

Loosestrife-eating Beetles Come to Local Backyard

Sue Flint

On a Sunday early in April, under a light rain, sneakers sinking into a wet field, I found myself extolling the virtues of a pitchfork for digging up loosestrife. “With this you can get right under the root ball and pull it up without getting so much muck [insert loud, slurping sounds of roots coming reluctantly out of the mud]. Isn’t that great!” My teenage assistants look skeptical and continue digging with their shovels. No matter. After four hours of digging and pitch forking, we had 150 or so root balls extracted, ready for washing and planting in our artificial wetland. Why, you ask? Why to feed the beetles, of course.

OARS, along with several other local groups, is raising *Galerucella sp.* leaf-eating beetles for the biological control of purple loosestrife along the Sudbury River. The loosestrife we dug up in April were planted in an artificial wetland (aka,

a set of wading pools in board-member Pam Rockwell’s backyard being tended by Isaac Rockwell), and, now at the end of May, most of our plants are large enough to supply ample food for beetles. Our “starter” beetles are both purchased and collected locally. Five hundred beetles purchased from the Phillip Alampi Beneficial Insect Laboratory in New Jersey arrived on May 22nd and are happily munching on the plants now! We’ll be collecting another estimated 250 beetles from areas of the watershed where they are sufficiently abundant. Protected from predators and with plenty of loosestrife to eat, all of our starter beetles should thrive and produce numerous offspring. The University of Minnesota Extension Service estimates that 10 beetles raised on potted purple loosestrife will yield 1,000-2,000 new adults. That next generation of hungry beetles will be released to new areas of loosestrife in the Sudbury watershed,



Building an artificial wetland.

to eat their fill and reduce the number of plants producing seeds for next year.

The larger loosestrife-control project is a three-year effort to reduce the dominance of purple loosestrife along the Sudbury River and allow native wetland plants that provide food and shelter for wildlife to thrive. The project is funded through the Nyanza Restoration Fund and administered through the Cooperative Invasive Species Management Area (CISMA). Massachusetts Audubon Society staff are monitoring populations of purple loosestrife and *Galerucella* beetles to document areas where remediation is needed, track where beetles are released, and monitor the effectiveness of the project.

In their initial mapping, Mass Audubon identified acres of dense loosestrife needing remediation near the following wetlands: Pantry Brook Wildlife Management

Love (but don’t feed) Your New Wild Neighbors

David Mark

Wondering if there are coyotes in your town? The answer is Yes. Massachusetts is home to more than 10,000 coyotes and they are in every town except on the islands! Boston sightings include the North End, Chinatown, Roxbury and Beacon Hill. Late spring onward is when coyote sightings increase. Fathers and mothers hunt more to bring food to the new pups. Once the pups are older they accompany their parents on practice hunts, so it is possible to see a family group—technically not a pack—walking down your street or lolling about at the neighboring meadow. In the fall the juveniles disperse to form mating pairs and find their own new territories.



Coyotes are not native to this area, originating west of the Mississippi. About 50 years ago, coyotes immigrated eastward through Canada, hybridizing with the local wolves before moving down into New England. These hybrids—larger, stronger,

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OARS

Protecting, preserving, and enhancing the Assabet, Sudbury, and Concord Rivers, their tributaries and watersheds for the purposes of public recreation, water supply, and wildlife habitat.

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Summer Time - Lawn Care Time!

On August 29, 2013, Governor Patrick signed into law an Act that limits the use of lawn fertilizer that contains phosphorus, the leading nutrient that pollutes our rivers and lakes. The law had a lot of support—it is expected to significantly reduce stormwater pollution and hence reduce the cost of cleaning up our waterways. But that is only if people comply! So, while the Department of Agriculture develops the regulations, here is what the law says and how you can get a jump on it this summer!



The law (MGL Ch.128 Sec. 65A) prohibits the purchase and use of any phosphorus-containing fertilizer on lawns or turf except when the soil is deficient in phosphorus (shown by a soil test), or it is needed to establish a new lawn. Agricultural turf is an exception. Phosphorus is important for a healthy root system, flower blooms and fruit production. Personally, I prefer that my lawn contains neither flowers nor fruit. The phosphorus content is printed on every bag, such as “5-10-5”, which shows the percentage of nitrogen, phosphorous, and potassium (N-P-K). Select bags that have “0” for the middle number. Thanks to the new law, the store where you buy fertilizer should have it, and if not—ask for it!

You may not need fertilizer at all, of course, and a healthy lawn can be had that requires much less water, fertilizer or chemicals than we have used in the past. It may not require any—and that is a good goal for us all. In most cases our local soils contain plenty of phosphorus for healthy plants and lawns, so adding it is both unnecessary and harmful to water bodies. Basic tips for a healthy lawn include: select seed that is suited to our climate; mow high but often and with sharp blades, and mulch the clippings right on your lawn to build the soil.

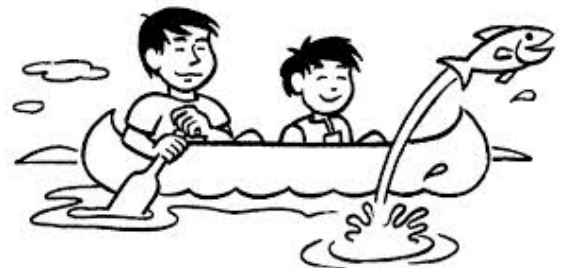
Most important, and perhaps most difficult, is to accept a dormant (a.k.a. brown) lawn when the summer turns on the heat and dries up the water. A healthy lawn will come back as soon as it rains. The fish in a dry stream, however, will not come back to life.

Some residents and businesses are sinking their own irrigation wells so they no longer use town water, but that does not help protect our water resources in the long run. Private irrigation wells should be used with the same water-conserving practices as those using the public water supply. Rather than sinking into the ground, most irrigation water is lost to the sky. The best way to help our rivers and your landscape is to build a healthy lawn or convert your lawn to ground cover, shrubs and perennial flowers—beautiful and appropriate to our climate.

I wish you happy gardening, boating, birding, and fishing this summer! Please check out our summer events on page 5.



Alison Field-Juma
Executive Director



New Board Members Voted in at Annual Meeting!

OARS held its 28th Annual Meeting at the Sudbury Grange on May 19. Sixty members and guests were treated to Tom French's entertaining talk on the "Return of predator and prey to our watershed" (see article on page 1).

Executive Director Alison Field-Juma described OARS' achievements over the past year. Our financial position is healthy, with 61% of our support coming from memberships and contributions and 77% of our expenditures being on programs—getting the work done.

Following the recommendation of the Nominating Committee, members voted in six members of the Board of Directors, including three current members: Paul Goldman of Marlborough, Allan Fierce of Stow, and Pam Rockwell of Concord. Three new Board members were also appointed: Bob Donelan of Concord, Ingeborg Hegemann of Stow, and Brian Kilcoyne of Concord.

Many thanks to the Sudbury Foundation for use of the Grange Hall and to our volunteers who baked and helped with our meeting.



Board President Pete Shanahan (center) welcoming new OARS Board Members, Bob Donelan of Concord (left), and Brian Kilcoyne of Concord (right). New Board member not in photo: Ingeborg Hegemann of Stow.

6th Wild & Scenic Film Festival Packed the Fine Arts Theatre Place



On Wednesday, April 30th over 350 festival-goers from Maynard and beyond were treated to an amazing evening of entertaining and inspiring films!

With the theme, "emPOWERment," the 13 award-winning films touched on issues that we are grappling with in our very own lives and watershed. Starting with the seriously funny A Brief History of the 5-cent Bag Tax, followed by Slomo (a retired doctor finds balance on rollerblades), attendees left the theatre with many favorites including, believe it or not, Dying Green. For a list and description of the films visit www.oars3rivers.org.

OARS thanks the Fine Arts Theatre Place, Maynard's Cultural Council, and the Town of Maynard Selectmen, Fire Chief, and Building Commissioner for making the evening possible. We also thank our Supporting Sponsors: Patagonia Boston, Epsilon Associates, O'Reilly, Talbot & Okun Associates, and Thoughtforms. We are also grateful to our many Community Sponsors: Serendipity Café, River Rock Grill, Confluence Visuals, Global Goods, Halfway Café, El Huipil, Nashoba Brook Bakery, WrightTouch, EMS, REI, Tea Forte, LEAP Organics, Acton Colonial Spirits, Main Street Liquors, Great Brewery, and Reasons to be Cheerful. The film festival was also made possible thanks to National Sponsors: Patagonia, Kleen Kanteen, Cliff Bar, Sierra Nevada, Orion, and Mother Jones.

A big thank you to our emcee EJ Labb of Maynard and the new theatre owners Melanie Perry and Steven Trumble. OARS also thanks our volunteers and everyone who came out to see the films and support our work on our own Wild & Scenic Rivers, the Assabet, Sudbury, and Concord. See you next year!

Welcome, New Members!

Terri Ackerman
Iris and Ted Barton
Lorrain and Ernest Bauder
Timm Brandhorst
Ann Budner and Harry Hollenberg
Laurie Burnett
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Matthew Smith
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Marie Struder
Cathy Terwedow
Kizette Vanger
Penni Hensley Wagner

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and with more variegated coats—are happy to fill the role of apex predator made vacant after the wolves and mountain lions were hunted to local extinction.

Coyotes and more were featured at OARS' Annual Meeting in Dr. Tom French's presentation "Welcome Home? Return of Predator and Prey to Our Watershed."

According to French, Director of Mass-Wildlife's Natural Heritage and Endangered Species Program, once-scarce mammals are finding suburbia much more to their liking than the bare hills of our agricultural past. The state's black bear population is estimated at 5,000 and is growing at around eight percent per year. For the present, hunting is allowed west of Worcester, but if the eastern population increases as expected, hunting will likely be expanded eastward. Bobcats are also spreading from mid-state eastwards.

On the bird front, bald eagles have fledged 493 chicks since the first nest was established by Mass Wildlife in 1989, peregrine falcons have fledged 434 chicks since 1987, wood ducks produce about 4,300 chicks per year in nest boxes, and wild turkeys are now just plain common—the 2012 harvest by hunters was 3,100 birds.






Moose wander

An estimated 1,000 moose now make Massachusetts their home. Adults settle down to a modest-sized territory, but juveniles, weighing 500-700 pounds, are known to wander hundreds of miles seeking potential mates. One female had to be removed from the Amherst campus earlier this month. In 2004 a moose created a ruckus swimming in Lake Boon.

Beaver settle

While the classic habitat is a dam-flooded stream and a stick-built house surrounded by water, beaver will also opt to dig into the bank of a river or pre-existing pond. And beaver will extend their foraging boundary to scores of yards distance from water's edge. Your ornamental cherry tree is their breakfast. Coyotes do a bit to keep beavers in check, and bears are known to

Did you know?

-  Massachusetts led the way in endangered species protection. Back in 1818 our state passed the first law protecting non-game birds.
-  In response to the new Holyoke Dam on the Connecticut River blocking the salmon runs, the legislature established the Mass. Fisheries Commission in 1866.
-  Our resident Canada geese are the offspring of live decoys which were prohibited—and let loose—in the 1930s. A case of unintended consequences?
-  The return of wildlife coincided with the rapid decline of agriculture in Massachusetts from 1950 to 1960 when the new interstate highway system cut the market out from under local farms.
-  The most dangerous wild animal in Massachusetts is the moose. Because of their large size, car collisions with moose are often fatal for both the moose and the car occupants. When you see that "Moose Crossing" sign—take care!

have an occasional beaver snack. Under certain circumstances, licensed trappers can be brought in to remove nuisance beavers.

Deer are dense

Populations now far exceed the pre-Colonial deer density of 8-10 per square mile. From an estimated low of 1,000 circa 1900, the current population rebounded to exceed 100,000. Central Mass harbors 15-20 per square mile, with hot spots (Martha's Vineyard and Nantucket) soaring to 40-50 per square mile. Culling via hunting is (obviously) not keeping up. Not only are deer devastating the forest undergrowth, they increase the population of deer ticks, and hence our risk of contracting tick-borne diseases.

Most of these species are crepuscular, meaning they are most active a few hours after sunset and before sunrise. However,

all of them will put in occasional daytime appearances, which does not necessarily mean that the animal is ill or rabid.

As a practical matter, avoid feeding wild animals, either deliberately or inadvertently, or putting food outside for your pets unless inside a fenced yard. Homeowners are finding that even a bird feeder can attract much more than squirrels.

Dr. French noted that "A Fed Bear is a Dead Bear"—once they become accustomed to you and your birdseed, they can become more aggressive to the point of having to be killed. Supervise your pets when they are outdoors or make sure you provide a safely fenced area. Keep trash secured and don't put food scraps on an open compost pile—this is akin to a wild animal buffet.

It has taken land use change, strong environmental laws, and a lot of hard work to make these feathered, furry, and shelled (in the case of turtles) creatures our neighbors once again. In the end, the best protection for both the animals and the people is to love the wildlife, but let it stay wild.

Marks' writing on the outdoors can be found in his book Maynard: History and Life Outdoors (2011, History Press) and at www.maynardlifeoutdoors.com.



Photographs courtesy of Tom French.



Join Us Along the Rivers This Summer!



Riverfest: A Weekend of Celebrating our Wild and Scenic Rivers

June 20 - 22

Check out the complete list of free events taking place throughout the watershed at www.sudbury-assabet-concord.org

RiverQuest

Sunday, 11 am - 1 pm

Explore the confluence of our three rivers. Put your canoe or kayak in at the Lowell Road bridge in Concord (or the South Bridge Boat House if renting a boat). Paddle the lower Assabet and Sudbury, continuing to the North Bridge on the Concord searching for clues and stickers. Picnic and enjoy other Riverfest activities at the Old Manse. This is a family-friendly paddle that takes 1-2 hours.

Music and Art Along the Banks of the Concord River

Sunday, 11 am - 2 pm

Enjoy music and art along the riverbank at the Old Manse in Concord. Build a sculpture with Musketaquid artists. Children can turn a recycled soda bottle into a colorful fish. Young children can create their own waterstick or painted turtle! Listen to the Dixie-land tunes of the Silver Leaf Jazz Band.



Fishing Class for Kids

Sunday, 9 - 11 am

Would your kids like to learn how to fish? Concord Outfitters will run a free fishing class for children ages 6-13 on the banks of Nashoba Brook in West Concord. Pre-registration is required. Please call 978-318-0330 or email andy@concordoutfitters.com by Thursday 6/19.

Summer Solstice

Sunday at 6:30 pm



Celebrate the beginning of summer with OARS and Musketaquid Center for the Arts and Environment! Begin with a musical picnic at the Old Manse and end the evening with an illuminated flotilla at the Old North Bridge followed by a Solstice Fire on the back lawn. Bring a candle lantern (directions at www.oars3rivers.org). This event has become one of our favorite traditions.



Water Wise Workshops Back for 11th Season!



July 7 - August 12

These free, water-side workshops on environmental science and stewardship are designed for children ages 6-10. Through field-work, hands-on activities and lively group discussions, participants are encouraged to explore the fascinating world of water and learn new ways of protecting it for all the creatures that depend on it. Topics include Water Plants and Animals, Water Bugs Mystery, Water Testing, and Photography. The series of six two-hour workshops will be in Westborough at Lake Chauncy (Mondays) and Natick at Lake Cochituate State Park (Tuesdays), 10 am - noon. Call OARS to register.



Family Water Sampling Workshops: Become a Citizen Scientist

Thursday, July 24, 6:30 - 7:30 pm

Tuesday, August 5, 6:30 - 7:30 pm



Water quality monitoring is core to OARS' science-based advocacy work. This free workshop gives children (ages 6 and older) and their parents a chance to experience science in action. The same workshop will be offered twice. Locations to be determined. Call OARS to register.

Remove Invasive Water Chestnuts

Saturday, July 12, 9 am - 1 pm, Tuesday, July 15, 5 - 8 pm

and Saturday, July 19, 9 am - 1 pm

Hand-pull water chestnut plants from the Assabet in Hudson, Stow & Maynard. All days begin with a brief training session for first timers. Groups go out in canoes to pull the weeds and haul them to shore. If you do not have a boat, we will have canoes available with early sign-up. We also need help on shore. It takes many hands to keep this plant under control. Join us and make a difference! Call OARS to register.

To register for OARS events or for more information, please contact us at 978-369-3956 or office@oars3rivers.org. Visit www.oars3rivers.org for details and updates.

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Area in Sudbury; Heard Pond in Wayland; Route 20 in Wayland; Route 2 in Concord; Baiting Brook Reservation in North Framingham; and Water Row in Sudbury. In associated projects, Mass Wildlife will be working to restore historic wild rice (*Zizania aquatica*) to sections of the Sudbury River, and CISMA will be working to restore native flowering plants to serve as forage for honey bees (see box).

About purple loosestrife

While the swaths of purple blooms along the rivers in July can be striking, purple loosestrife (*Lythrum salicaria*) is an aggressive invader of North American wetlands, lakes and rivers. Native to Eurasia, loosestrife was well established in New England by the 1830s and over the next 150 years spread throughout North America, taking over wetland areas. A single mature loosestrife plant can produce 2 million seeds per season. Once established, loosestrife forms dense monotypic stands that degrade habitat quality by displacing native plants such as local bullrush, spikerush, and wild rice and by eliminating food and shelter for species such as the bog turtle.

In its native range, loosestrife is controlled by insects and tends to be less than 6% of the flora of an area. According to the Association of Massachusetts Wetland Scientists, "Viable solutions for managing this invasive weed by conventional means (water level management, burning, herbicides, direct digging, cutting) have proven to be extremely difficult and impractical on a large scale. An alternative is the biological control of purple loosestrife by introduction of natural enemies from



Galerucella sp., the purple loosestrife eating beetle!

Purple Loosestrife and Honey Bees



A potential down-side of successfully reducing the density of purple loosestrife may be an impact on honey bees that have come to depend on purple loosestrife for forage in areas where they are already stressed by urban development, according to the Middlesex County Beekeepers Association. The USGS Northern Prairie Wildlife Research Center suggests that a 75% reduction in the density of purple loosestrife would probably reap the benefits of loosestrife control while the surviving *Lythrum salicaria* would still provide a substantial base of pollen and nectar forage amidst a healthier mix of native plants. The goal of the loosestrife control project is the reduction, not the elimination, of purple loosestrife. To help counter the loss of loosestrife as bee forage, CISMA plans to work with partners to mow selected wetland fields and plant native blooming species such as: swamp milkweed (*Asclepias incarnate*), ironweed (*Vernonia noveboracensis*), dense blazing star (*Liatris spicata*), sweet joe-pye weed (*Eutrochium purpureum*), and sweet pepper bush (*Clethra alnifolia*).

You can help! Create a bee-friendly area of your garden, or convert part of your lawn to a more natural meadow and include the plants listed above and other flowering plants. Bees are attracted to large patches of like flowers and gardens where a number of different species of plants provide blooms over the growing season. And, of course, skip the pesticides. Native plants can be found at: New England Wildflower Society in Framingham and Russell's Garden Center in Wayland.

its native range." Which brings us to the beetles.

About the beetles

Galerucella pusilla and *Galerucella calm-ariensis* are the most successful of the four beetle species that are USDA-approved for biological control of purple loosestrife in the United States. Native to Europe, these beetles feed on purple loosestrife bud, leaf and stem tissue causing defoliation and prevention of flowering/seed production. Continued defoliation leads to plant death. Once a population of beetles reaches a level that results in significant reduction of purple loosestrife (50% defoliation), the beetles will disperse to

new loosestrife stands and continue their good work. Extensive testing by USDA and Cornell University went into the selection of the *Galerucella* from among the 120 loosestrife-eating insects found in the plant's native range to ensure that they are effective, and host-specific, posing no threat to native and ornamental plants. *Galerucella* are highly specific, unable to complete their life cycle on anything other than purple loosestrife.

Successes

Reports from Ontario, Minnesota, Michigan, New Hampshire, New Jersey, Connecticut, and other release sites show that the *Galerucella* beetles can have a dramatic impact on purple loosestrife infestations. In our state, the Massachusetts Wetlands Restoration Program facilitated the rearing and release of beetles at 43 sites, including the Neponset River and Nashua River watersheds, resulting in documented reductions of loosestrife at a number of sites. The Parker River Wildlife Sanctuary released beetles for three years, resulting in significant reductions of purple loosestrife populations. In a project

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aimed at restoring habitat for bog turtle, the New Jersey Department of Agriculture reported successful beetle dispersion after four years and, after fifteen years, they report that purple loosestrife is considered “naturalized,” in balance with other wetlands plants and varying naturally with the beetle population.

A naturalized population of loosestrife, kept in check by a self-sustaining population of beetles, in balance with native wetland plants and animals – that’s what success in our watershed would look like.

Sudbury Valley Trustees allowed us to dig loosestrife in their wet meadow. And Russell’s Garden Center donated sweet Joe-Pye weed for replanting the wet meadow, replacing the purple loosestrife.

We, and the bees, thank them.

References and resources

Association of Mass. Wetland Scientists: www.amws.org/loosestrife_project.html.

Blossey, B., et. al. 1994. Host Specificity and Environmental Impact of Two Leaf Beetles (*Galerucella californiensis* and *G. pusilla*) for Biological Control of Purple Loosestrife (*Lythrum salicaria*). *Weed Science*. 42:1. pp. 134-140. www.jstor.org/stable/4045556

Mayer, M., et al. 2012. Release of *Galerucella californiensis* and *Galerucella pusilla* (*Coleoptera: Chrysomelidae*) To Control Purple Loosestrife, *Lythrum salicaria*: 2012 Report. www.nj.gov/agriculture/divisions/pi/pdf/purpleloosestrife.pdf

Massachusetts Wetland Restoration Program: Accessed May 2014: www.mass.gov/eea/docs/dfg/der/freshwater-loosestrife/project-summary.pdf

Nyanza NRD Trustee Council. 2012. Restoration Plan and Environmental Assessment for the Nyanza Chemical Waste Dump Superfund Site (May 2012) Prepared for Nyanza NRD Trustee Council. Accessed May 2014 from: http://www.fws.gov/newengland/pdfs/2012_05_07_Final_RPEA_Nyanza.pdf

PBS. Silence of the Bees. Can you help the bees? Accessed May 2014: www.pbs.org/wnet/nature

Sato, H. 2009. A ‘Bad’ Weed Disappears, and Beekeepers Worry. *Lowell Sun*, April 2009. Accessed May 2014: www.nebees.com/badweeds.php

Thompson, D. Q., et.al. 1987. Spread, Impact, and Control of Purple Loosestrife (*Lythrum salicaria*) in North American Wetlands. U.S. Fish and Wildlife Service. 55 pages. Accessed May 2014: www.npwrc.usgs.gov/resource/plants/loosstrif/

US Fish and Wildlife Service. Biological Control of Purple Loosestrife *Galerucella* Rearing Guide. Prepared by: Robert Kenning, Invasive Plant Coordinator

USDA http://plants.usda.gov/plantguide/pdf/pg_lysa2.pdf

Remembering OARS in your will and estate planning

OARS has been protecting the natural resources of our watershed for more than 25 years, thanks to the help of your generous donations and volunteer hours. How will we protect it in the future? One way is to ensure the sustainability of OARS and its programs. We hope that you will consider including OARS in your will and estate plans. If you would like more information on including OARS in your estate planning, please contact Julia at jkhorana@oars3rivers.org or (978) 369-3956.

OARS

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OARS

OARS is your local river conservation organization. Established in 1986 to protect the Assabet River, OAR added the Sudbury and Concord Rivers to its mission in 2011 and became OARS.

OARS has over 900 members, a dedicated board of directors, a small professional staff, and a large corps of active volunteers. Our work benefits all communities in the Assabet-Sudbury-Concord watershed.

Please visit us at www.oars3rivers.org

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