showed up without him, in his van, the attendant expressed shock. He then confided, "He comes here several times a day."

I didn't doubt it, but it took me a few more years to figure out the extent of Nat's fame in the waste circle. Last year, our friend Kurt planted a box for a valuable Leica camera lens at the edge. Of course, Nat opened it up, finding a rock and a note: "Hi, Nat."

These days of relaxed picking from the bulky waste pile are about to end. When our landfill runs out of space, it must close. Just as our kitchen trash and recyclables have left by truck for incinerators and recycling plants for the last many years, now too must the furniture, wood, forgotten appliances, and anything else bigger than a breadbox first pile up in a deep dumpster at our transfer station, and then get whisked away in a truck destined for a larger landfill out of state. Removing waste from the dumpsters, officially, isn't allowed. Sometimes Nat has brought home something from the metal dumpster that, technically, was off limits, but attendants sometimes look the other way. Dumpster diving is a surreptitious hunt. It's harder and scarier than just picking up things people placed on the ground near where it would be buried to top off the landfill. In my family, we dread the time when every last thing gets sorted for transport, not only because Nat might be considered a criminal, but because it will mark a more complicated, more expensive, less efficient, less friendly world.

There's an alternative to sorting, guarding, and trucking away dumpsters of larger items: continue to simply pile up those larger items they call bulky waste, and let townspeople pick through it and take it away. One step away from this is to do what many towns in New England now do: operate "swap shacks." The first I ever saw was in Truro, Massachusetts, but several towns in Connecticut run them. A swap shack is the drop-off point for bulky waste. Residents leave unwanted clothing, dishes, toys, furniture, and the like, at the swap shack. An attendant sorts the stuff into a sort of thrift shop. Everything is free. Of course, the towns must pay the attendants, without whom the shack would become unwieldy, but this approach is the closest to pure dump picking.

Allowing dump picking, or opening swap shacks, would save towns and people money and help the environment. My husband has saved us probably thousands of dollars by salvaging things we could use. He's also sold stuff for thousands of dollars, reduced bulky waste, and cut dumpster loads in our town.

In the future, Nat must become either a dumpster diver or a solicitor at the entrance to the transfer station, offering to take things out of the pickup before they have to drive inside. His interest in waste can all be very funny—weird, even. But people like my husband are the master recyclers of the world.

— Christine Woodside

COMING IN THE NEXT ISSUES OF

CONNECTICUT WOODLANDS

Winter 2008
INVASIVE SPECIES

A primer on invasive insects, pathogens, and plants

Holding back burning bush and barberry

Connecticut promotes its native plants

Has Trash Incineration Worked?

Trucking, separating, burning, and making electricity replaced town dumps 15 years ago

One of the state's four municipal trash incinerators on the Thames River in Preston

Christine Woodside

BY GAIL BRACCIDIFERRO

A massive metal claw resembling a spider grown to Godzilla proportions is lowered into a sea of food scraps, plastic bottles, broken children's toys, fast food wrappers, crumbled cardboard boxes, and black and white plastic bags. Its claws clench a huge ball of household detritus. A man sitting behind a wide glass partition several stories above the concrete floor where garbage trucks dump their loads shifts the levers that control the claw. It slides to the left and releases its load into a tube where a fire burns at nearly 2000 degrees.

On another floor of the trash-to energy-plant that towers over the banks of the Thames River in Preston, a group of workers sits in front of a wall of computer screens monitoring the plant's incinerator temperature and emissions of substances such as lead, mercury, carbon monoxide and dioxins. The technology also measures the plant's output of electricity.

This plant, one of four in the state overseen by the quasi-public agency Connecticut Resources Recovery Authority, burns 260,000 tons of trash annually. The energy harnessed from the burning generates 130 million kilowatts of electricity.

"It's enough to power 4,000 houses a year," said Gerald D. Tyminski, exec-

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utive director for the Southeastern Connecticut Regional Resources Recovery Authority to which belong the eastern Connecticut towns that send municipal waste to this plant.

Nearly 60 percent of the trash Connecticut residents produce is brought to a facility such as the Preston trash-to-energy plant. The CRRA oversees three mass burn facilities — meaning there is no separation of materials dumped by garbage trucks — at Preston, Wallingford, and Bridgeport. Its fourth plant in Hartford is a refuse-derived fuel plant at which recyclables and noncombustible materials are separated before the remaining materials are burned.

Besides the CRRA plants, Connecticut also is home to a privately operated waste incinerator in Lisbon, a privately operated medical waste incinerator in Wallingford, and another waste incinerator in Bristol operated by the public entity Bristol Resource Recovery Facility Operating Committee.

Waste that is not burned in one of these facilities is disposed of in another fashion. About 30 percent of waste produced in Connecticut is recycled. The rest is trucked to landfills—a few within the state's borders, but most located out of state.

This system of burning, recycling, and trucking replaced, in the early 1990s, the town dumps once located in every Connecticut community. Few who remember the stinking, uncontained mountains of garbage at town dumps, where wind-blown trash could soil a wide radius and chemicals and toxins leaked into groundwater and nearby rivers and lakes, would likely argue for their return.

This system of burning, recycling, and trucking replaced, in the early 1990s, the town dumps once located in every Connecticut community. Few who remember the stinking, uncontained mountains of garbage at town dumps, where wind-blown trash could soil a wide radius and chemicals and toxins leaked into groundwater and nearby rivers and lakes, would likely argue for their return.

Both environmental groups and those who oversee waste management policy agree it is likely healthier and greener, now that the days of uncontrolled dumping are over. They also agree that both individuals and policy-makers should be working to move Americans away from the disposable, throw-away mindset that has taken hold in the country in the past several decades. In Connecticut, in fact, the state Department of Environmental Protection adopted a solid waste management plan two years ago that calls for the recycling rate to increase to 58 percent by the year 2024.

That, however, is where agreement between the two sides ends.

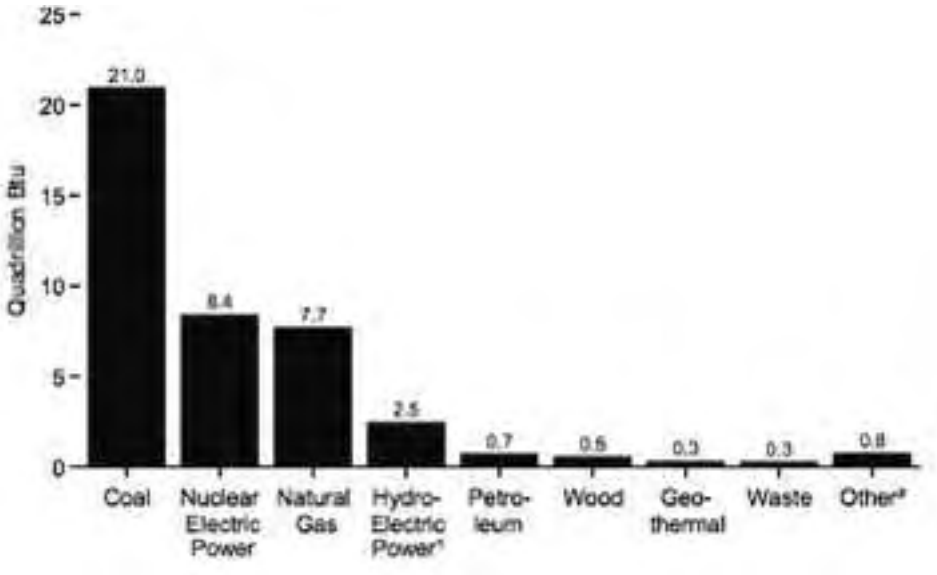
Some environmental groups contend that trash-to-energy plants pollute the air and sabotage efforts to increase the more environmentally friendly practices of recycling and composting. They also say trash incinerators frequently are located in low-income neighborhoods where residents have little political clout and emissions contribute to a variety of health problems.

Another problem is that trash-to-energy facilities produce an ash that must be deposited in a landfill. Few residents welcome the prospects of a new landfill in their community without some skepticism. Currently, many residents in the tiny rural community of Franklin are fighting the CRRA's proposal to locate an ash landfill in their town, for example.

Some groups go as far as contending that landfilling all garbage, if carried out in a tightly regulated manner, might be better for the environment than trash-to-energy plants.

Dr. Mark Mitchell, founding president of the Connecticut Coalition for Environ-mental Justice, said his group is very concerned about emissions from the state's trash-to-energy facilities. He believes the emissions are linked to increased incidences of asthma, allergies, rashes and even types of cancers among Connecticut residents, he said. "New England is the only place where these

Fuel Sources for U.S. Electricity, 2007



U.S. Energy Information Administration

Incinerating waste provided just three-tenths of one percent of electricity in the United States last year.

health problems are increasing and we think it's because of this," Dr. Mitchell said of the region's use of trash incinerators.

Dr. Allen Hershkowitz, senior scientist with the Natural Resources Defense Council in New York City, called waste to energy combustors "an unfortunate and unworkable throwback to the early 1980s" in a policy paper he wrote for the group. "Because incinerators arguably generate the widest range of air pollutants of any combustion source, it is impossible to claim that these facilities can be operated without posing meaningful health risks to workers at the plant, in the host community surrounding the plant, and to the global environment," he wrote.

David Ciplet with the Berkeley, California–based Global Alliance for Incinerator Alternatives, said there is a clear link between garbage disposal and global warming. A report titled "Stop Trashing the Climate" released in June by GAIA, the Institute for Local Self-Reliance, and Eco-Cycle concluded that the United States should adopt a zero waste approach, directing all its resources to increase recycling and composting.

"Incinerators and landfills are bad for the climate," Mr. Ciplet said in a press release about the report. In a telephone interview, he added, "Once you put the money into an incinerator, there is no money to promote other programs. Government subsidies should be going to sustainable energy sources such as wind and solar." He said some residents of the Bridgeport area, for example, advocate shutting the CRRA plant that serves towns in Fairfield and New Haven counties and adopting a goal to recycle 70 percent of the waste stream by the year 2020.

Paul Nonnenmacher, director of public affairs for CRRA, said some of the contentions made by anti-incinerator groups are fallacies. He criticizes some groups for tying all trash incinerators into one bundle and points to the emissions from Connecticut's facilities as a case in point.

CRRA facilities produce emissions well below the levels allowed by the U.S. Environmental Protection Agency. Emissions from the Bridgeport plant, for example, show that although the EPA has an emissions limit of 0.040 milligrams per dry standard cubic meter (mg/dscm) for cadmium, the Bridgeport plant's emissions in 2006 stood at 0.0010 mg/dscm. For lead, the EPA emissions limit is 0.44 mg/dscm and Bridgeport's emissions in 2006 were 0.007. The EPA has an emissions limit of 29 parts per million (ppm) for sulfur oxides and Bridgeport emitted 17.9 ppm in 2005, but emissions dropped dramatically to 5.3 ppm in 2006.

Christine Woodside

Trash destined for a trip to an incinerator waits in a giant hopper at the Deep River transfer station.

Mr. Tyminski of SCRRRA said the distinction between a trash incinerator and trash-burning facilities such as those in Connecticut that harness steam to produce electricity is the amount of pollution-control devices on the plants. He also noted that trash-to-energy facilities such as Connecticut's must follow regulations that prevent certain types of materials such as electronics, pressure-treated wood, brush, and medical wastes from entering the waste stream. At the Preston facility, pollution control devices account for more than half the plant's physical structure, he said.

Mr. Nonnenmacher said the difference between a trash incinerator and Connecticut's trash to energy plants is like the difference between "a Model A and a Porsche."

Ted Michaels, president of the Washington, D.C.–based Integrated Waste Services Association, said $1 billion has been spent nationwide to improve emissions controls on waste to energy facilities throughout the country since the EPA issued more stringent air quality standards in 2000. "These facilities are meeting standards that most other industries are not required to meet," he said. "Waste to energy is a net reducer of greenhouse emissions." EPA research has shown that for each ton of trash processed at a waste to energy plant, about one ton of carbon dioxide equivalents is avoided, he said. "They want to show that waste to energy competes against recycling," Mr. Michaels said of the groups that criticize trash to energy plants. "This is not so. Recycling rates are higher in areas where there is also waste to energy."

In Connecticut, closing even one trash-to-energy plant would lead to more pollution, Mr. Nonnenmacher said. If the Preston plant alone were closed, an additional 50 trucks a day would be sent onto Interstate 95, not only contributing to traffic congestion and air pollution, but also wasting more fuel and piling up more waste in out-of-state landfills.

"We feel that reduce and recycle is also the way to go," Mr. Nonnenmacher said, adding that CRRA runs education programs promoting recycling and waste reduction.

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Trash

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From a practical standpoint, however, beefing up recycling is not going to happen overnight, he said.

Mr. Ciplet, of the anti-incinerator group, said Connecticut could be more aggressively promoting recycling. Oakland, California, a large urban community, recycles 50 percent of its waste and hopes to boost that rate to 75 percent in just 2 years, he said. "San Francisco is nearing its 75 percent goal now," he said.

Others concerned about the adverse health impacts of incinerators said they believe EPA emissions standards are not strict enough. Dr. Mitchell, of CCEJ, said there are also many materials currently being tossed out and subsequently burned that have never even been tested for their possible adverse impacts to health.

In Preston, garbage-laden trucks rumbling into the trash to energy plant dump their loads of waste. It's a daily procession that won't slow until Connecticut residents, along with the rest of the nation, finds a way to produce less waste.

Although many in the rural community adamantly opposed the plant when it was proposed in the early 1990s, however, Mr. Tyminski said many municipal officials and residents here now admit the plant is a viable part of the waste management system.

Gail Braccidiferro, of Pawcatuck, Connecticut, is a freelance writer and a journalism professor at the University of Connecticut.

Most bulky waste landfills in Connecticut have closed. This one in Deep River is near the end of its life.

Christine Woodside

PHARMACEUTICALS IN THE WATER

BY CHRISTINE WOODSIDE

In 1998, chemists who were testing lakes and the North Sea in Switzerland for an herbicide also found a popular cholesterol-lowering drug, clofibric acid. They were surprised, and they tested more water in urban and rural lakes and rivers, finding the drug everywhere. They concluded that the drug, which is not manufactured in their country, had to have come from human wastes via sewage treatment plants' effluent.

Although scientists have long known that humans can't absorb all of the medication they take, until these findings, neither regulatory agencies nor drug makers nor environmental groups had worried about drugs in water because the belief was that the amounts were very small. But the Swiss team's discovery of measurable amounts of a drug in a body of water as large as the North Sea spurred the U.S. Geological Survey to conduct its first nationwide study of drugs and other chemicals in streams, lakes, and drinking water.

By 2002, the USGS had published the results of this study, based on tests in 1999 and 2000. A list of ordinary substances people use frequently—including medicines, caffeine, and the common insect repellent DEET—showed up in waterways tested in 30 states. Researchers tested for 95 different compounds. The USGS found at least one of that list in 80 percent of the streams it tested. This result got the attention of scientists, who began to plan more tests, and ordinary people who had never thought that the unabsorbed hormones of birth-control pills might end up in the bodies of fish.

Connecticut was *not* one of the states the USGS tested in 1999 and 2000. The closest test sites to Connecticut were in northern Westchester County, New York, not far from the Ridgefield and Danbury area, and northeastern Massachusetts — close enough to send alarm bells ringing here. The U.S. Environmental Protection Agency's monitoring of lakes and wadable streams did not test for pharmaceuticals, said Hilary Snook, an EPA scientist.

Other tests in other states have revealed drugs and pesticides in effluent and in drinking water sources. In a 1999 Georgia study by the USGS and the Centers for Disease Control, 16 pharmaceuticals were found in wastewater and 3 were found in filtered municipal drinking water. Drugs detected in that study included heart medications (diltiazem and dehydronifedipine), a diabetes medicine (metformin), and a cholesterol-lowering drug (gemfibrozil). Also found were caffeine and acetominophen (the active ingredient in Tylenol).

Connecticut law forbids sewage effluent to discharge into drinking water sources. That's good. Nevertheless, drugs and chemicals discharged in treated wastewater have done harm to fish. Researchers believe that in streams and rivers, fish are ingesting hormone-disrupting chemicals, such as surfactants from detergents and bisphenol-A, a substance used in plastics and some paper coatings. The sources of these chemicals is municipal wastewater via such ubiquitous things as laundry wash water and, some research suggests, toilet paper made of recycled paper.

Some chemicals appear to actually "feminize" male fish. For example, a study published last year found far fewer male white sucker fish near the outflow of the Boulder, Colorado, sewage treatment plant than upstream of that pipe. A study by the USGS and published last year in the journal Aquatic Toxicology found that male fathead minnows exposed for a month to wastewater effluent in laboratory tanks began producing a female egg-yolk protein, vitellogenin. A study presented in 2006 by South Carolina researchers found the active ingredient in the antidepressant Prozac, when added to laboratory tanks in concentrations similar to actual amounts in lakes and streams, interfered with the reproductive cycles of freshwater mussels. Female mussels released their larvae too soon, which meant that they did not develop.

Investigator Rebecca Heltsley of the Hollings Marine Laboratory said the study results were alarming, according to the Environmental News Service, because mussels struggle to survive with increased sediment, the loss of habitat, and competition with the aggressive nonnative zebra mussels.

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A conservation organization, the Farmington River Watershed Association, is proposing a study of the Farmington and an urban tributary, the Pequabuck River, which meets the Farmington near Tariffville Gorge, with the Connecticut office of the USGS, said Alisa Phillips-Griggs, the water quality and projects coordinator at the river association. "It's a fairly low flow river and in the summer is wastewater dominated," she said. "That might be our worst-case scenario."

Meanwhile, the USGS plans to add a list of pharmaceuticals to the next round of its study of the basins of the Connecticut, Housatonic, and Thames rivers. The USGS National Water-Quality Assessment program is part of a string of national river-basin studies of water quality. When the program began in 1991, no one was testing for pharmaceuticals. The third round of tests is to begin in 2013, said Craig Brown, a hydrologist in the East Hartford office of the USGS, and will include a list of drugs and personal care products. The USGS must receive new funding to do the testing, he said.

Other national water-quality assessments now are looking for pharmaceuticals. A study of New England coastal basins headquartered in the USGS office in Northboro, Massachusetts, is studying the Merrimack River, which flows from the White Mountains in New Hampshire to the Atlantic Ocean at Newburyport, Massachusetts.

The chemicals the USGS has been testing for in its Denver office are the following: acetaminophen (the painkiller), albuterol (an asthma drug), bendazole (for parasitic worms), caffeine, carbamazepine (an epilepsy drug), codeine, cotinine (from nicotine in cigarettes), dehydronifedipine (a heart medicine), diltiazem (a hypertension drug), diphenhydramine (the ingredient in Benadryl), ethyl nicotinate-d4, a metabolite of caffeine, sulfamethoxazole (an antibiotic), trimethoprim (an antibiotic), and warfarin (a blood-thinner).

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Across the country, since the revelations of the 1998 Swiss study, researchers are looking more carefully for pharmaceuticals. Some studies do this with an eye toward how to filter out these chemicals during sewage treatment. "We can't outlaw excretion," Ms. Phillips-Griggs said. But it could be, she noted, that redesigning plants to increase "lagoon time," or the amount of time the waste is sitting at the plant while biological processes break it down, might alter what ends up in the outflow.

One outgrowth of this new understanding about pharmaceuticals is a movement to collect unwanted drugs. "Don't flush that leftover medicine!" reads a brochure advertising the September 20 collection of unwanted pills at the Connecticut Water Company in Clinton. This was the fourth pharmaceuticals collection in the state, Ms. Phillips-Griggs said. The first was in 2006. For this latest collection, co-sponsors included CVS Pharmacy, the Connecticut Department of Consumer Protection, the Connecticut River Estuary Regional Planning Agency, the Tidewaters Institute, the Connecticut River Watershed Council, Rivers Alliance, and the Farmington River Watershed Association.

"Up until very recently people were told to discard of medication by flushing it down the toilet," Ms. Phillips-Griggs said. "Sewage treatment plants are not designed to deal with that." And neither are septic systems that filter waste in rural areas. "The fluids go into your septic field," she said. "The water ultimately finds its way into the groundwater, and the groundwater goes into the rivers."

What a Citizen Can Do

- Instead of flushing old medication, wait for a collection day. Check with the state Department of Health at www.ct.gov/dph. In a pinch, it's better to throw it in the trash than to flush.
- Reduce the number and amounts of personal and cleaning products you use.
- Become an advocate for more study of this emerging problem.

The forest landscape is well into the transformation to non-oak trees

The Uncertain Future of CONNECTICUT'S OAK FORESTS

BY EMERY GLUCK

Oaks have been part of the eastern landscape for about 10,000 years but their future does not look as bright as their past. It is possible that if sudden oak death (ramorum blight) gets established, it could decimate the oak population as it currently is doing in California. But even if it doesn't, more subtle threats may eventually greatly reduce the extent of Connecticut's oak forests.

The Oak Factor

Oaks are an integral part of Connecticut's forests. Slightly more than half of the forests in the state are considered oak-hickory forests. Acorns rate at the top or nearly the top of the wildlife food list. They provide a high-energy food source for more than 90 types of birds and mammals, including bear and blue jays. Jays consume the nut and help with reforestation—one study states that each bird buries an average of 4,500 acorns per year for winter retrieval, but they only recover part of their buried cache.

Acorns were an important part of Native Americans' diet. They would soak acorns to leach out the tannins. The acorns were then shelled and ground into a pulp or paste that could be cooked. They provided much of Californian Natives' diet as recently as early last century. Numerous early societies in the Mediterranean, Mesopotamia, and the Far East also relied on acorns for much of their sustenance.

Oak Forests Then . . .

Native Americans indirectly helped nature promulgate white oaks and oak forests with their extensive use of fire. They frequently burned the forest to improve habitat for their game animals, improve ease of travel, increase berry production, facilitate the collection of acorns and firewood, aid hunting, and assist in warfare. The practice of tree girdling in combination with fires was used to kill trees so the land could be planted to crops. Oak colonized abandoned cropland and fields. Fires often create favorable seedbeds for acorns to germinate into seedlings. Aspen, birch, and pine seeds also germinated after fire.

Trees that co-occurred with fire had to develop a survival mechanism for their species to survive for thousands of years. Low-intensity fires might injure but usually did not kill the older thick- barked species like the various oaks and chestnut. Bark thickness increases with age and insulates the cambium (the living layer of cells just underneath the bark) from the lethal heat of a short-duration moderate fire. The young trees and thinner bark species were more vulnerable. Most native hardwoods often persevere after fire kills their stems and crowns as they commonly re-sprout at the tree's base. Oak and chestnut appear to be the most persistent sprouters after repeated fire.

The frequently burned forest near native villages was open with well-spaced overstory trees

and a grassy understory often punctuated by oak and chestnut sprouts. The open understory provided enough light for acorns to germinate. If the fires ceased for a while, white oak seedlings and sprouts would shoot up and might eventually graduate to the overstory through gaps in the canopy. Fires, combined with pest infestations or hurricanes, could kill significant groups of canopy trees that allowed even more young oak and chestnut to take their place. When forests were not burned for a long time, fire-sensitive birch, beech and maple would eventually resurge and crowd out the more shade-sensitive oak and chestnut and create thickets of understory trees.

European settlers increased practices that favored the dominance of oak and chestnut. They picked up the torch from the natives and cleared most of Connecticut's forests for agriculture by the early 1800s. Most of the remaining forests were clear-cut repeatedly for firewood and charcoal as wood was the main source of energy in the state until the early 1900s. The forest also supplied an enormous amount of raw material for railroad ties, fences, shingles, and lumber. Wood was consumed so fast that a 1909 forest survey showed the forest was seldom allowed to mature as 95 percent of the hardwood forests in Litchfield County were less than 40 years old. Intense fires were so frequent in the early 20th century that it was an incentive for landowners to cut their forests before fire burned over their property. A record 100,000 acres blackened Connecticut's forests in 1915. An average of over 44,000 acres or about 3 percent of the forest burned annually during that decade. Sparks from locomotives, farmers burning to improve their pastures, and escaped fires from charcoal production were among the main sources of fire. The fires, clear-cuts, and lack of deer all played into the hands oak and chestnut. When the chestnut blight hit, it was estimated that chestnut accounted at least one quarter of the trees in the state. A 1909 forest survey stated 60 percent of the hardwoods in Litchfield County were chestnut. With its main competitor out of the picture, oak was crowned the undisputable king of the forest, at least for a while. That was a different era. Harvesting sharply declined after the 1920s as fossil fuels replaced wood and charcoal. For much of the last half century, fires failed to build a head of steam as the state became more suburban, precipitation increased, and Smokey became an icon. Currently, it is uncommon for more than 600 acres (or three-hundreths of 1 percent) of Connecticut's forests to burn annually.

Emery Gluck

If left alone, shade-tolerant birches, beeches, and maples will grow beneath older oaks and eventually replace the oaks as they die of old age.

Oaks are an integral part of Connecticut's forests. Slightly more than half of the forests in the state are considered oak-hickory forests. Acorns rate at the top or nearly the top of the wildlife food list. They provide a high-energy food source for more than 90 types of birds and mammals, including bear and blue jays.

. . . and Now

Timbering started to rebound in the 1970s as trees started to become big enough to make sawtimber. Today, the post-harvest forest is dramatically different from a century ago as clear-cuts are now uncommon. Instead, the best timber (often oak) is commonly plucked out leaving the less desirable trees. This practice is known as high-grading. It is often inappropriately masked as a "selective harvest." The ecological consequences of removing only the oaks are subtle unless you are a squirrel or one of the 90 other species that depend on acorns. This regressive practice greatly speeds up the transition from oak forests to birch-beech-maple forests. Deer greatly affect high-graded forests because they voraciously browse oak seedlings but only occasionally on less palatable birch, beech, and maple (black birch has the same chemical found in the muscle rub "Ben-Gay"). Their selective browsing combined with understory shade from residual trees will profoundly affect the species composition of future forests.

The loss of oak may be greatly accelerated when nature plays the hurricane card. Category 3 or higher storms flattened substantial parts of Connecticut forests about once a century. The last one, in 1938, felled an estimated 20 percent of the hardwood and half the conifer sawtimber trees east of the Connecticut River. The next hurricane is expected to floor a much larger proportion of the forest as the trees are taller therefore more vulnerable to uprooting. Much of our oak forest now has a well-established birch, beech, and maple understory, which is

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Oak Forests

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poised to take over once the current overstory succumbs.

The effects of global warming suggest that Connecticut will become more suitable for oak. Past climatic warming and drying have resulted in increases of oak. However, that was when the forest was burned extensively by humans. Fires are unlikely to increase substantially as suppression is now much more effective, the forests have grown less flammable and extensive fires are not tolerated by society, especially those individuals with homes near the woods. Additionally, a general increase in precipitation is also expected to accompany global warming in New England. Connecticut's climate is predicted to be more like that of the mid-Atlantic states in the future. Even in the warmer climates farther south, oak is not self-sustaining under current conditions (except on the driest sites where oak do not grow very large). Oak will be hard-pressed to retain its royal reign with an increase in temperature alone.

Reversing the Trend

Historically, oaks have been sustained after disturbances that affected the understory and overstory. Reintroducing fire could help promote new generations of oak on a very limited scale. But after years of fire exclusion, a thick and ever larger non-oak understory has grown and it is harder to get a fire hot enough to kill more than the smallest trees in the understory. Multiple intense burns would be needed to cause adequate disturbance to both the understory and overstory.

The most economical method of recreating an environment conducive for perpetuating oak forest is to implement a commercial forestry operation that includes harvesting about half the overstory trees and felling half to most of the understory trees. The harvest should take place within a year or two of an acorn crop and retain mostly oak in the overstory. Additional harvests or other severe disturbances are also usually needed to give oak seedlings sufficient sunlight within about 5 years of the initial harvest. Some of the follow-up treatment options include these:

► Harvest no additional trees but conduct repeated burns. (A limited amount of oaks may graduate to the overstory once the competing seedlings sprouts are severely impaired by the repeated fire and the burning stops.)

► Harvest trees in small groups (if the group is too small, few if any oak will reach the overstory).

► Harvesting most of remaining trees so the well-spaced remaining trees are too sparse to hinder most of the oak seedlings.

► Harvest most of the remaining trees but leave only a small portion of residual canopy trees in groups.

► Harvest all of the remaining trees in patches at least one acre in size, leaving at least half the area un-harvested.

► Harvest all remaining trees.

The last two options will promote the most cherry, aspen, red cedar, white and gray birch, and other shade sensitive trees that are losing ground in Connecticut's forests. Additionally, the last option yields an extraordinary benefit for the 26 species of birds and mammals in New England that depend on the ensuing thick young forest for their primary habitat. These young forest specialist include species such as blue-winged warbler, eastern cottontail and bobcat and are experiencing significant population declines because of diminishing habitat. Young forest habitat is currently at its historic lowest levels.

The greatest biological diversity in a forest occurs when all successional stages of a forest (from newly established forest to old growth) are present in adequate amounts to support viable populations of all the species that depend upon the different stages of forest. A combination of the previously mentioned options would create much diversity as long as young forest habitat occupies 5 to 10 percent of a forest landscape at any one time. Young forests start to lose their habitat value at age 10, so additional areas should be harvested within a decade. Diversity would also be enhanced by retaining uncut buffers and corridors around wetlands. Den trees and snags should also be left around the periphery of these harvests. Snags and other unstable trees should be left only away from trails and roads so they will not become a hazard.

In addition to a second round of harvests, more follow-up treatments such as prescribed burning or felling overtopping sprouts may be needed to get new oak into the overstory.

The Clock Is Ticking

Fire and other disturbances have historically been an intrinsic part of maintaining oak forests. The ecological cycle that perpetuated white oak dominance for thousands of years has been broken. The forest landscape is well into the process of being transformed to non-oak trees. Though not yet near the end of their life spans, the present generation of overstory oaks (currently about

Some pre-settlement forests in Connecticut probably looked similar to this oak stand in Nehantic State Forest, which is the result of controlled burning and a timber harvest.

Emery Gluck

Emery Gluck

Oak seedlings, shown here in the fall, thrive under the light shade cast from a forest that has been heavily harvested both in the overstory and the understory.

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100–120 years old) will eventually senesce. White oak can potentially live to 600 years, but other oaks have substantially shorter lives. Scarlet and black oak typically live 100 and 150 years, respectively. Overstory oak mortality on research plots maintained by the Connecticut Agricultural Experiment Station is only about 2 percent per decade, but substantial patches of mortality, particularly on ridge top chestnut oak, are starting to occur elsewhere in Connecticut. Mortality will probably increase with age as accumulated stressors (i.e., infestations, drought, crowding) start to take their toll as these trees approach old age. Without young oak growing into the overstory, the current oak forests appears to be a one generation phenomenon except on the driest sites. Even long-lived species have a bleak future if they fail to produce a successful progeny.

To sustain oak forests under current conditions, concentrations of under- and overstory trees (including oak) must periodically die. Implementing this counter-intuitive concept is disconcerting to many. But if adequate action is not taken, oaks will likely fall from dominance. The coup could be a long drawn out affair as oaks slowly succumb to old age or the next hurricane could make short work of it. If we fail to act decisively and soon, we will have earned the scorn of our successors for squandering their oak inheritance.

Emery Gluck is a forester for the state of Connecticut. He has conducted controlled burns in several areas to promote health of oaks and pitch pines.

Remembering Roosevelt, 50 Years Ago

Fifty years ago, students marked the centennial of Theodore Roosevelt's birth by students planting trees. Roosevelt's birthday is October 27, and perhaps we should all think about planting a tree to commemorate this pioneering conservationist. Planting trees is a selfless act of hope for the future, as we plant a seedling meant for the enjoyment and benefit of future generations. This working and looking to the future made Roosevelt a model for all generations.

Trees For Teddy

American schoolchildren are being urged to plant trees during 1958 to commemorate the 100th year of the birth of Theodore Roosevelt. The recommendation, by the Theodore Roosevelt Centennial Committee of the Natural Resources Council of America, urges public school superintendents, principals, and teachers to observe the memory of the great conservation leader in that manner, according to the Wildlife Management Institute.

"There could be no more fitting tribute to this pioneer conservationist during the centennial year of his birth than a program symbolizing the former President's varied personal interests in natural resources, forestry, wildlife, and youth," the committee said.

"We feel that tree-planting activities, with appropriate ceremonies, would serve the dual purpose of inspiring the young people of America with the spirit and philosophy of Theodore Roosevelt. It was under his administration that the first fully effective laws were enacted to protect our natural resources.

"Tree planting in the fall, up to the first hard freeze in the northern States, can be as successful as in the spring. Everyone retains memories of treeplanting projects, and it is hoped that there will be widespread participation in this phase of the Theodore Roosevelt Centennial program."

Representing many major national conservation groups and societies, the Natural Resources Council of America serves as an information medium for member organizations. NRC centennial committeemen are C. R. Gutermuth, Wildlife Management Institute; John H. Baker, National Audubon Society; Fred E. Hornaday, American Forestry Association, and Harlean James, American Planning and Civic Association.

"Outdoor News Bulletin," Wildlife Management Institute

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Remembering Richard Haley

BY ADAM R. MOORE

The feeling of a day well-spent overtook me as I walked back to camp after a long, August day in the woods, a day spent among striped maple and mountain laurel and towering white pines. I was enrolled in "mods," the summer field session at Great Mountain Forest for incoming students at the Yale School of Forestry and Environmental Studies. The day's work done, we neophytes hopped into the back of Star Childs's pickup truck and rumbled along dirt roads to Tobey Pond for an afternoon swim, then gathered back at the mess hall of the Yale Camp for dinner. Dinner was served on two long tables covered with red and white checked tablecloths, beneath the mounted head of a buck and beside a massive stone fireplace, with a central stone carved into the shape of Connecticut. After dinner, we adjourned to a living room on the other side of the fireplace. Here a fire burned, for even August evenings are cold in Norfolk, Connecticut. We'd hear a lecture, perhaps by Dr. Herb Winer on the history of Great Mountain Forest. I remember mods at Great Mountain Forest well, but what I remember best is not the forest, or the camp, or the dinner, or the lessons or the lecture. What I most remember was the music.

Specifically, I remember Richard Haley and his songs. Richard Haley was a naturalist who died tragically in 2006 in a car accident in Arizona. At the time of his death, he was the centers and education director for Audubon New York. Before that, he directed the Goodwin Conservation Center in Hampton, Connecticut, and before that, he was the director of the New Canaan Nature Center. I did not know Richard in those capacities. When I met Richard, he was a year ahead of me at the forestry school and one of our mods instructors at Great Mountain Forest. Back at the Yale campus, he was a teaching assistant for the terrestrial ecosystems course. I did not know Richard well, but I remember him well, and that is because of his guitar and his voice.

Richard Haley was a naturalist who died tragically in 2006 in a car accident in Arizona. At the time of his death, he was the centers and education director for Audubon New York. Before that, he directed the Goodwin Conservation Center in Hampton, Connecticut, and before that, he was the director of the New Canaan Nature Center.

Senses other than sight enhance memories. Smell triggers immediate recall. The smell of spring sunlight warming fallen pitch pine needles takes me instantly to a camping trip, decades ago, at Cape Cod. Last week I smelled doughnuts sizzling in a vat of oil, and at once I thought of the Durham Fair. So it is with sound. Familiar sounds and familiar songs bring back memories. How else is it that, upon hearing a song again, we can sing along to it, in tune and keeping time, without having heard it for 20 years? Songs heighten memories. I've sat around many a campfire, but the ones I really remember are the ones where people sang.

Richard Haley played campfire songs for a couple dozen, tired new foresters, environmental policy folk, scientists, and whatnot. When evening had fallen, and the lecture ended, Richard would sit down, place his guitar across his lap, and begin to strum and sing. Students gathered all around him—in chairs, cross-legged on the floor, reclining on couches, leaning up against the wall. We held cups of lemonade, after-dinner coffee or tea, bottles of cold beer, or dripping cold water fresh out of the ice chest. We all were worn out from a day's worth of pacing in a straight line through mountain laurel thickets. All of us were fatigued except Richard.

Richard played "MTA" by the Kingston Trio, the familiar folk tune about the "man who never returned." Know the song? "Let me tell you a story, 'bout a man named Charlie on that tragic, and fateful day. He put ten cents in his pocket, kissed his wife and family, went to ride on the MTA." As you may recall, the song recounts how the fares had gone up, and finding himself a nickel short, Charlie was stuck on board the train, never able to see his sister in Chelsea or his cousin down in Roxbury. It's a great, rollicking song, and whenever I hear it, I see Richard singing, gleeful, with voices raised around him and hands clapping in time. He played "A Hundred Miles," and then a rendition of "Waltzing Matilda."

Once while Richard played, I stepped out onto the porch and then out onto the broad sloping lawn. I gazed up at the firmament above Norfolk, into the starlight, looking for stray Perseids streaking across the darkness. Richard's happy voice drifted out of the camp building, out the screen door, into the August evening, to meet his eager accompaniment of crickets and katydids.

There is a beautiful memorial garden dedicated to Richard Haley at the Goodwin Conservation Center. On one of my visits back to Connecticut, I will take Route 6 and visit that garden to remember Richard. But really, I remember Richard well, and often, even though I did not know him well or see him often. I remember him so well because of the music he shared, because of the joy, and the mirth, that he so freely shared with his companions. It was the same joy that I saw him share as a teaching assistant, showing the creatures of the world to others. To me, Richard is ever waltzing Matilda. When we share joy, mirth, and music, we remember, and we live.

Adam R. Moore is a Durham native and the former executive director of the Connecticut Forest & Park Association. He now lives with his family on Martha's Vineyard where he directs the Sheriff's Meadow Foundation.

We Waste Food — Why?

By JEAN CRUM JONES

It is estimated that the average American wastes more than a half-pound of food per day or almost 30 million tons each year. People are now paying a modicum of attention to American's food waste situation as food prices keep skyrocketing. The tragic news stories of food shortages sparking riots around the globe stand in stark contrast to reports of the incredible volumes of edible food that is simply being thrown away in this country. Almost one-third of edible food is never eaten.

Unlike our ancestors, most of us are not involved in producing our own food. We purchase it nonchalantly from grocery stores. We are separated from the risk and work it takes to make food. The growth of American industrial agriculture during the last century transformed food into a cheap commodity, which is easy to obtain and not expensive to throw away. Food spending represented only 10 percent of disposable personal income in 2006, the lowest since USDA began tracking these statistics in the 1930s and the lowest amount in the world. Ironically, the American food production and distribution system, which has focused on cost reduction and increasing volume, has made millions of us fat, perhaps makes millions more go hungry, and allows food-borne pathogens to create epidemics.

If we learn and think more about this type of problem, we can begin to make a big difference as individuals. Adjusting the way we purchase and use food can make us try harder to conserve it. The greatest amount of food waste takes place in the American home. But food manufacturers, restaurants, supermarkets, and enterprises, such as schools, hospitals, and prisons, all add to the tremendous volume of food thrown away.

In households, surveys show that most people think they don't waste much, only about 1 percent of their food purchases. Actual studies reveal average households throw out 15 percent of their food. People don't pay attention to their food waste because it goes straight into the garbage or disposal—out of sight, out of mind. Food waste can be divided into a few categories. Disposal of a portion, such as melon rinds and bones, is unavoidable. Another portion includes plate scrapings and other edibles that some people just won't eat, like bread crusts or vegetables. A third portion consists of food that is no longer of good quality, like stale bread, old leftovers, or overripe fruit. Then, there is the one-quarter to one-third of food waste that is unopened or whole or untouched.

Why do we waste food? The most common reasons are a lack of menu planning, buying too much, and owning big refrigerators that store a lot and allow food to wither away before we notice it. Busy lives and not knowing how to cook mean we don't make leftovers into stew or even freeze it for future use. It is so easy to eat out on the spur of the moment that a lot of previously purchased store food lingers and deteriorates in the home kitchen.

An interesting finding from the University of Arizona's Garbage Project (which has been studying our habits with debris since 1972) found that Mexican-American census tracts in Tucson have less food waste (about 20 percent less) than do white census tracts. Though Mexican Americans enjoy a diverse array of dishes, they are based on a relatively small number of ingredients: tortillas, beans, chunks of beef, chicken, and pork, avocados, tomatoes, lettuce, onions, red and green chili sauce, salsa. It is easy to incorporate leftovers into new meals while the staple ingredients are in a state of constant turnover, write William Rathje and Cullen Murphy in the book *Rubbish: The Archeology of Garbage.*

As a result of this discovery, the Garbage Project developed its First Principle of Food Waste: The more repetitive your diet—the more you eat the same things day after day, the less food you waste. What role does the constant quest of American food manufacturers and marketers to provide us with never-ending novelty foods have to do with the ever-increasing stream of food waste? Another example of the Garbage Project's findings was that the waste in garbage from the standard 16-ounce and 24-ounce loaves of sliced bread was virtually nonexistent—at most, crusts and ends—because common sandwich bread is used continually, meal after meal. Whereas specialty breads—hot dog buns, bagels, muffins, Kaiser rolls—were wasted at rates of 30 to 60 percent, because people bought them less frequently.

School children waste more than 25 percent of their lunches. This translates into a cost of about two billion dollars of taxpayer money allotted to the National School Lunch program. No longer do children grow up with the "clean your plate" ethic. Because of high obesity rates, increased portions, and diminished valuation of food, parents say to their children, "Eat what you like." Rarely are today's school lunches homemade-style foods prepared by good-cook "lunch ladies." Rather, foods, supplied by easy to administer national food catering concerns, are provided in packaged grab-and-go wrappers to be wolfed down in very short lunch periods. It seems no longer important to feed children good appetizing foods at school. Therefore, kids no longer see food as a valuable resource, nor do they care if it's thrown out. Most children have no idea what becomes of their garbage or how leftover food debris affects the quality of their environment. We have in Stratford, Connecticut, a very informative Museum of Garbage, but it is a well-kept secret.

In restaurants, massive portions lead to big bellies and full dumpsters. Every day, American restaurants throw away more than 6,000 tons of food, generally from oversized portions. Otherwise, most restaurants are surprisingly efficient with their food pur-

chases and wise chefs waste little food in the preparation process.

At supermarkets, less than perfect produce is routinely pitched. The addition of readily prepared cut vegetables and fruit, as well as ready-to-eat meals has greatly increased the amount of food thrown away, because "instant" foods, not sold at day's end, are generally discarded. Some progressive food stores have arrangements with food banks and other low-income feeding centers to provide donations of these foods. The newest player in the grocery store field is Wal-Mart, where America currently spends 21 cents of every food dollar and where it is predicted that soon 50 cents of every food dollar will be spent. Wal-Mart's role in driving down retail prices to unsustainable low levels has unknown consequences for the American food supply. But, if people perceive shortages, they buy excess amounts and hoard and, contrary to expectations, tend to waste more food in these situations.

When it comes to food waste on the farm, there are many variables. Farmers generally plant extra crops to cope with unexpected weather and growing conditions. They do not sell "cosmetically challenged" food, because it is misshapen, not the right size or color. It is estimated that at least 30 percent of fruits and vegetables are tossed at the farm because of these slight imperfections. There are also times when fields full of ripe crops are not harvested because the market price is insufficient and it is not worth the cost of labor to pick the harvest. Feeding hungry people through gleaning would be an admirable way to curb waste at the farm, but few such programs exist in this country. Forty percent of all food produced on farms in this country is not eaten.

Finally, produce can spoil on the way to the market. The average distance food travels from field to fork in the United States is 1,500 miles. Food that is transported long distances in refrigerated trucks requires more complex packaging with sufficient use of nonrecyclable plastics, which only add to the waste quotient. Support of regional food production and distribution systems would allow the sale of safer, fresher foods and could contribute to less food loss from excessive long distance traveling.

Wasting food squanders time, energy, and resources—both of the people and of oil—that is used to produce and prepare that food. Fossil energy is used to fertilize, apply pesticides to, harvest, and process food. Still more is spent transporting food from the farm to processors, wholesaler to retailers, and finally to the landfill.

Food we throw away in Connecticut ends up in trash incinerators. It's wet and difficult to burn. Food waste and ground clippings can be composted for use as a soil amendment. Many individuals, universities, and municipalities have been composting for years and more are starting up compost programs. Composting costs are roughly the same as regular waste diversion, but make a superior contribution to a better environment.

Hogs, cows, and other animals can make use of commercial food waste. The practice used to be widespread for households and restaurants to separate food scrap "garbage" from the "trash" in many locales. Farmers would then collect the garbage and use it to feed their animals. Cooked garbage is a perfectly safe animal feed. On our Pumpkinseed Hill Farm, a former owner used to raise about 200 pigs annually on the garbage from the small city of Ansonia, back in the 1930s.

Another waste-to-energy process is anaerobic digestion. The process harnesses bacteria to convert food waste into biogas that can power vehicles or create electricity. The process has long been used in America to create energy from animal manure and there is potential to transform supermarket and municipal food waste into power.

Wasting food has become a fact of modern life in America. Yet, sadly, it is a wasted resource that could be harnessed for useful purposes—to feed hungry people, to create energy, to make a safer and a more beautiful landscape. Hopefully, the time has come when people are willing to do something about this vital issue and to stop wasting food. We cannot afford to do otherwise.

Jean Crum Jones is a registered dietician and runs Jones Family Farms in Shelton with her husband, Terry. She serves on the board of directors of Connecticut Forest & Park Association.

*Several of the statistics and issues reported in this column come from "*The Food Not Eaten: Food Waste, Out of Sight, Out of Mind,*" by Jonathan Bloom, on www.culinate.com.*

Shagbark Hickory
(Carya ovata)

The shagbark hickory is known for its sweet and rich-flavored nuts. It is a large commercial tree, averaging 60 to 100 feet high and 1 to 2 feet in diameter. It thrives best on rich, damp soil and is common along streams and on moist hillsides.

The bark of the trunk is rougher than on other hickories, light gray and separating into thick outwardly curved plates, which are only slightly attached to the tree. The terminal winter buds are egg-shaped, the outer bud-scales having narrow tips.

The leaves are alternate, compound, from 8 to 15 inches long, and composed of five, rarely seven, obovate to ovate leaflets. The twigs are smooth or clothed with short hairs.

The fruit is borne singly or in pairs, and is globular. The husk is thick and deeply grooved at the seams. The nut is much compressed and pale, the shell thin, and the kernel sweet.

The flowers are of two kinds, opening after the leaves have attained nearly their full size.

The wood is heavy, hard, tough, and very strong. It is used largely in the manufacture of agricultural implements and tool handles. For fuel, the hickories are the most satisfactory of our native trees.

Shagbark hickory is so dense that when burned in a woodstove it's been found to produce more than 29 British thermal units per cord, the equivalent of 210 gallons of number 2 fuel oil. The only wood more efficient as a heating source than that is Osage orange, which has been planted across the United States but is native to Texas and Oklahoma.

SHAGBARK HICKORY
Leaf, one-third natural size.
Twig, one-half natural size.

— *C.W.*

This page is modeled closely on CFPA's classic book *Forest Trees of Southern New England*. To order a copy, contact the office at 860-346-2372. The price is not prohibitive.

Safety with your Chainsaw

You've dusted off the woodstove. Do you know how to run a chainsaw?

BY TOM WORTHLEY

Every now and then, it occurs to me that after many years of association with saws, axes, splitting malls, sawmills, chainsaws, and other primitive woodcutting devices that I should feel a bit of gratitude that I still possess all the fingers and toes with which I was born. I have a couple of scars here and there, but nothing too serious. The reason I should feel fortunate is that my respective lack of serious injury may be as much a matter of luck as any sort of skill. That was especially true in my younger days, when I was smarter than I am now—that is, too smart to worry about chainsaw chaps, ear protection, and other frivolous stuff like personal safety equipment.

I have heated my home with firewood for more than 25 years, and more recently have been cutting some of my own sawlogs. During that time, I have become quite familiar with the vagaries and idiosyncrasies of different types of woodcutting tools, methods, and woodcutting situations. I confess to several times when I felt as though I could have been more careful, or more observant, or planned things better to save myself some aggravation caused by delay, equipment damage, or near-miss for injury, but, as I say, I have been fortunate. It is generally after a situation like one of those that I have grudgingly accepted that perhaps the experts are right and I should modify my way of doing things. One of those modifications has to do with the use of personal safety equipment.

Rising oil prices have renewed people's interest in heating with local wood. Many folks are dusting off the old wood stoves or investing in new ones and thinking about where they might get wood. Some people will buy wood from a vendor, but some will also save money by cutting their own, as long as they have access to a wood source. One piece of equipment considered a necessity if this is the case is a trusty, reliable chainsaw.

Now, I consider the modern chainsaw to be one of the most useful tools ever invented for the purpose to which it was designed. Modern chain saws have evolved to be marvels of engineering, combining light weight and power with user-friendliness and safety features. But used incorrectly, or in a manner not in accordance with its design, a chainsaw might be the most dangerous piece of equipment you will ever own. A chainsaw injury is, *at best*, an ugly, painful, life-changing occurrence, and can often be disabling or fatal. It is not the purpose of this article to teach you how to operate a chain saw in the safest and most efficient manner, or to try to explain woodcutting and tree-felling techniques. Learn these things by attending a course or seminar like those offered periodically at the Goodwin Conservation Center and other locations, or through a Level One Game of Logging course you might have an opportunity to attend elsewhere. A wealth of information about these topics is also available on the Internet. Search on "chainsaw safety" or "chainsaw operation."

My purpose here is to discuss some items associated with personal safety that woodcutters need to consider *before they even begin* starting up the saw. This way, if things don't go well after the saw is started, then at least serious personal injury won't be the first immediate outcome.

All fairly new chain saws are designed with a variety of safety features that include the following:

- ► Spark arresting muffler, for fire and explosion prevention purposes
- ► Chain brake, to arrest the movement of the cutting chain in the case of kickback
- ► Chain catch, near the base of the saw to prevent a broken or dislodged chain from flying back and injuring the operator
- ► Working on- and off-switch, because it is helpful to be able to shut the saw off if something is not right
- ► Working safety throttle switch, to prevent the throttle from being accidentally engaged and causing the saw to rev up unexpectedly.

These items have all been standard equipment for a few years now, so if you take Uncle Charlie's old saw out of the barn to cut some wood and find it does not have, say, a chain brake, or a safety throttle switch, then do yourself and Uncle Charlie a favor and throw it away. Please, please, choose a piece of equipment that is not obsolete and dangerous. Once you are satisfied that the saw you intend to use is properly equipped, then inspect it visually for overall condition. Make sure it appears clean and well maintained with no leaks or loose parts, and that it appears to be in good working condition.

All new chain saws also come with a manual that discusses maintenance operation and safety (I strongly urge you to read these documents), and most Web sites on the topic contain references to personal safety clothing. Most manuals and Web sites suggest that such things as safety chaps and hearing and face protection are advisable, but I don't think the subject gets the emphasis it deserves in most cases. I know people who wouldn't dream of playing a game like football or ice hockey without safety equipment, or drive their car without everyone buckled in, but they will blithely operate a cutting tool that is capable of lopping their leg off or opening up their skull in two careless seconds and never give personal safety equipment a second thought.

In my experience, essential safety gear includes good wrap-around chaps for leg protection, a helmet system that includes face shield and hearing protection, safety-toe leather boots, and good heavy work gloves. I emphasize that these are *essential.* Excuses abound, such as, "Oh, chaps are so bulky and hot." Or, "This helmet is so uncomfortable." The way I want to respond, of course is, "Well, grow up and get used to it. If you think you are uncomfortable now, try having 60 or 80 stitches in your leg." But the injury prevention statistics associated with personal safety equipment speak for themselves.

The other great excuse is, "I've been doing fine for years without all this stuff." To which the appropriate response is that many profes-

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Big Decisions About Garbage for a City You Might Not Know

BY LORI PARADIS BRANT

Citizens in the growing city of Branfield are running out of room for their garbage. Expected to close within the next two years, the Branfield landfill has practically met its storage capacity. This puts the city's municipal solid waste disposal at near crisis level. Several town meetings have already transpired; citizens groups, federal and state agencies, and representatives from the industry have debated several options to resolve the problem. They are considering construction of a new landfill with or without a new incinerator—known as a waste to energy facility, or WTE.

Education Director Lori Paradis Brant

There are several concerns with the use of a WTE building. Toxic air pollutants including mercury, lead, and dioxins, as well as particulate matter, could be emitted from a WTE facility. The way the plants are configured, they must have a steady flow of waste to run properly, so another worry is that paper and other burnable recyclables will be burned rather than sorted and recycled for use in new products.

Branfield Town Council is nearing its deadline to vote on the proposed WTE facility. How should the council make this tough decision? Where is the city of Branfield located anyway?

Branfield exists only in the pages of *Exploring Environmental Issues: Municipal Solid Waste* high school curriculum guide of Project Learning Tree. PLT is a national education program celebrating its 30th anniversary in Connecticut this year. What to do with Branfield's waste reflects the kinds of problem-solving situations that students get engaged in while carrying out the PLT activities. Teams of students in the Waste to Energy high school lesson plan are assigned roles to research and represent. They might act as the Environmental Protection Agency, conservation organization, local citizens group, construction worker, garbage hauler, or recycling coordinator. Each student group must defend its position for or against the proposed WTE in the city of Branfield. They must have a dialogue with those who advocate for a different solution. Thinking critically, collaborating on research, and presenting and listening to persuasive arguments all help students weigh information to learn how make sound decisions now and in the future. It's the perfect example of how PLT teaches students how to think, not what to think, about the environment.

Here is another example. A group of 15 fourth-grade girls from the Convent of the Sacred Heart School in Greenwich had a bugs' eye view of thinking about the environment this past school year. Under the wise guidance of the school's science coordinator and teacher, Patricia McKean, the students pilot-tested the Connecticut Forest & Park Association's Persnickety Pillbugs project. This hands-on investigation of leaf litter critters is based on PLT's Nature's Recyclers lesson plan and it's anticipated that it will become an activity of the Connecticut State Department of Education's science framework. The students volunteered to participate in this project and even sacrificed five of their recesses to work on the experiment in their Lower School Laboratory. Each of the student teams made observations of their critters' behaviors and experimented with different types of food choices and shelter selections for the pill bugs in the students' temporary care. At the beginning of their investigations, the students are asked to think about where these organisms live, how they survive, and so forth. Erika, one of the fourth graders, observed, "They like to eat leaves. They clean soil. They depend on other organisms because each animal has a part in the cycle." In measuring the amount of rations the pill bugs ate, Casey stated that she knew pill bugs preferred to eat leaves "because I counted up all the centimeters for both compost and leaves." Math plays a key role in studying the environment, and having students use math skills in their science activities shows how the disciplines are often integrated.

At the end of the task, Ms. McKean told me, "The girls loved doing this project. Thanks for letting us do this." Ms. McKean encouraged her student scientists to discuss the activity with their parents, and she sent a letter home describing the CFPA environmental education project. By engaging students in explorations of the world around them, they begin their lifelong journey of connecting themselves to the land and the outdoors. In the words of Victoria, one of the student scientists, "I think pill bugs need forests" to survive.

How do students get to do these PLT activities? After their teacher has attended a professional development workshop, he or she brings the curriculum to the classroom and starts. The Municipal Solid Waste curriculum, along with Forest Ecology, Introduction to Risk, Places We Live, and the newly published Forests of the World modules are geared toward high school classrooms, and the 96 activities in the Environmental Education Guide are created for the prekindergarten to eighth-grade classroom or outdoor learning center. Educators, working with specialists in various fields, write the lesson plans, education framework, assessments, and other resources. This makes the activities teacher-friendly, simple to use, and accurate.

As part of the 30th anniversary observance of the Connecticut branch of PLT, CFPA and its PLT partner, the Connecticut Department of Environmental Protection, are holding a facilitators' training session to prepare other educators from nature centers, museums, and other organizations to host their own PLT workshops. Connecticut PLT has reached nearly 4,000 educators in the last 30 years and expects to continue to increase. As we look

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Walktober, A Month of Great Walks

BY LESLIE LEWIS

The group that manages the Quinebaug and Shetucket Rivers Valley National Heritage Corridor, which covers 26 Connecticut towns and 9 Massachusetts towns, has sponsored one of the best walking promotions. This chunk of New England is called "the Last Green Valley" for its noticeably dark night sky visible on satellite photos of the Northeast. The U.S. Congress and the National Park Service recognized this land for its unique natural and cultural values. The nonprofit that manages the corridor started out with a simple plan: showcase this beautiful and historically rich part of New England with a few guided walks over Columbus Day weekend, when the leaves and the weather were usually at their peak. Thus, Walking Weekend was born. I don't think anyone imagined that 18 years later, the event would have mushroomed into a month-long celebration called Walktober.

Want to walk in the footsteps of Revolutionary War heroes? How about exploring woodlands in search of wildlife? Tour a winery? Meet some alpaca? (Alpaca? Here in Connecticut? Yup—Stone Bride Farm offers tours and entertainment featuring these fiber-producing animals.) Don't forget the vampires—this should be everyone's favorite Halloween adventure. These walks just scratch the surface. Charlene Cutler, executive director of the Quinebaug-Shetucket Heritage Corridor Inc., estimates that more than 6,000 people walked 112 routes last year, when one walking weekend became "weekends" to fit all of the walks. This year, the event becomes Walktober, offering walks, paddles, bike rides, and special events scheduled from October 4 to 30.

Walktober includes activities for every age, ability, and interest. For more information on individual events, you can check out the Quinebaug-Shetucket Web site at www.lastgreenvalley.org. Lace up those walking shoes and enjoy the best of northeastern Connecticut and southern Massachusetts.

Leslie Lewis is the director of the Connecticut Forest & Park Association's WalkConnecticut initiative, which promotes walking and other nonmotorized activities along trails and sidewalks around Connecticut. For some suggestions on where to go walking, see www.ctwoodlands.org/walk-ct.

Leslie Lewis directs CFPA's WalkConnecticut program.

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forward to the next 30 years of Connecticut PLT, we'll reach out to new audiences and grow new programs. Developing parent nature workshops, family forest owner programs, and reaching college students before they are teaching in a classroom are just a few of the exciting things that are on the horizon. Here's to 30 years of Connecticut Project Learning Tree — a window to the world for teachers and their students.

Lori Paradis Brant is the education director of the Connecticut Forest & Park Association.

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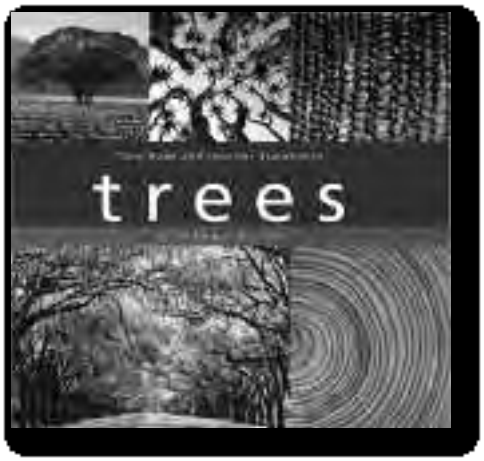
sional woodcutters operated without safety gear for years and were lucky themselves during that time—but they would never work with a chain saw now without their chaps, helmet, faceguard, hearing protection, gloves, vest, and steel-toe boots. They learned, they changed, and they operate more safely and efficiently now. There are also many who operated chain saws for years without safety gear who are now disabled or dead. Most, if not all, legitimate wood-harvesting professionals these days are fully equipped for personal safety and have been for years, and it has made a big positive difference in the safety records, productivity, and professionalism of their operations. Yet I continue to see homeowners, town road crew members, weekend woodcutters, and others operate chain saws as though they were doing nothing more dangerous than planting posies. I hope these folks will also learn and change.

So when you are thinking about woodcutting this heating season, remember to plan for safe operation. Make sure your chain saw passes the five-point safety check, and be personally dressed for protection from injury. Then, maybe, you can begin. Oh, and by the way, never, never, ever let anyone else come on your property to cut wood unless they are also equipped properly for operating safely.

Tom Worthley is a stewardship program forester at the University of Connecticut Cooperative Extension office in Haddam.

Nicely illustrated tree guide will get you outside



Trees: A Visual Guide,
by Tony Rodd and Jennifer Stackhouse. Berkeley: University of California Press, 2008. 304 pages.

BY ROBERT M. RICARD

This a stunning book. It is also equally useful. Part coffee table book, part instructional, Trees: A Visual Guide focuses on tree form and function and the environments they grow in from every perspective and it does so sumptuously. Australians Rodd and Stackhouse cover tree utilization ranging from timber products to pharmaceuticals derived from tree parts, from shade provided on a steamy summer day in a central city woodland park, to foliage fodder for threatened giraffe in the African savanna. The book covers tree habitat from deep Amazonian forest habitat to urban street tree pits, from American suburban backyards to wood fuel plantations in Lesotho.

The opening pictures illustrate the global reach of the book. The first is familiar to Connecticut residents—it's of a presentation of the diversity of fall color in a temperate hardwood forest. The next picture is of a dense cluster of white barked birch enduring another Siberian winter. The third is of trees precariously holding soil together on the banks along a serpentine river running in a narrow riparian zone in an African desert. In the introductory chapter, the first picture is of moss draped ancient conifers in the American northwest coastal forest. The next picture is of golden, delicate Japanese maple leaves in a Zen Buddhist temple garden. And another is of an orchard of Date Palms in southern California. The authors illustrate global environments of trees as well as local and global services trees provide.

The succinct narrative holds readers' attention. At times, Rodd and Stackhouse can be dramatic: "Trees are the 'big game' or the 'whales' of the plant world," or the fact that trees "include in their numbers the world's largest living organisms." This is a common point of many tree books. What is less common in tree books that try to enthrall (such as this one) is its relation of trees to ordinary life. "We tend to take for granted the trees in our local environment. But even the most ordinary tree, whether growing in the street or in a city park, is worthy of contemplation."

Rodd and Stackhouse ask you to step outside, to take a moment from reading the book and consider what a tree, any tree first encountered, is doing right at that particular moment. They ask you to consider how many leaves it might have; to think where the roots might be going and what the conditions they are growing in, what is present, what might be absent. How old is this tree? How tall is it? How wide is the crown, what animals might be living or using its trunk, branches, and roots?

They then ask you to think what this tree might be doing for the immediate and then global environment. How much carbon is this particular tree absorbing and fixing into its body, holding it until released through decay or fire? Visualize the micro-level processes of the root system, of fibrous root hairs drawing water and minerals from the soil then water passing through the woody roots and to tree parts. Consider what this tree might provide if it were cut down and processed for wood products and consider what uses (shade, beauty, inspiration) might be traded at the same time. And consider the people that might have spent time under its spreading crown and of what human events the tree may have witnessed.

They then ask you to walk around the house or office; wherever you are. Consider what items are made from tree parts. Obviously, the wooden table or chair comes from the body of a tree. But also consider some less conspicuous products trees provide. The paper in the book you just left on the coffee table may be from the pulp and paper process of a Quebec forest products based community in the boreal forest. The hose you just tripped over on the patio may have originated from the cells of the Raffia Palm, which is native to Madagascar. Your glass of lemonade may be resting on a cork coaster made from Cork Oaks growing in the Mediterranean region of Spain. The glass of lemonade itself originates from the reproductive structures of the lemon tree.

The illustrations are wonderful, as good as any botany college text book.

This book does not preach—the authors simply present the biological structure and function of trees, the habitats they inhabit, and the ecosystem functions as well as the multitude of human uses they provide. It is informative in a fun way. You can pick it up at any time, just relax, and still learn something. Or you can seek specific information too. Make no mistake—this should not be the only book on trees you own, but it would be one that you return to over and over again.

Robert M. Ricard is a senior extension educator in urban natural resources and public management with the University of Connecticut Cooperative Extension System.

Asian Longhorn Beetle Discovered in Worcester, Massachusetts

A resident's sighting of a large beetle in the Greendale section of Worcester, 20 miles north of the Connecticut border, has led to tests that confirmed the long-dreaded arrival of the Asian longhorn beetle into New England. The U.S. Department of Agriculture plans several steps to limit the infestation. After killing frosts next winter, officials plan to remove the trees where the beetles were found to prevent their spreading out of the area. Scientists estimated the Worcester beetles to be at least five years old. Because of this, and because two heavily traveled highways, I-395 and I-290, pass near the area, officials are worried that the beetles could easily spread to Connecticut.

Christopher Martin, the Connecticut Department of Environmental Protection's director of forestry, said in a press release, "The close proximity to Connecticut definitely places our forests at risk." He said Connecticut residents should watch for the beetles and report possible infestations to the Connecticut Agricultural Experiment Station in New Haven or the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine.

Mr. Martin also warned Connecticut residents to buy firewood locally and not to transport firewood from out of state because the beetles could easily "hitchhike" in on the wood. A partial list of trees the beetle likes includes box elder, Norway, red, silver, and sugar maples; alders; birches; elms; horse chestnuts; poplars; and willows. Previous infestations have occurred in New York, Illinois, and New Jersey.

Contact the agricultural experiment station at 203-974-8474 or 203-974-8485. Residents can also report sightings to APHIS via its Web site at http://www.aphis.usda.gov/.

The Connecticut Department of Environmental Protection recommends the following Web links to read more about the beetles and the warnings:

USDA FS Pest Alert:
http://www.na.fs.fed.us/pubs/palerts/alb/alb_pa.pdf

Fact sheet:
http://www.aphis.usda.gov/publications/plant_health/content/printable_version/fs_phalb.pdf

Connecticut Passes Law Supporting Protection of Lower Farmington River

Connecticut lawmakers expressed support for an effort to achieve federal "wild and scenic" designation of the lower Farmington River and its tributary, Salmon Brook, under the Wild and Scenic Rivers Act. A study committee plans to apply to the U.S. Congress for the designation in 2010. The Connecticut bill, H.B. 5143, also commits the Connecticut Department of Environmental Protection to work with agencies toward the designation. A federal "Wild and Scenic" designation would afford the two rivers some extra legal protections and provide annual federal funding to be used in the river towns for river-related projects. The Upper Farmington River was designated Wild and Scenic in 1994. The Eightmile River was designated this year.

A total of 17 legislators representing all 10 towns expressed their support for the bill, and the bill passed unanimously.

A number of Connecticut legislators played essential roles in the passage of H.B. 5143. Senator Donald J. DeFronzo, Representative Demetrios Giannaros, Representative Richard Ferrari, Representative Dick Roy, and Representative Linda Schofield played key roles in shepherding the bill through the state legislature. Wild and Scenic Study Committee members became regular visitors at the state capitol as they met with representatives and senators from the 10 Wild and Scenic study towns, Avon, Bloomfield, Burlington, Canton, East Granby, Farmington, Granby, Hartland, Simsbury and Windsor.

In testimony before the Environment Committee, Sally Rieger, chair of the Wild and Scenic Study Committee, said, "Many people feel, as I do, that it is their river, their special place, and want to see it healthy, for themselves, their children and grandchildren and for the citizens of their towns."

"In our region, the Farmington River has value that is truly priceless. This legislation is the best opportunity imaginable to protect the river and an opportunity that in years to come will be looked back on with great pride," said Sarah Hincks, Chair of the Farmington River Watershed Association and representative to the Wild and Scenic Study Committee. *Source: Press releases*

Forest Forum Nov. 25 Explores Benefits of Public Forests

Interested in healthy, working forests and sustainable local economies? If your answer is "yes," please join the Connecticut Forest & Park Association and its co-sponsors for the fourth annual Connecticut Forest Forum on Tuesday, November 25 8:30 to 4 p.m. at the University of Connecticut in Storrs.

For the brochure and registration, see www.ctwoodlands.org or call 860-346-2372.

Forest ecosystem functions and services are essential to our communities, our economy and the quality of our lives. Yet as important as they are, they are seldom very well understood, and their value is almost never reflected in the traditional marketplace. As Connecticut's forests shrink and fragment, we may well be losing more than we realize.

The forum explores forest-derived "ecosystem services" and the benefits and challenges involved in valuing them and communicating their importance. Special guests from other states who will share their expertise at the forum include Robert Costanza, director of the Gund Institute for Ecological Economics at the University of Vermont, and David Newman, chair of the Department of Forest and Natural Resources Management at the State University of New York College of Environmental Science and Forestry.

Get Out the Hiking Shoes....

Metacomet-Mattabesett Hike Series Planned

In celebration of the proposed New England National Scenic Trail, CFPA is organizing an extensive series of section hikes of the Mattabesett and Metacomet trails.

Twelve section hikes of between 5 and 12 miles each and six "sampler" hikes each 5 to 10 miles and going to notable outlooks or views will be scheduled on weekdays and weekends between September 1 and November 30. The section hikes total more than 100 miles and the sampler hikes, 38 miles total. The Metacomet and Mattabesett trails are part of a proposed New England National Scenic Trail.

For details of the hikes, see the Web site www.ctwoodlands.org or call 860-346-2372.

MMM Hike Series 2008

Note: *The letters and numbers listed for some of the hikes refer to a "hike difficulty" rating system devised by the Appalachian Mountain Club. For a key, see the bottom of this page.*

October

S**aturday, October 11. METACOMET TRAIL**, Peak Mountain, East Granby. Family Hike (C4C). Two-mile hike to Peak Mountain and back for excellent views and fall foliage. Good for kids 6 and older. Start with a steep climb but the pace will be easy to allow time to view rocks, plants, and animals. Snack at lookout. Meet at 1 p.m. on Newgate Road at intersection with Route 20 in East Granby. Rain cancels. Leader Mike Stanley, 860-668-5304, HIKELIKEMIKE@AOL.COM.

Sunday, October 12. MATTABESETT TRAIL, Chauncey Peak, Meriden. Afternoon Family Hike (C4B). Climb the traprock ridge to great views. Leashed dogs welcome. Meet at 2 p.m. in Meriden at Giuffrida Park on Westfield Road (a continuation of Country Club Road), 2.8 miles west of I 91 Exit 20. Rain cancels. Leader Eric Stones, 203-797-9175, estones01@snet.net.

Saturday, October 18. MATTABESETT TRAIL, Mount Pistapaug, Middlefield, 10.4 miles (A2B). Highlights include great views of the Ulbrich Reservoir from the summit of Mt Pistapaug. Meeting place is the unpaved parking lot on the corner of Route 157 and Route 68 in Middlefield. Meeting time: 8:45 a.m. Start time: 9 a.m. From here we carpool to the trailhead on Route 77 in Guilford. Questions contact Leader David Bellemare, davidbellemare@sbcglobal.net, 203-753-9126, or Cell 203-509-0151 day of hike only.

Saturday, October 18. MATTABESETT TRAIL, Chauncey Peak & Lamentation Mountain, Meriden (C2B). CFPA/AMC-sponsored 4.5-mile loop hike over new and old sections of the Mattabesett Trail. Great views in several directions from Traprock Ridges. Some very steep and strenuous climbs in about a three-and-a-half-hour hike, including view breaks. Meet 9:45 a.m. for a 10 a.m. start at parking lot by dam in Giuffrida Park. From I-91 exit 20, go west 2.7 miles on Country Club/Westfield Road, then turn right into Giuffrida Park. Rain cancels; if in doubt call Leader by 9 a.m. Leader Chuck Sack, 860-966-8877, happihiker@yahoo.com. Co-leader Beagsley the Trail Beagle.

Saturday, October 18. MATTABESETT TRAIL, Mount Higby, Middlefield (B3B). Five miles from Route 66 to summit and back on the premier Mattabesett Trail. Spectacular views; enjoy the Connecticut version of Mount Tom. Dogs on leash welcome. Meet at 10 a.m. at the Route 66 westbound parking lot in Middlefield, just west of Route 66 intersection with Route 147. Heavy rain or lightning cancels. Leader George Arthur, 860-871-0137, trailsarthur2@comcast.net. Co-leader: Joe King.

Sunday, October 19. METACOMET TRAIL, Heublein Tower, Simsbury, 10.6 miles (A2B). Highlights include MDC Reservoir #6 and the Heublein Tower. Meet 8:45 a.m. for 9 a.m. start at Penwood State Park, Route 185, Simsbury; we will carpool to Park Road. Questions contact Leader David Bellemare, davidbellemare@sbcglobal.net, 203-753-9126, or Cell 203-509-0151 day of hike only.

Saturday, October 25. MATTABESETT TRAIL, Guilford (A3C). Hike the Mattabesett and Lone Pine section of trails in the Northwoods conservation and wildlife corridor of Guilford. This 11-mile loop consists of nine preserves and three private parcels of land that connect to thousands of acres. Points of interest include two vistas with 360-degree panoramic views. Meet at 8 a.m. at the Braemore parking lot on Route 77 (5000 Durham Road, Guilford). Leader Paul Mei, 203-457-1938. Rain date Sunday, October 26, same time; call Leader if in doubt.

November

Saturday, November 1. METACOMET TRAIL, Old Mountain Road to Route 372, West Hartford/Farmington/Plainville (B2B). This beautiful 8.2-mile stretch of the Metacomet Trail goes past many great views while threading through some residential areas. Highlights of this hike include wooded area on grounds of the Hill-Stead Museum, the beautiful Rattlesnake Mountain, Pinnacle Rock, and several outlooks next to the old Nike military base and a former quarry. Meet 8:45 a.m. (for a 9 a.m. start) at the MDC Reservoir #1 treatment plant in West Hartford. From Route 4 (Farmington Avenue) in West Hartford, turn west into MDC plant entrance and park at recreation area. We will walk the short distance to the trail from here. Transportation provided back to your car at end of hike. Leader Christine Woodside, 860-526-9099 evenings or cell phone 860-575-1024 on day of hike.

Sunday, November 2. MATTABESETT TRAIL, Higby Mountain, Middlefield (B2B/C). 5.0 miles round trip, rocky trail to summit (892') and back. Outstanding views from traprock ledges. Lunch along the way. Meet 9:45 a.m. for 10 a.m. start. Directions: I-91 (North) Exit 18 to Route 66 east to intersection with Route 147. Left at light into Guida's restaurant parking. Turn around, go right on Route 66 0.5 mile to trail parking on right. I-91 (South) Exit 20, turn left on Country Club Road, go 1.1 miles and turn right on Higby Road, go 1.2 miles and turn right on Meriden Road (Route 66), go 1.2 miles to Guida's restaurant. Continue straight on Route 66 0.5 mile to trail parking on right. Steady rain cancels. Leader George Schott, 203-223-1677, geosteven@aol.com.

Saturday, November 8. METACOMET TRAIL, Talcott Mountain, Simsbury (C4C). Two to three miles to te summit and back with excellent views. See Heublein Tower, Farmington River Valley, and Barndoor Hills. Start with steep climb, but with easy pace to allow nature observations. Bring your snack for a rest at summit. Meet at 10 a.m. at Talcott Mountain State Park parking off Route 185, Simsbury. From the west, entrance road with brown sign is on right, 1.5 miles east of junction of Route 185 and Route 10/202. From the east, entrance road is on the left just past Penwood State Park, 1.25 miles west of junction of Route 185 and Route 178. Heavy rain/lightning cancels. Leader George Arthur. 860-871-0137, trailsarthur2@comcast.net. Co-leader Joe King.

Saturday, November 15. METACOMET TRAIL, Talcott Mountain (B2B/C), West Hartford/Bloomfield/Simsbury. CFPA/AMC-sponsored eight mile loop on the Metacomet Trail and alternate trail. Hike is approximately four hours including lunch break at Heublein Tower. Great ridge views of Farmington Valley. Meet 9:45 a.m. for 10 a.m. start at MDC Reservoir #6 parking lot, Route 44, West Hartford. Rain cancels; if in doubt call Leader by 9 a.m. Leader Chuck Sack, 860-966-8877, happihiker@yahoo.com. Co-leader Beagsley the Trail Beagle.

Key to Difficulty Ratings

The first letter is the distance. The number is the hiking pace. The next letter is a key to the terrain.

Distance ratings:

AA: Greater than 13 miles.
A: 9 to 13 miles
B: 5 to 8 miles
C: Less than five miles

Hiking pace ratings:

1—Very fast, 2.5 mph or faster.
2—Fast, 2 to 2.5 mph
3—Moderate, 1.5 to 2 mph
4—Leisurely, slower than 1.5 mph

Terrain ratings:

A—Very strenuous
B—Strenuous
C—Average
D—Easy

More 2008 MMM Hike Series listings to come – check the Connecticut Forest & Park Association Web site at ctwoodlands.org.

CFPA *Store*

Limited Edition Reproduction Commemorative Maps

Quinnipiac Trail (1931)
$3.25 (plus tax and $4.00 shipping)

Original Appalachian Trail (1934) $3.75
(plus tax and $4.00 shipping)

Trail Gear

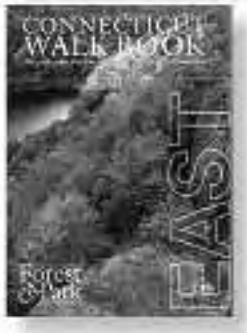
CFPA Logo Hats
Two-toned low-profile 100% cotton baseball cap with KHAKI CROWN, FOREST GREEN BILL, embroidered logo. Adjustable strap. (Hat not exactly as pictured here).
$15.00 (plus $2.00 shipping)

Books, etcetera

Forest Trees of Southern New England, a 56-page paperback publication of the Connecticut Forest & Park Association. This manual is a simple description in accurate and nontechnical terms of the forest trees common in southern New England. It is intended for the general public to meet a pressing demand for a pocket manual which is easy to use and understand.
$2.00 (plus tax and $1.50 shipping)

Connecticut Woodlands,
A Century's Story of the Connecticut Forest & Park Association, by George McLean Milne, published by the Connecticut Forest and Park Association in 1995. A fascinating history, not so much of the Connecticut Forest and Park Association as it is of the dedicated men and women who have cared about Connecticut's forests and fields, hills, valleys, and parklands. Scattered through these pages are inspiring accounts of courageous struggles to protect the rich and varied natural environment of the state.
$25.00 (plus tax and $5.00 shipping)

A Shared Landscape,
A Guide & History of Connecticut's State Parks and Forests, by Joseph Leary, published by Friends of Connecticut State Parks, Inc. in 2004. Richly illustrated in four-color with maps and photographs, this 240-page guide offers an intimate look at Connecticut's public lands and tells you everything you need to know about where to go if you love to hike, bike, camp, fish, swim, hunt, watch birds, learn about ecology or cross-country ski.
$25.00 (plus tax and $5.00 shipping)



The Connecticut Walk Book, WEST, and the Connecticut Walk Book, EAST, provide a comprehensive guide to hiking throughout the state. Published by the Connecticut Forest & Park Association, the two volumes are the 19th edition of the guidebook first released more than 75 years ago. Both volumes include the Metacomet and Mattabesett Trails of Central Connecticut. Both volumes include detailed two-color topographic maps that are crisp, clear, and easy to read. Complete trail descriptions accompany the maps.

Each volume **$19.95 members**
(plus tax and $5 shipping)

Each volume **$24.95 non-members**
(plus tax and $5 shipping)

The Homeowner's Guide to Energy Independence,
by Christine Woodside. Lyons Press, 2006. A book for ordinary Americans who want to move away from fossil fuels. Learn about the most viable and affordable alternatives such as solar panels, wood, hydroelectric, hybrid cars, and more.
$14.95 (plus tax and $5.00 shipping)

Trail Gear

CFPA Logo T-shirts
Hanes Beefy Ts – 100% cotton, heavy weight, double needle hems, taped shoulder-to-shoulder, Sizes: S-M-L-XL, WHITE ON FOREST GREEN / FOREST GREEN ON KHAKI. **$15.00** (plus $4.00 shipping)

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Seventy-five years ago, the federal government started the Civilian Conservation Corps. The next issue of Connecticut Woodlands will include an article by Marty Podskoch about the Connecticut CCC camps, such as the one above at Chatfield Hollow State Park.

Connecticut Department of Environmental Protection

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