

THE *ecological landscaper*

The Newsletter of the Ecological Landscaping Association

Vol. 16, No. 1

Spring 2009

Moving Forward with ELA : Connecting the Dots

FROM THE EDITOR

• Kat Good-Schiff

Over 300 landscaping professionals, landscaping product and service providers, master gardeners, community activists, homeowners, students, and interested individuals came together in Springfield, Massachusetts, at the 15th annual ELA Conference on February 27

and 28. They “dug in” to the theory and practice of ecological landscaping by attending two inspiring keynote addresses and 20 in-depth sessions on cutting-edge topics.

“Green is the right business to be in right now”

In this issue of *The Ecological Landscaper*, we review some of the conference sessions. We will continue to expand on conference offerings and additional topics in the coming year.

“This is the only conference like this anywhere. It is great to get together with other like-minded professionals,” said one attendee.

Presenter Tom Benjamin called it “a very well-organized,

well-considered and most interesting conference.” And keynote speaker David Yarrow observed, “In my second encounter with ELA, I am even more impressed with its quietly efficient organization.”

Other good news, shared at the conference, is that in the midst of economic uncertainty, the demand for sustainable landscaping services remains strong. Many landscaping professionals reported that 2008 was their most successful season ever. As our featured member in this issue, John Engwer, declares: “Green is the right business to be in right now.”

EXPANDING THE STORY OF ECOLOGICAL, SUSTAINABLE, AND ORGANIC LANDSCAPING

• Keynote Address by Peter Forbes, Co-founder and Executive Director of the Center for Whole Communities
Review by Darcy Paige, MCH, OLCP, owner of Laurel Garden Design

This was my first time at the ELA conference. As a landscape designer and maintenance professional wanting to transition my clients to ecologically sound practices, I hoped to expand my knowledge, network with others in the field, and receive inspiration. By the end of the day, that’s exactly what I got. The sessions I attended and the Eco-Marketplace were excellent, informative, and offered many opportunities to meet new people and talk to others about the latest developments in ecological landscaping.

The keynote speech by Peter Forbes touched on many points. He spoke of the landscapes of our childhoods and how many of them no

contents

- 1 Expanding the Story
- 3 Managing Soil Compaction
- 3 Survival Strategies and Tree Connections
- 4 ABCs of Forest Insects
- 5 Members Making a Difference
- 6 Open Forum
- 9 Moving Forward with ELA
- 12 Gleanings, Events

EXPANDING continued on pg. 2

The Ecological Landscaper is published by the Ecological Landscaping Association (ELA). Subscriptions are a benefit of membership in ELA. For information about ELA, contact:



ELA

1257 Worcester Rd., #262
Framingham, MA 01701
(617) 436-5838
www.ecolandscaping.org
ela.info1@comcast.net

Write to us! We welcome comments, letters, articles, topic ideas, and opinions. Send to Newsletter Editor at the address above.

Also send all other ELA business, including address changes, to the address listed above.

The ELA board meets throughout the year in various locations in eastern Massachusetts. All members are welcome. Contact us for specific dates and locations.

ELA Board of Directors

President: Dennis Collins

Vice President: Kathy Sargent-O'Neill

Treasurer: Chris O'Brien

Secretary: Andrea Knowles

Board Members

M.L. Altobelli

Jordan Hall

William Jewell

Robert Levite

Trevor Smith

Sue Storer

Maureen Sundberg

Sandy Vorce

Bruce Wenning

Executive Assistant: Penny Lewis

Each author appearing herein retains original copyright. Right to reproduce or disseminate all material herein is otherwise reserved by ELA. Please contact the Editor for permission to reprint.

Mention of products is not intended to constitute endorsement. Opinions expressed in this newsletter do not necessarily represent those of ELA's directors, staff, or members.

©Ecological Landscaping 2009

The sponsors of ELA's 15th Annual Conference deserve special recognition.



We thank **ICT Organics** for their important role in making the conference possible.

For compost tea and organic lawn care made easy, visit them at www.ictorganics.com.

— EXPANDING continued from pg. 1

longer exist; of the social disconnect that can happen when we are no longer connected to the land; of the importance of conserving the land that remains undeveloped; and of opportunities to create community and urban gardens that allow people to reconnect to the land and each other. A slide show behind Mr. Forbes showed beautiful photographs of people and natural places. The images did not illustrate specific points in his talk, but provided a visual, nonverbal counterpoint to his words.

I left the evening with two particularly strong memories. The first is of holding a spoon that he passed around the room at the beginning of his talk. He had carved the spoon out of pear wood that had once been pruned off a tree in India by Mahatma Gandhi and grafted to a tree in the U.S. After many incar-

nations, pruned and grafted several times to several trees, a piece of this wood was offered for Mr. Forbes to carve. Holding a piece of wood that had grown from the cutting Gandhi had given to a friend was a moving experience, a strong reminder that the land has the power to connect people to each other and to their dreams.

Secondly, the final message to us was clear: that we, as workers with the land, are not only stewards but also spokespeople who must go out and encourage people to see new ways of connecting to the land, of saving the land, and of caring for the land (and ourselves) in a way that can be sustained over the long haul.

It was a poetic evening, difficult to describe. I left feeling encouraged and inspired to take my work forward into the coming season.



In the Eco-Marketplace, vendors and conference sponsors including Jon Briggs of Oldcastle and John Engwer of Groundscapes Express discussed their product lines with attendees.

MANAGING SOIL COMPACTION

- Presentation by Paul Sachs
Review by Tina Smith

In his workshop, Managing Soil Compaction, Paul Sachs discussed the characteristics of a compact soil and how to remedy the situation. Sachs explained that

it is important to properly monitor and maintain soil aeration because a compact soil can lead to more sports injuries, such as shin splints, as well as an increase in weeds and plant diseases. Compact soil is starving soil and in starved soil plant matter cannot thrive.

A good way to sustain soil aeration is to increase the biological ac-

tivity via organic soil additives such as compost or compost tea. While biological activity is a must, it may not always be the best solution, and in extreme cases aeration equipment is needed.

The workshop was very informative and included funny tidbits of field work stories, making this workshop a hit!



Jazz Hour at the Conference provided time for networking.

SURVIVAL STRATEGIES AND TREE CONNECTIONS

- Presentation by Kevin T. Smith,
USDA Forest Service
Review by Allison Mooney of Mass Audubon

Kevin T. Smith's mantra, "All trees die, all wood rots," might seem initially jarring. Few people can comfortably say, "Death is a normative state." A pause for reflection, however, spurs hope. Dead trees feeding the microorganisms that keep soil (and hence plants) healthy illustrates the cyclical, connected nature of ecological systems.

During his presentation, Smith moved with alacrity between the microscopic world of soil organisms to the macrocosmic world of

ecology and metaphor, focusing on the strategies trees employ to accomplish the universal goals of survival and expansion.

Smith showed a startlingly beautiful and informative photograph of tree growth rings that highlighted the basket weave pattern between radial cells (which convey starch into storage areas) and axial cells (the cambium layer, or phloem and xylem). This woven network is the crossover zone between the symplast – the web of living cells – and the apoplast – the network of "open pipes" supporting the trunk. It is clear that all the living material of a tree is connected both physically and chemically. What an invigorating thought!

However, life is not always a

———— SURVIVAL continued on pg. 8

The sponsors of
ELA's 15th Annual
Conference deserve
special recognition.



We thank
**Mount Auburn
Cemetery**
for their important role
in making the
conference possible.

To view this beautiful and timeless National
Landmark, visit
www.mountauburn.org.



Conference presenters and attendees found time to chat between sessions.

AN UPDATE ON THE ABCS OF FOREST INSECTS – ADELGIDS, BEETLES, AND THEIR CONTROL

- Presentation by Dennis Souto, Entomologist, U.S. Forest Service, New Hampshire

Review by Bruce Wenning, ELA Board of Directors

Dennis gave an informative, but sobering lecture about the dangers of the Asian Longhorn Beetle (ALB), Emerald Ash Bore (EAB), and the Hemlock Woolly Adelgid (HWA). All three insects are exotic invasive pests introduced from Asia and are responsible for threatening and destroying certain native tree species from the Midwest to the Northeast.

The Asian Longhorn Beetle (*Anoplophora glabripennis*) is a recent introduction to the Worcester, Massachusetts area, and control measures to stop this beetle are underway. ALB is in the order *Coleoptera* (beetles) and family *Cerambycidae* (long-horned beetles). It is a very beautiful insect, but a serious pest of hardwood trees in China.

In the eastern U.S. ALB prefers Norway, red, sugar, silver, and box elder maples. Other hosts include elms, willows, Ohio buckeye, and horse chestnut. Less preferred hosts

include London plane tree, mimosa, poplars, ashes, and European mountain ash.

Beetle larvae tunnel through wood, girdling stems and branches. Adult female beetles produce 30-90 eggs. Eggs hatch in 10-15 days into small larvae which grow larger as they feed on inner wood. Once feeding and tunneling stops, just below the bark surface, larvae pupate into adults which resume boring to exit the tree. Round exit holes are $\frac{3}{8}$ inch in diameter.

Host trees can be repeatedly attacked by the same population or by discrete populations in near proximity. Eventually, infested trunks and branches die and tree death occurs. Dennis stated that ALB is an extremely devastating pest of hardwood trees, and “we want to stop this beetle as fast as we can in Massachusetts and ... we don’t want it getting established in Vermont where it can destroy the sugar maple industry.”

ALB produces one generation per year. Adults emerge in July and live until the fall. Adult beetles don’t travel far from their host trees. Adults are $\frac{3}{4}$ to $1\frac{1}{4}$ inches long, glossy black in color with white blotches or spots on the wing covers (elytra). The antennae are very long (between 2 and 3 inches) and the legs have a bluish-white hue on the dorsal (top) surface.

ALB is similar in appearance to our native longhorn beetle, the Whitespotted Sawyer beetle (WsSB) (*Monochamus scutellatus*). Only the female WsSB has white speckles in a mottled arrangement. Males lack this coloration. Both sexes are bronze black and not glossy or shiny black like the ALB.

Lastly, the WsSB is attracted to dying, stressed, or recently cut

conifer species. On the other hand, the ALB is attracted to hardwood species whether they are stressed, recently cut, or healthy. That’s right, healthy trees are just as at risk as stressed ones! All trees attacked by the ALB must be cut down and processed through a wood chipper.

The Emerald Ash Borer (EAB) (*Agrilus planipennis*) is from Asia and a serious exotic invasive pest of ash trees. This species is in the family *Buprestidae* or metallic wood-boring beetles. The destructive larvae are also known as flat-headed borers because the larvae have broad flat heads. The white EAB larvae are distinctive, having a serrated look along the length of the body (abdomen). A pair of brown pincer-like appendages is located on the terminal (end) segment.

Some larvae of *Agrilus* species attack shrubs, raspberries and blackberries. One species causes galls on *Ostrya* (ironwood). However, most

ABCs continued on pg. 10

The sponsors of ELA’s 15th Annual Conference deserve special recognition.



We thank
Belgard-Ondrick
for their important role
in making the
conference possible.

For landscaping and
building stone,
visit them at
www.ondricknaturalearth.com.

MEMBERS MAKING A DIFFERENCE : JOHN ENGWER OF GROUNDCAPES EXPRESS AND PHASE II STORMWATER PRODUCTS

• Kat Good-Schiff

For over ten years, John Engwer's Groundscapes Express has been a trusted resource for erosion control solutions, called on by architects, engineers, and municipalities across New England. Engwer



John Engwer of
Groundscapes Express.
Photo: John Ferrarone

has quietly led the field in developing ecologically sound erosion control products, using them for his own projects and gaining wide-spread support from engineers, architects, and the Massachusetts Department of Environmental Protection.

In an effort to broaden the scope of his ecological stewardship and educate both the industry and public about the importance of these practices, Engwer recently launched Phase II Stormwater Products to offer his patented products to the landscaping and erosion control industries.

"We thought it was finally time to spread the word about what we've been doing to support the environment," said Engwer. "We have developed and patented erosion control products, cultivated one of the cleanest compost farms in the nation, and are working to let people know about the right way to protect both the land and our water supply. These products can open a new stream of income for companies who have invested in blower trucks and hydroseeders."

It was the truck that got Engwer into ecological landscaping. He began his own landscaping business in 1979, and eventually felt the need to purchase a Finn Corporation blower truck to apply mulch to his clients' yards. Looking to justify the expense and find additional uses for the vehicle, he started reading and soon became convinced of the benefits of using compost—both for top dressing lawns and as planting mulch.

Then he and his manager, Butch Goodwin, began experimenting with blowing compost into burlap tubes. The idea was to create completely biodegradable berms that would improve upon the standard erosion-control method of straw bales and silt fences. The

resulting FilterMitt™ retains sediment and protects wetlands and other water resources. Unlike all other products, it contains no synthetic materials, so it can be left in place indefinitely, saving the costs of repair and removal. It can be used alone or in conjunction with other storm water management techniques, and can be grouped to form dams or stream bank stabilization structures. An added benefit is that, due to microorganisms, filtering through compost improves the quality of the water as well as slowing the flow.

It did take some time for the idea to take hold. Engwer and Goodwin clocked many hours promoting their products to conservation commissions across Massachusetts, as well as to the DEP and EPA. But their efforts paid off—FilterMitt™ is the only product in the United States that satisfies the MA Highway Department's Item 767.12 for "Mulch Filter Tubes."

"We see the product from start to finish," Engwer says. "When I couldn't find enough quality compost, I started making my own." He pays attention to the details, and he also has an eye on the big picture. Landscaping and storm water concerns are really two aspects of one issue, he points out, adding that "storm water and landscaping should be treated as one permit by the planning boards ... because really, the whole landscape is a rain garden. The whole soil is a storm water recharge."



Engwer's patented microbial FilterMitt™ is available through Phase II Stormwater Products, offering the only biodegradable stormwater solution in the country.

The sponsors of ELA's 15th Annual Conference
deserve special recognition.



We thank **Groundscapes Express** for their important
role in making the conference possible.

For innovative storm water solutions, visit them at
www.groundscapesexpress.com.

THE MARCH 24TH OPEN FORUM EVENING

• Dennis Collins

After getting re-named "The Meeting of the Minds" by board members involved in the planning of it, the ELA Open Forum Evening was successfully held at the Doyle Conservation Center in Leominster, MA. Hosting the event at an impressive LEEDS gold certified facility seemed appropriate, since the group that gathered there represented some of the most prominent ecological land-care stewards in New England. The evening offered a far reaching discussion about the future of ELA, the efforts of non-profits nationwide, the phenomenon of "green-washing" in corporate advertising and the prospects for educating the very distractible American public.

Invitations for this event asked people to help bring together diverse perspectives and creative thinking on the challenges facing our organization. At a time when economic pressures

are felt by all corporate and non-profit organizations, we are seeing our message (environmental responsibility and sustainable use of resources) finally reaching the mainstream national media. The unique nature of this moment caused the ELA Board of Directors to seek the input of as many people as possible. Judging from the turnout of more than thirty individuals, the board got exactly what it was looking for.

As the evening's agenda was purposely unstructured, the topics and the range of ideas varied widely.



Doug Gagne of The Mixed Border Nursery and Gardens in Hollis, NH, makes a point.

Suffice to say, it will take a while before all of the points that were raised can be fully processed. Yet it seemed worthwhile to share some

of the highlights here.

The ELA Annual Conference & Eco-Marketplace, clearly the largest effort of this organization each year, was given ample attention. Most people agreed that it is a very important event and that it needs to continue somehow. Some felt that the registration costs were too high (though it was also suggested that we under-priced it). This brings up the old chicken and egg dilemma. If the registration numbers were higher, the fees could be lower. Yet, we risk a financial loss if the fees are low and the attendance is also low. Several people suggested that our problem (and solution) was in the marketing of the conference.

Some discussion focused on the fact that the conference, although capable of generating lots of interest and excitement, happens too rarely. Perhaps ELA needs to get on people's radar screen more frequently than once per

year. There were several suggestions for changing this, including the staging of the event more than once per year, and at different venues. However, this expansion seems possible only if corporate sponsorship or foundation grant money could substantially underwrite the costs. Other ideas for achieving this focused on the website and what it could offer beyond its present content.

One intriguing suggestion was to provide a comprehensive resource for municipal planning boards and

———— OPEN FORUM continued on pg. 7

watershed associations. This would include white papers, downloadable power-point presentations and video clips. It was noted that so many of the problems ecological landscape firms are brought in to fix could be averted by better planning and zoning practices, more progressive local ordinances and better informed leadership from elected officials.

Municipal planning boards and government officials were two of many suggested new audiences that ELA might pursue. Others included homeowners, landscape architects, engineers, stormwater managers, and conservationists. Homeowners make up only 20% of the membership in ELA. Although it was not a deliberate strategic choice, this 80-20 balance (of professionals to non-professionals) has been fairly consistent over the years since ELA's founding, and our educational programming has followed a similar proportion as a result. There is wide consensus on expanding our reach to homeowners, but the means to do it remains uncertain. Landscape architects would be a natural fit for this organization, since the ELA mission and core message (decisions guided by a knowledge of and respect for natural ecosystems) are integral to the process of landscape design. Engineers, hydrologists, and conservationists all play crucial roles in site development, where

choices clearly impact the integrity of ecosystems. One sensible idea was to attract more of these professionals to our educational events by featuring speakers from within their ranks.

Partnerships and alliances



Kathy Sargent O'Neill, an ELA Board-member, explaining a position while Karen Howard (far left) and Cathy Rooney listen.

were discussed at length. Everyone seemed to favor a significant push toward more collaboration. Recognizing the common goals and the shared visions of different organizations (as opposed to focusing on the differences between them) was widely supported as the way to go forward. Perhaps the keynote address by Peter Forbes at this year's annual conference helped spur this view! A rather large list of suitable organizations could quickly be assembled, but a few of the more natural and logical match-ups were mentioned at the meeting. These included the Northeast Organic Farming Association (NOFA), the US Environmental Protection Agency (EPA), the Sustainable Sites Initiative (SSI), and several associations for conservationists, tree wardens, and watershed authorities.

The different types of educational outreach at ELA might be changed in the future. An interesting suggestion submitted via email by a person who wasn't able to attend the Open Forum was to offer hands-on workshops and behind the scenes tours of working landscape sites. Filming a series of how-to videos for local cable stations or for distribution on the web is another interesting approach. Both would require a substantial team of speakers/presenters that could be drawn from within the ranks of the ELA membership.

Lastly, an interesting discussion about the phenomenon of corporate "green-

washing" took place. This came out of a debate on what new future roles could ELA play in educating the public about environmental responsibility. Most folks abhor marketing campaigns that extol a



Neptune's Harvest
Organic Fertilizers

PRODUCTS INCLUDE:

- TURF FORMULA • HUMATES
- LIQUID FISH • CRAB &
- SEAWEED • KELP MEAL
- BLENDS • AND MORE

FREE SAMPLES & CATALOG
800 259-4769
www.neptunesharvest.com

company's commitment to energy efficiency or sustainability when it is apparent that the company has a history of environmental indifference or (worse yet) products that contribute to ecological degradation. We see this more and more lately, and it was suggested that ELA could serve as a watch-dog resource for such practices. This is not so different from other roles we are considering, such as identifying particularly good products and suppliers, or producing reading lists of essential books (perhaps those that we've reviewed in this newsletter). However, a surprising perspective was offered in the middle of this discussion. Someone suggested we look at green-washing as just a symptom of society (and industry) in the midst of a transition period. In a way this is reminiscent of watching children try on costumes and practice new voices. Is it better to accept this awkward period than to discourage the budding attempts at corporate responsibility with our criticism? Change is often not pretty, and perhaps ELA needs to focus more on encouraging change than policing Madison Avenue.

Or, perhaps not! What do you think? ELA is truly a melting pot of ideas and perspectives. The Open Forum illustrated how essential it is to get an infusion of ideas from our members, friends, and colleagues. Please consider this a standing invitation to let us know what you are thinking. We need to hear your perspective. Our organization exists and functions solely on the collective input and ideas of its members. Its success is based on the quality of that input, and on the shared time and talents of its members. Don't



Conference attendees examined the many offerings at the conference book store run by the New England Wild Flower Society.

underestimate the value of what you can contribute.

— SURVIVAL continued from pg. 3

“bowl of cherries,” even for trees. Smith showed a graph comparing the number of trees that start to grow with the number of mature trees. Obviously, many more trees germinate than reach adulthood. Fortunately, trees can disconnect from disease or injury; this capacity to confront and envelope an invasion or loss is crucial to their survival. Smith showed two photographs illustrating such reactions: one of zone lines around incompatible bacteria and another of the compartmentalization of decay after the loss of a branch during an ice storm.

Trees connectivity extends beyond physical form. While a tree might appear to be a discreet physical entity, it is consistently involved in a complex, interconnected web of biotic and abiotic environmental activity. In the atmosphere, CO₂ and water are, of course, engaged by chlorophyll to create sugars and oxygen. The effects of this win-

win situation for life on Earth are far-reaching and profound. Underground, symbiotic relationships between root tips and mycorrhizal fungi are equally essential for the trees, the fungi, soil health, and the vast array of soil organisms.

As a plant physiologist, Kevin Smith uses trees as a medium of understanding and exemplifying connectivity. They are stellar models, since even their capacity to remain upright is based on a regulated balance of dead cells (heartwood) and living cells (sapwood and bark). With a small imaginative leap, one can readily see how Smith postulates that “energy capture and energy release,” primarily through photosynthesis, is the meaning of life.

Smith's article Connections in Wood and Foliage provided support for the presentation. It can be downloaded at www.ecolandscaping.org/handouts.html.



MOVING FORWARD WITH ELA: CONNECTING THE DOTS

- Kathy Sargent-O'Neill, ELA Board Member, Conference Committee Chair

Connectivity is a theme in the ELA world this year. As discussed by Peter Forbes in his keynote address and by Kevin Smith in "Survival Strategies and Tree Connections," connecting to land and community helps sustain, strengthen, and carry forward one's purpose, mission, and goals—whether the connections are between trees, individuals, or groups.

ELA hosted an Open Forum on March 24 to explore ways we might sustain, strengthen, and carry forward our mission to provide information about leading-edge ecological landscaping practices and methods to professionals and the public. A heartening number of interested parties took time out of their busy schedules to attend. These included conference attendees, representatives of various like-minded organizations, ELA members, and the ELA Board of Directors.

We posed the following questions to the group and received many great suggestions:

Are traditional events like the Conference and Roundtables still viable? The answer to this question was, "Yes—networking and education on these topics are needed more than ever!"

Are there new approaches and newer models that we have not considered? The "Yes" was accompanied by many good suggestions of new models for events and the distribution of information. These included

streaming events over the web, recording roundtables and conference sessions on DVDs, and holding the Conference & Eco-Marketplace in two locations each year or alternating locations every other year.

Are there organizations that we should align with? What collaborative efforts should we consider? A resounding "Yes" was delivered to the ideas of aligning and collaborating with like-minded organizations. There's a lot to be done logistically but the will and interest are there.

We look forward with renewed energy and new connections to the various possibilities suggested at the Open Forum for continuing the ELA mission, including:

- offering leading-edge information on ecological, sustainable, and organic landscape practices
- providing networking opportunities to those who want to connect to the land in order to eliminate or reduce negative landscaping practices that lead to environmental degradation

Thanks to all who attended the Open Forum and to those who sent along suggestions and encouragement. Let us know your thoughts on these proposals or send any other ideas to ELA.info@comcast.net – and stay tuned to the Newsletter and ELA website for updates about all these exciting possibilities.



Offering Natural Fertilizers, Soil Amendments, and Environmentally Compatible Pest Controls

Depot St. Bradford, VT 05033
802/222-4277 FAX 802/222-9661

Email: info@norganics.com

Visit our web site @ www.norganics.com or call now for the location of our nearest wholesale distributor



larvae bore under bark in the cambium region causing serious damage to trees and shrubs. Buprestids commonly attack living trees as well as recently cut or dying trees and branches. This holds true for EAB. However, the EAB attacks only ash species in North America. It is established in Michigan; Windsor, Ontario, Canada; and several locations in Ohio. It is expected to colonize the Northeast if present trends continue.

Female EAB beetles lay an average of 75 eggs. Eggs are laid in bark crevices and hatch in 7 to 10 days. First instar larvae (i.e., the smallest and youngest) bore just beneath the bark into the cambium where they feed and grow larger as they travel producing s-shaped feeding galler-

ies. When you pull off the bark of an infested killed tree you can see these feeding galleries packed with fine textured sawdust – like frass (i.e. excrement).

Adult EAB beetles are about ¼ inch long, narrow, with body color varying from bronze black to metallic green. This species has one generation per year. Adult beetles, which emerge from trees in early June to early July, feed on ash leaves and hide in bark crevices and on ash foliage. Leaf damage is minimal and noticeable on leaf margins.

Trees are killed by the action of the boring EAB larvae. Water and nutrient transport is disrupted by larval feeding, causing infested branches and stems to wilt. Repeated infestation eventually kills the tree within 5 years depending on host tree size, condition, prevailing stressful environmental conditions, site quality, and size of the infesting EAB population.

The Hemlock Woolly Adelgid (HWA), *Adelges tsugae*, is in the insect order *Homoptera*. The order also includes other related and familiar insect groups like aphids; scales; spittlebugs; cicadas; leaf, plant, and tree hoppers; psyllids; and whiteflies.

Adelgids are in the family *Adelgidae*. Aphids, on the other hand, are in the family *Aphididae*. Both are soft-bodied plant feeders with piercing-sucking mouth parts and complex life cycles.

An interesting side note: there are some noticeable differences in the field between aphids and adelgids including but not limited to the following: (1) Adelgids only occur on conifers. (2) Aphids mostly occur on leaves and stems. Some occur on roots. (3) Above ground aphids produce honeydew, a clear, sticky substance secreted by feeding

The Ecological Landscaping Association would like to thank the following for their generous help in sustaining our mission through the Annual Appeal:

Dwight Brooks

Ecological
Landscape
Designs, LLC

Sarah Holland

Taylor Kane

Liz Newell

Sandy Vorce

Thank you as well to our many valued supporters who wish to remain anonymous.

aphids. Honeydew consists mainly of excess ingested sap and sugars mixed with waste materials. Sooty mold colonizes honeydew giving it a black color which is an excellent field diagnostic feature indicating that aphids are present. (4) Adelgid damage causes needles to yellow and eventually drop. Aphid damage causes leaf yellowing, leaf and stem wilting, and leaf curling, depending on the aphid species. (5) Some



Wells * Filters * Pumps
Stain Removal Services
Design * Sales * Service



John Larsen
Well Water Connection, Inc.
PO Box 158 Tewksbury, MA 01876
Tel: 978-640-6900 Cell: 978-804-5146
Fax: 978-640-6901
Email: JLarsen@WellWaterConnection.com
www.WellWaterConnection.com

Visit our NEW On-Line Store
www.WellWaterInUse.com

——— ABCs continued from pg. 10
species of aphids can transmit plant diseases. Adelgids do not transmit plant diseases. (6) Aphids feed on nutrient rich sap while the HWA feeds on stored carbohydrates (i.e. starches) in small branch stems (branch tips).

The HWA is a major insect pest of eastern hemlock (*Tsuga canadensis*) and Carolina hemlock (*T. caroliniana*) in their natural ranges in the eastern U.S. from Maine to Georgia. It is a tiny insect measuring less than $\frac{1}{16}$ of an inch long. When maturing to adulthood it covers its body with white waxy filaments. These filaments give the appearance of tiny cotton-like balls along the undersides of branch tips and are the characteristic diagnostic feature indicating HWA infestation.

The HWA needs no males to reproduce; however, males are present

in certain situations. Females can produce up to 300 eggs. This type of reproduction is called parthenogenesis (i.e., egg production without male fertilization). Parthenogenesis presents problems when nerve poison insecticides are repeatedly used in chemical control programs. Insecticide resistance builds up over time. In other words, some adelgids have the genetic traits to survive the first chemical application. These survivors reproduce giving way to more resistant individuals, and so on. For example, if one repeatedly uses an insecticide labeled for HWA control, year after year, each successive surviving adelgid population would become resistant to that specific insecticide. Insect pests reproducing by parthenogenesis coupled with a high reproductive capacity, like adelgids and aphids, can be extremely difficult to control

with nerve poison insecticides.

Horticultural oil is very good for HWA control if thorough coverage of infested branches is achieved. The same principle holds true for insecticidal soaps. Both are not nerve poisons and are impractical to use on large trees and large inaccessible forest stands. It is my opinion that horticultural oil works the best on controlling the HWA. Horticultural oil kills by smothering or suffocation and not by poisoning. Therefore, insects susceptible to oil cannot build up resistance. Soil injection using MERIT has provided long-term control.

To view images of these insects and to learn more about their biology and control, go to www.invasive.org and <http://www.na.fs.fed.us/pubs/palerts.shtm>.



Erosion Control Solutions

FilterMitt™ installed with Groundscapes' compost blends are successful & superior to other methods. Groundscapes offers applications for erosion control, topdressing, compost tea blends, & tea brewers. PDF Drawings download from website.

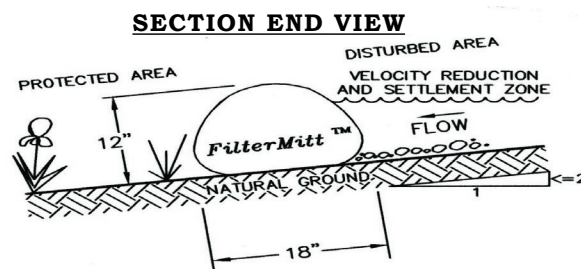
www.groundscapesexpress.com

P.O. Box 737

Wrentham, MA 02093

Office: (508) 384-7140

FAX: (508) 384-0571



gleanings

Asian Longhorned Beetle: Volunteers Needed

Massachusetts Arborists Association seeks MCA volunteers to conduct climbing inspections to help with the Asian Longhorned Beetle situation in Worcester. Volunteers are asked to make a two-day commitment any time between **March 15 and July 15**. If you are interested in lending a hand, please download this form: http://www.massarbor.org/images/ALBvolunteer_maa.pdf

Board Member Wanted

The Southwest Corridor Park Conservancy is a four-year-old, 501C-3 whose mission is to preserve, protect, and restore the Southwest Corridor Park located within the City of Boston. We are a state park managed by the Department of Conservation and Recreation. The budget for the park is next to non-existent, and we are actively raising funds for park maintenance. We have an effective board but lack a landscape professional who can advise us and direct us on the best practices for the replanting and restoration of the hardscape and landscape along the park. The time required by the board member is about two hours per month for a meeting. Beyond that, whatever the board member feels he or she can give. Please contact Franco Campanello, President, Southwest Corridor Park Conservancy at 617-642-5223 or visit us at www.swcpc.org.



events

Invasion of the Longhorns

Wednesday, April 15, author Peter Alsop will speak at Kemper Auditorium on the Phillips Academy campus in Andover, MA, at 7:30 p.m. Alsop has been investigating the Asian Longhorned Beetle outbreak in Worcester, and has written an article that will be published shortly in *Smithsonian*.

7th Annual Green Expo

Wednesday, April 22 in Boston, MA, hosted by EPA New England. This vendor fair features energy efficient, recycled, less-toxic, organic, or otherwise environmentally preferable consumer products and services. The theme is Climate Change and Energy. Visit the website and submit an online registration at <http://yosemite.epa.gov/r1/videolen.nsf/greenexpo>.

Native Knowledge Conference

Saturday, April 25 in Great Barrington, MA with two nationally-known speakers: entomologist Douglas Tallamy, author of *Bringing Nature Home*; and William Cullina, botanist and author of several wonderful gardening books. There will also be several breakout sessions with local horticulture experts. For more information or to register visit www.projectnative.org.

Workshop: Demonstration & Discussion of the Making & Use of Biochar

Saturday, May 9

9:00 am – 4:00 pm
with David Yarrow & Doug Clayton
The Lodge At Pony Farm
19 Putnam Road (off Webster Highway off Route 101), Temple, NH
www.lodgeatponyfarm.com
Cost: \$25, Soup & Salad Lunch with Coffee & Tea provided
To pre-register contact:

Douglas Williams
28 Cunningham Pond Road
Peterborough, NH 03458
603-924-7008
douglaswilliams28@comcast.net

Hands-On Greywater Workshop

The CLCA Education Committee presents this half-day workshop on **Friday, May 15** in Los Altos Hills, CA.

Presenters: Sherri Osaka from Sustainable Landscape Designs and John Russell from Water Sprout. Learn what grey water is and how you can use it to provide solutions for your customers' landscaping needs. Students and CLCA and APLD members: \$30, all others \$40. Send a check to Heidi Johnson, c/o H K Johnson & Assoc., 1153 Scotland Drive, Cupertino, CA 95014. Include your business name, which individuals will be attending, and your contact information with email. Questions: hkjohnson@aol.com.

Ecological Horticulture Classes

At New England Wild Flower Society, Garden in the Woods, Framingham, MA

Compost Tea Workshop : Saturday, June 13

Introduction to Seed Collecting : Saturday, September 12

For more information and a complete list of offerings, visit <http://www.newfs.org/learn/adult/>

International Biochar Initiative North American Biochar Conference Sunday, August 9-Wednesday, August 12

Sponsor: Center for Energy & Environmental Security
Place: Law School, University of Colorado at Boulder
Contact: Ron Larson
Phone: 303-526-9629
Email: rongretlarson@comcast.net
Web: www.colorado.edu/law/eesi/

Correction

On page 1 of our Winter 2009 issue, Lauren Chase Rowell's name was not on the byline at the start of the article. It should have read: "Digging into Ecological Landscaping by Following Nature's Lead—by Kate Hartnett, Lauren Chase Rowell, Mary Tebo, and Marilyn Wyzga." Our apologies for the error. —Ed.