

THE *ecological landscaper*

The Newsletter of the Ecological Landscaping Association

Vol. 14, No. 3

Fall 2007

Global Challenges, Local Solutions?

"The era of procrastination, of half measures, of soothing and baffling expedience, of delays, is coming to a close. In its place, we are entering a period of consequences."

– Winston Churchill

THE WAY IS CLEARED FOR NEW ELA CHAPTERS

After years of discussions and planning, the Ecological Landscaping Association is pleased to announce that the policies for forming ELA Chapters are finally completed. The process was long and arduous and involved many people. For the final preparations, the ELA Board of Directors contracted with the law firm of Hurwitz Associates in Boston, MA, who worked on the final drafting during the summer and fall. Much credit has to go to ELA board member William Jewell from Brattleboro, VT, who chaired the committee on national-chapter governance for more than two years. Also putting in long hours of work on the project were a number

of other individuals, both committee members and members at large, who should be recognized: Michael Kusiak, Golden Love, Dave Roberts, Brett Graff, Ken Foster and Roxanne Evans from California; Lauren Wheeler from Maryland; ELA board members Chris O'Brien, Kathy Sargent O'Neill, Bob Levite, Owen Wormser, Cathy Rooney and Dennis Collins. A word of thanks is also due to all those members who have been patiently waiting during the planning process.

In the early stages of planning, the committee studied many alternative models for structuring chapters and organizing their formation. A wide array of different organizations/associations were looked at, providing a range of possible approaches. The by-laws and policies of the most closely matching nonprofits were assembled (in their entirety) by Bill Jewell, who is said to have compiled an 800 page matrix in a notebook! These other organizations included Audubon, the US Green Building Council, YMCA and the Association for Professional Landscape Designers.

Ultimately, the most difficult decision was on the level of independence that ELA chapters would have. In the final plan, new chapters will each become separate 501(3)(c) nonprofit organizations, after initially operating as provisional chapters under the umbrella of national ELA. The main reason for this was the potentially greater fundraising ability a chapter might have in attracting local funding.

Another challenging question focused on the size and geographic territory of chapters. It was determined that while most chapters would represent states, there will be cases where a region that includes multiple states would be a better chapter area because of metropolitan concentrations or common bioregions (desert, mountain, coastal environment, etc.). It was also recognized that certain large states might ultimately hold more than one chapter. Until these types of cases are actually presented, there will be a mechanism to serve "out-lying" members of chapters by creating sub-chapters and working-groups.

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

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FAHRENHEIT 59

What a child's fever might tell us about climate change

• Audrey Schulman

Yesterday afternoon, my six-year-old son practiced swimming with me. Delighted with the water and my attention, Corey stayed in for forty minutes. Despite the water's chill, I knew if I took his temperature it would be close to 98.6° Fahrenheit. For an hour afterward he ran through the humid July heat, playing tag with his cousins, his hair damp with sweat. Still, a reading would have shown his body to be within a degree or two of 98.6.

This stability is a product of homeostasis. A holy word for biologists, homeostasis refers to an organism's ability to maintain its ideal temperature and chemistry.

Each species has its own preferred level of warmth, but among most mammals the possible range is surprisingly narrow, generally between 97° and 103°F. Each body's temperature works to optimize the function of its enzymes, which are critical to its every chemical interaction. Too cold and these catalysts slow down. Too hot and they break down entirely.

Such homeostatic regulation depends on a mechanism known as negative feedback: a response that maintains a system's balance. Yesterday, for example, when Corey ran in the hot sun, his cheeks got rosy as more blood moved to the surface, maximizing heat loss off his skin. No, his body said to his increasing temperature.

It turns out that our bodies' homeostasis can provide an analogy with which to understand the complexities of climate change—and the human response to it. Over geological time, the biosphere uses negative feedbacks in a way that maintains a stable global average temperature. When the Earth's oceans heat up past a certain point, for example, hurricanes (which thrive only on warm water) increase their

intensity, leaving a trail of stirred-up nutrients. The food creates a massive bloom of phytoplankton, which suck in enough of the greenhouse gas carbon dioxide to start cooling the global climate.

Conversely, when temperatures fall too low, vast quantities of methane are released into the atmosphere, possibly in part because ice sheets build up, lowering sea levels and exposing coastal methane hydrates. As a greenhouse gas twenty times more powerful than carbon dioxide, the methane warms the biosphere quickly.

Through a large array of negative feedbacks like these, the biosphere has managed to maintain a relatively stable temperature, despite massive volcanic eruptions of greenhouse gasses and orbital and solar irregularities. To Earth-based organisms, the fluctuations may have seemed severe, allowing ice sheets to roll in or crocodiles to paddle across the Arctic. But through its self-corrections, the biosphere has remained habitable.

According to New York University biology professor Tyler Volk, the sun's temperature has increased 30 percent over the course of Earth's history, which would have increased temperatures about one hundred degrees were it not for the cooling effect of phytoplankton and other life. And scientists calculate that the Earth would be a frigid fifty to sixty degrees colder without any greenhouse gases. Over the last million years, the biosphere has remained within about eighteen degrees of 59°F.

Humanity's intemperate carbon emissions, however, have severely tested these negative feedbacks. Since 1900 alone, the Earth has warmed more than a full degree—one-fifth the entire temperature range over the past ten thousand years. The Earth is now within two degrees of its warmest levels in one million years.

The increased heat dries up the soil faster and pumps water vapor into

the clouds, exaggerating the severity of drought, then rain. Gentle summer days turn into baking onslaughts, temperate-zone drizzles become tropical monsoons, tropical diseases and pests have whole new latitudes to conquer, and temperate-zone animals and plants are fleeing toward the poles. The increased heat has also warmed the oceans, causing hurricanes to grow in intensity.

And when a situation becomes extreme enough, biological systems can abandon their attempts at moderation. Corey crawled into bed with me in the middle of last night, saying his head hurt. His hands and face felt hot. Touching his ribs I could feel his heart racing. Ill with the flu, his body no longer fought to maintain its normal temperature. Instead it was using positive feedbacks, reactions that amplify a change, to create a fever. Holding him close in bed, I could feel his muscles violently shivering, creating heat and more heat. Within an hour of the first symptoms, his temperature was 102°.

Positive feedbacks can also shift the Earth's climate quickly, with the kind of results seen in the latest global warming news. As ice sheets melt near the poles, for example, the water slips through the crevasses to the rock below. At some point the water pools up enough to raise the glacier just a fraction, greasing its slide into the ocean. James Hansen of the Goddard Institute, whose science has been uncannily accurate since he alerted Congress in 1988 to signs of human-induced climate change, points out that this phenomenon can cause millennia-old ice sheets to disappear with an explosive splash. At that point, white ice no longer reflects sunlight into space. Instead, dark water draws the sunlight in as heat, accelerating the rise in the Earth's temperature. Yes, the water says, yes.

The thaw of the Siberian permafrost may provide another example of a positive feedback. Roughly 400,000

megatons of dead plant matter that has never finished decaying because it has been frozen, the permafrost is now thawing more rapidly than expected, according to recent reports. Because all this plant flesh is wet—under snow that's now melting—the decay is engineered by anaerobic bacteria, which metabolize the plants straight into methane, that muscular greenhouse gas. Once truly underway, this release of methane would dwarf any effect humans have on climate change. There'd be no more discussion of Energy Star appliances or raising the emission standards of cars. The rising temperatures would effectively no longer be powered by us, or subject to our influences. The system would take over.

As medical researchers have discovered in the past decade, our bodies

give us fevers for a specific reason: certain antibodies and other infection-fighting agents function optimally at 100°F or higher. When Corey's body detected the presence of overly aggressive microbes, it turned its thermostat up high. His hypothalamus made his muscles shiver, minimized the blood flow to his skin, conserved heat in his gut. For a little while, his body could withstand a high temperature while the immune system brought out its heavy artillery. Overall this strategy tends to work well: Corey slept straight through the day, and, late in the afternoon, he sat up, skinnier and ferociously thirsty, but healthy again. Research shows, however, that while the feverish response may preserve the human organism as a whole, some of the immune system's agents have side

ELA ROUNDTABLE

Saturday, December 1, 2007

9:00am – Noon

**Bio-control in the Garden:
New Research and Techniques for Invasives**

Co-sponsors: Arnold Arboretum and the Ecological Landscape Association

Fee: \$35 member, \$40 nonmember

Co-presenters: **Lisa Tewksbury**, Manager, Biological Control Laboratories, University of Rhode Island; **Bruce Wenning**, Land Stewardship Manager for Land's Sake, Inc.

Invasive species are here to stay and their numbers will only rise with increasing globalization. But this doesn't mean defeat for landscapers and gardeners. What it does require is considering the dynamics of ecosystems and developing methods for keeping aliens in check.

In this program on problem insects and weeds of New England, Lisa Tewksbury, an entomologist and manager of the University of Rhode Island's Biological Control Laboratories, will present a variety of bio-control techniques, including her lab's current work with lily leaf beetle, birch leaf miner, Cyprus spurge, purple loosestrife, common reed, swallow-wort, as well as hemlock woolly adelgid. She'll update us on success stories and challenges and when we can expect to see the results of some of the newly introduced "fighters."

Bruce Wenning will present various methods used and the successes and failures he experienced in removing invasive plants at an urban wildlife sanctuary.

effects: their activity can kill many “innocent” non-aggressive cells.

We should take note. It may seem a poetic stretch to say the Earth itself ever sickens or has a fever. Seen from a distance, the Earth itself does not become more or less “healthy”—just more or less populated with life. But

as seen from the ground, the view is rather different. If our planet’s feedback systems switch over from negative to positive and the biosphere heats up fast, the Earth will certainly seem feverishly ill to a number of species, many of which will not survive.

In terms of our planetary climate, it’s easy to guess which species is playing the role of overly aggressive mi-

crobe. But we do have a choice. Some human cultures, through their agriculture and hunting, have respected and adapted to ecological limits. We have the ability to shape our destiny—to be microbial attackers, or humble cells inside a living body.

Originally published in the January/February 2007 issue of Orion magazine.

Audrey Schulman is the author of the novels Swimming with Jonah, The Cage, and A House Named Brazil and has written for Grist and Ms. She lives in Cambridge, Massachusetts.

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SOME CLUES TO GLOBAL WARMING IN THE LANDSCAPE

• **Bruce Wenning**

We are experiencing more frequent and intense storms and droughts and unseasonable weather patterns, ranging from mild winters and hotter-than-normal summers to more frequent and intense temperature fluctuations year-round.

These climate changes are related to global warming, which is due to the burning of fossil fuels and the loss or destruction of vast amounts of forests and other vegetated areas. We hear about the impacts of global warming on polar bears in the Arctic, about droughts in Africa, and heat waves in Europe. But climate changes are also creating biological threats to our local gardens, lawns and natural areas. Plant damage from exotic insects is increasing, and plant diseases are spreading more rapidly and lasting longer.

In recent years, many people have noticed the premature emergence of spring flowering bulbs, in February instead of April. Warmer-than-normal winter temperatures have also caused azalea to start blooming in March before succumbing to a sudden drop in temperature that causes bud and flower kill.

The increase in insect pests is a less direct, but no less serious, effect of global warming. Al Gore, in his book, *An Inconvenient Truth*, describes how the bark beetle is destroying the vast spruce forests of Alaska and British Columbia. Typically long, cold winters sufficiently reduce the bark beetle populations so they do not devastate the forests. Shorter and milder winters in the past decade or so have increased this pest's ability to survive and reproduce. More than 14 million acres of prized spruce forests have died as a result.



Yellowish orange and reddish colors of faded spruce are evidence of an intense spruce beetle infestation in Alaska. Photo: USDA Forest Service.

A similar phenomenon is occurring in our own backyard, but on a much smaller scale. Almost every homeowner has suffered lawn damage caused by the white grubs that become Japanese beetles, Oriental beetles or Asiatic beetles (www.greendecade.org/download/white_grubs.pdf).

Lately, European chafer grubs have been feeding longer into the fall and earlier in the spring on turfgrass roots than have these other three species. With warmer fall temperatures these grubs are able to feed on lawn roots longer, until freezing temperatures force them into inactivity. UMass Extension has found European chafer grubs feeding on lawn roots under snow in February. Twenty-five years ago this situation would have been an anomaly in Massachusetts, because this species is more prevalent in woods and fields dependent on rainfall for moisture requirements. This grub tolerates drier soil conditions than the moisture-loving Japanese beetle grub and it became a lawn pest in the 1990s, when regional droughts were common and water conservation minded homeowners did not water their lawns. The result was that Japa-

nese beetle grubs declined on droughty lawns and the European chafer grubs expanded their range right into the lawns of suburbia.

The Hemlock Woolly Adelgid is an exotic pest affecting our native hemlocks that is active during the winter months.

Usually, it succumbs to sudden drops in temperature and dies on the tree. But now that we are having milder winter temperatures without sudden hard freezes, the reproductive success and spread of this pest has been devastating woodland hemlocks,

and it is impractical and too expensive to treat them with horticultural oil sprays.

Global warming is also increasing the cold weather fungal diseases pink snow mold and gray snow mold I have seen on Kentucky bluegrass and fescue lawns. They appear as cob-webbing



Woolly adelgids feeding on hemlock.

on the grass surface, and their characteristic color becomes noticeable as they increase in size. These diseases are active under snow, killing lawns during winter and early spring, and are sometimes most noticeable along walks and driveways. Prolonged wet snow cover combined with unseasonably cooler spring tempera-

tures has extended the duration and severity of these diseases, particularly pink snow mold. When the fungal diseases subside as temperatures rise in the spring, the dead grass succumbs to weed invasion.

Unseasonably wet springs coupled with cooler early summer temperatures have also increased the duration and severity of dogwood anthracnose, the fungal disease decimating native New England dogwood trees over the past 15 years (see www.greendecade.org/download/dogwood.pdf). Countless other examples can be documented by observant gardeners and ecologically-minded citizens. Plant growth and survival is dependent not only on proper gardening and lawn care techniques, but also on being observant. Homeowners, by being aware of their surroundings, can often note these new assaults of insect pests and pathogens in time to mitigate the damage.

For more information about monitoring insects in the landscape, plant diseases and the influences of weather on growing conditions in Massachusetts, see www.UMassGreenInfo.org and select Landscape Message.

Bruce Wenning is Land Stewardship Manager for Land's Sake, inc., Weston (www.landssake.org), and serves on the Board of Directors of the Ecological Landscaping Association (www.ecolandscaping.org).

TERRA PRETA SOILS ARE HEATING UP

• Dennis Collins

Imagine discovering that a soil amendment technique used 3,000 years ago but unknown to the modern world could make your plants grow three times as fast and fight global warming at the same time. This is the seemingly miraculous possibility that keeps some scientists working these days. A discovery that some unique agricultural soils, managed (if not also created) by indigenous tribes in ancient Brazil, possess remarkable biological and chemical properties, has led researchers to ponder the effects of using charcoal and biochar (biomass-derived black carbon) as soil amendments to promote plant growth.

The “terra preta de indio” (Portuguese for dark earth) soils were first noticed and studied by a westerner in the 1800s. It seems nobody was very impressed at the time. But in recent years archeologists and anthropologists have changed perceptions of where these soils may have come from and new studies are finding that it is more than just an interesting historical footnote. Originally thought to be related to volcanic eruptions in a land that supported minimal human populations, the terra preta (TP) soils, containing a noticeable amount of pottery shards, are now thought to be elaborate man-made agricultural initiatives, capable of supporting large pre-Columbian populations. The decimation of indigenous populations by European diseases in the 16th century would account for both the loss of expertise and organization required to create the TP soils and also our modern day lack of understanding about what agricultural production capacity they had. Some scientists now think

that the pottery shards made of unfired clay may even have been deliberately added to the fields as part of the “recipe” rather than simply remnants of past village life.

The full implication of what these soils might represent has attracted considerable attention. Johannes Lehmann, assistant professor of biogeochemistry in the Department of Crop and Soil Sciences at Cornell University is among the first to realize what might be a revolutionary breakthrough for modern horticulture and agriculture. Aside from the practical advantages



Julie Major and a co-worker in a terra preta research field in Columbia.

of creating and using modern biochar or charcoal to help plant growth, he is intrigued by the potential reverse in carbon sequestration the technology might offer. In a book by Lehmann and his colleagues, *Amazonian Dark Earths: Origin, Properties, Management* (Kluwer Academic Publishers, NL, 2003), it is estimated that up to 12% of the carbon emissions produced by human activity could be offset annually if “slash-and-burn” were replaced by “slash-and-char” agriculture.

The good news for ELA: a colleague of Lehmann’s at Cornell, Julie Major, will be presenting on the topic at ELA’s upcoming annual conference in March, 2008. The conference will also have other speakers such as

David Yarrow and Dr. John Todd who are informed on the subject as well. Meanwhile, you might be interested to know more about the mystery. After a brief attempt to summarize what has been published so far, a list of further references will be given below.

Low-temperature produced charcoal is the key to this equation. The process of burning wood and biomass without oxygen is known as pyrolysis. As anyone who has ever burned a charcoal fire knows, there is a considerable amount of energy preserved and available in the product. When mixed with other organic materials, the charcoal forms the basis for a highly effective compost cycle in a soil. Arbuscular micor-rhizal fungi begin colonizing the soil and other microorganisms eventually follow. More than one researcher believes the indigenous tribes that produced these soils added other biomass to the soils for the same reasons we do today. How this apparently rich carbon-based reserve of nutrients becomes available to microorganisms and plants, and why it lasts for such a long time, is still unknown and testing has been going on in various places to find out.

Gerhard Bechtold, a German graduate student, conducted research at a number of TP sites and recorded mineral and nutrient levels in the soils. The typical soil properties make for a fine soil indeed: pH 6.5; high cation exchange capacity; 13-14% organic matter; high levels of Ca, Mn and Mg. The carbon content was about 9%. More remarkable than the fact that these sites (typically around 50 acres in size) are so fertile, while surrounded by some extremely impoverished soils, is the fact that whoever or whatever created them did so thousands of years ago. The long lasting impact of charcoal as a soil amendment is another attractive piece of this puzzle. In a 2003



Experimental fields with different rates of biochar applied to a Colombian savanna soil (J. Major).

study (Lehmann et al, *Plant and Soil*, 249:343-357) it was noted that nitrogen leaching was dramatically less in TP soils than in non-TP soils and that phosphorus levels were surprisingly high. Unfortunately, we don't have a sense for how long it may have taken to create the conditions found in these sites today. Perhaps a generation or two of people adding organic materials or composting crop residues improved the quality of the soils, somehow maturing the composting bioweb over many years.

In Australia, Dr. Lukas Van Zwieten of the New South Wales Department of Primary Industries, tested "biochar" amendments at a rate of 10 tonnes per hectare (approximately 4 tons/acre) and found noticeable differences in plant growth, microorganism activity and water holding capacity. The research team observed that various forms of TP soils can be produced by modifying the production methods and using different biowaste. They suggest that custom mixes can be devised for specific purposes.

Normally the soils in the Amazon Basin are the nutrient-poor ferralsols, which is why the cutting of the rainforest is a tragic and terminal end to productive land use. The clear-cutting slash and burn farming practiced by today's impoverished Brazilians leaves the resulting farmland only capable

of supporting a year or two of pasture grazing for livestock before the farmers are forced to move on. The rainforest, with its vast wealth of biodiversity, is a completely self-sustaining system with nutrients continuously cycled and recycled over time. Once it is burned and cleared, the perfectly balanced system and its amazing sustainability disappear. While this is clearly a waste of effort for the farmers, global warming scientists recognize it as a dangerous loss of sequestered carbon, which is released into the atmosphere as CO₂.

Gaining an effective new tool for improving soil fertility will obviously be welcome for landscapers, gardeners and farmers. Yet it seems we have even more to gain by the potential technology derived from TP soils for offset-

ting atmospheric carbon emissions. After all, what is that expression about arranging deck chairs on the Titanic?

Julie Major will be speaking at the ELA 2008 Conference on Friday, March 7th.

Some useful sources of information:

Ron Larson, 2006: www.solartoday.org/2006/nov_dec06/Chairs_CornerND06.pdf

Johannes Lehmann, Cornell University website, 2007: http://www.css.cornell.edu/faculty/lehmann/terra_preta/TerraPretahome.htm

BBC, 2007: <http://www.bbc.co.uk/science/horizon/2002/eldorado.shtml>

Glaser, B., J. Lehmann, W. Zech (2002). Ameliorating physical and chemical properties of highly weathered soils in the tropics with charcoal - a review. *Biology and Fertility of Soils* 35 (4): 219-230.

Casselmann, A. (May 2007). Special Report: Inspired by Ancient Amazonians, a Plan to Convert Trash into Environmental Treasure. *Scientific American*.

Tennesen, M. (2007). Black Gold of the Amazon. *Discover Magazine*. Vol. 28 No. 04.

Benefits Of Bio-Char. *The Avant Gardener*. Vol. 39, No. 10.

ELA 2008 MEMBERSHIP RENEWALS COMING SOON TO YOUR MAILBOX

The ELA membership year runs from January 1st through December 31st of each year. Soon you will be receiving your ELA membership renewal package in the mail.

When your renewal package arrives, please consider renewing your membership at the same or higher level. Renewals at the Professional level and above are included in the online directory, *Find an Eco-Pro* as well as in the printed Member Networking Directory.

Remember that ELA members are eligible for registration discounts to the annual **ELA Conference and Eco-Marketplace to be held March 6th – 8th, 2008** in Springfield, MA.

If you have any questions, please call: (617) 436-5838 or email: ela.info@comcast.net.

THE ECOLOGICAL LANDSCAPING ASSOCIATION WANTS You!

Once again, we want to let you know that we welcome motivated, energetic individuals who support our mission and purpose to join us in developing and administering the programs and initiatives of our organization. Our past success and the ability to improve and expand ELA in the future depend on the support and involvement of many people. Your interests, enthusiasm and talents may be just what are needed. Different opportunities for participation are available:

Committees – The various committees play a vital role in carrying out the work of the organization. Participation on standing committees or helping with specific projects might be something you could offer. Opportunities are available in conference planning, fundraising, publications, national governance, public relations, board recruitment, membership services, and on ad hoc committees. Creativity, enthusiasm, writing/communication skills, dedication, and of course, a little free time are what we need. Do you have any to lend?

Getting involved is as simple as calling us at (617) 436-5838, or dropping us a line at ela.info@comcast.net. Let us know how and when to reach you and we will get in touch.

CHAPTERS continued from page 1

To facilitate the formation of new chapters and to serve their needs over time, a new committee of the ELA Board of Directors will be formed. Representatives of the individual chapters will serve on this committee and it will be chaired by a newly created board position called Chapter Coordinator. At the ELA annual meeting last July, the board filled this position in a move reminiscent of Tony Blair stepping down as the UK Prime Minister, only to become immediately appointed as special envoy to the Middle East! Outgoing ELA President, Chris O'Brien, was elected to serve as the first Chapter Coordinator. Inquiries on the formation process should be directed to him.

gleanings

⇒ ELA Sightings

ELA displayed information and provided materials to visitors of many regional events this summer. Two recent events included:

Lincoln Invasive Plant Summit held September 29th at Bemis Hall in Lincoln. The event was very well attended and the ELA booth received a lot of attention. Frances Clark provided the keynote address followed by a panel of speakers representing the Lincoln Conservation Commission, The Lincoln Land Conservation Trust, Mass Audubon and a local homeowner. Local artists provided a unique feature to the Summit with many creative works highlighting a variety of invasives. For more on the artists see <http://www.wickedlocal.com/lincoln/fun/entertainment/arts/x1909892250>

AltWheels Alternative Transportation & Energy Festival – September 28-29. Thousands of people turned out for this

gathering on City Hall Plaza. ELA was one of 160 stalls and exhibits at the highly touted event. The festival highlighted the latest advances in green technology, including bio-diesel fuel and prototype vehicles. For more visit <http://www.altwheels.org/>



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⇒ 2007-2008 ELA Roundtables

The first of three roundtables has been scheduled for December 1, 2007. Please check the ELA website www.ecolandscaping.org and the Winter newsletter for information about the January and February 2008 roundtables.

**Saturday Dec. 1, 2007
9:00am-12:00pm – Bio-control in the Garden: New Research and Techniques for Invasives**

Co-sponsors: Arnold Arboretum and the Ecological Landscape Association

Fee: \$35 member, \$40 nonmember

Co-presenters: **Lisa Tewksbury**, Manager, Biological Control Laboratories, University of Rhode Island; **Bruce Wenning**, Land Stewardship Manager for Land's Sake, Inc.

Invasive species are here to stay and their numbers will only rise with increasing globalization. But this doesn't mean defeat for landscapers and gardeners. What it does require is considering the dynamics of ecosystems and developing methods for keeping aliens in check. In this program on problem insects and weeds of New England, **Lisa Tewksbury**, an entomologist and manager of the University of Rhode Island's Biological Control Laboratories, will present a variety of bio-control techniques, including her lab's current work with lily leaf beetle, birch leaf miner, Cypress spurge, purple loosestrife, common reed, swallow-wort, as well as hemlock woolly adelgid. She'll update us on success stories and challenges and when we can expect to see the results of some of the newly introduced "fighters". **Bruce Wenning** will present various methods used and the successes and failures he experienced in removing invasive plants at an urban wildlife sanctuary. (0.5) MCA credits and 1 MCLP credit.



EPA Pushes Procurement of Materials from Recovered Waste

Release date: 09/10/2007

Contact Information: Roxanne Smith, (202) 564-4355 / smith.roxanne@epa.gov.

(Washington, D.C. – Monday, September 10, 2007) The U.S. Environmental Protection Agency is revising the list of items designated in the Comprehensive Procurement Guidelines' landscaping products category to promote the use of materials recovered from solid waste. EPA is expanding the description of "compost" from yard trimmings and food waste to include compost from biosolids and manure, but does not limit the designation to specific types of organic materials. In addition, EPA has added fertilizer made

from recovered materials as a designated landscaping item.

The Resource Conservation and Recovery Act requires procurement officials to buy products containing recovered materials when the agencies spend more than \$10,000 a year on that item. Procuring agencies are federal, state, and local agencies, and their contractors that use appropriated federal funds.

For example, if a county agency spends more than \$10,000 a year on an EPA-designated item and part of that money is from appropriated federal funds, then the agency must purchase that item made



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Janet Childs, Lucy Borodkin, Love's Gardens

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

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from recovered materials. Agencies are required to purchase the product with the highest recovered material content level practicable, given reasonable competition, product price, performance, and availability. Through the CPG requirement, EPA is harnessing the purchasing power of the federal government to foster and support markets for recycled-content products, thereby reducing the need for raw materials, consumption of energy, and the release of greenhouse gas emissions.

announcements

Massachusetts Arborists Association Celebrates the 50th Anniversary of the Massachusetts Certified Arborist (MCA) Program

The Massachusetts Arborists Association (MAA) announces the 50th anniversary of the Massachusetts Certified Arborist (MCA) program. The oldest state-wide voluntary certification program in the nation, the MCA has become the symbol of professionalism in arboriculture in the Commonwealth of Massachusetts.

The MAA will celebrate a half century of the MCA program at its November 27th Annual Meeting and at New England Grows in February 2008. The first MCA examination was administered on February 13, 1958 at the Waltham Field Station of the University of Massachusetts. By 1960, a list of 25 MCA-certified arborists was published. Since then, the ranks of Massachusetts tree care professionals carrying the MCA designation have swelled to more than 800.

For further information about the MCA program, please visit www.certifiedtree-andlawn.org or call (508) 653-3220.



Peter Hinrichs and YouthBuild Boston
New Board member Peter Hinrichs recently joined YouthBuild Boston as a project manager for the Project Advan-

ELA 2008 Conference & Eco-Marketplace

Revisoning the Landscape: An Ecological Approach

Mass. Mutual Center, Springfield, MA

Don't Miss This Three-Day Event March 6-8, 2008

Our top flight 2008 conference program offers national and local speakers: Charles C. Mann, Dr. John Todd, Tom Wessels, David Jacke, Dr. Richard Primack, Deborah Soule, Paul Tukey, and 20 others covering topics like permaculture, IPM strategies for insects and diseases, building constructed wetlands, bio-energetics in plant health, integrating landscapes and local ecology, and much more!

The Eco-Marketplace is open Friday, March 7th from 8:00AM-6:00PM, and Saturday, March 8th from 8:00AM-1:30PM. There will be several program breaks, continental breakfast served in the hall both Friday and Saturday and lunch served on Friday, expanded on-floor programming and a jazz/cocktail hour on Friday all designed to allow plenty of time for people to chat with exhibitors.



**Registration form and Conference Brochure
will be available on the ELA website
www.ecolandscaping.org in December.**

tage program. He will be developing this program with an emphasis on providing youth with training and exposure to the green industry along with the acquisition of their GED. The focus will be on landscaping and horticulture skills which they can use to enter the work force or higher education. YouthBuild Boston also has a construction curriculum where they learn

the building trades, which has strong ties to the LEEDS program and local architects. The organization already has some completed projects and more in the pipeline, for which they hope to get LEEDS certification. For more information on YouthBuild visit <http://www.ybboston.org/>



FOR IMMEDIATE RELEASE

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GREEN BUILDING MOVES OUTDOORS New Rating System to Encourage Sustainable Landscape Design

San Francisco, CA, October 6, 2007 — The American Society of Landscape Architects (ASLA), The University of Texas at Austin's Lady Bird Johnson Wildflower Center, and the United States Botanic Garden announced the development of a new rating system for sustainable landscape design, called the Sustainable Sites Initiative. The announcement took place at the 2007 ASLA EXPO in San Francisco, California.

Just as the U.S. Green Building Council's LEED® rating system measures a building's environmental impact, the Sites Initiative will measure the sustainability of designed landscapes of all types, including public, commercial, and residential projects. The U.S. Green Building Council is lending its support to this project and plans to adopt the Sustainable Sites metrics into its LEED® system once they are finished.

"This will provide the missing link for green building standards," said Nancy Somerville, Executive Vice President and CEO of ASLA. "Developers, designers, owners, and public officials will now have the tools at hand to significantly increase sustainability in the built environment, from interiors to landscapes."

"We are acutely aware that the best guidelines and standards in the world will not be adopted if they are not cost-effective for builders and landowners," said Frederick R. Steiner, FASLA, Dean of The University of Texas at Austin School of Architecture and a member of the Wildflower Center Advisory Council. "Sustainable landscapes have enormous environmental benefits,

and any additional costs should be easily recovered over the life of the project in energy, water, and other savings."

"The U.S. Botanic Garden is extremely excited to be a part of the Sustainable Sites Initiative", said Holly Shimizu, Executive Director of the Garden. "We recognize that through partnerships and collaborations we can make a much greater impact on promoting and guiding sustainable design, implementation, and management of gardens, landscapes, and all outdoor spaces. This initiative will help balance the built and natural environments for the long-term health of communities nationwide."

Additional program partners include the U.S. Green Building Council, the Environmental Protection Agency's GreenScapes Program, the National Recreation and Parks Association, the American Society of Civil Engineers' Environment and Water Resources Institute, the National Association of County and City Health Officials, the Nature Conservancy's Global Invasive Species Initiative, and The Center for Sustainable Development at the University of Texas at Austin. For more information, visit www.sustainablesites.org.

About ASLA: Founded in 1899, ASLA is the national professional association for landscape architects, representing more than 18,000 members in 48 professional chapters and 68 student chapters. Landscape architecture is a comprehensive discipline of land analysis, planning, design, management, preservation, and rehabilitation. ASLA promotes the landscape architecture profession and advances the practice through advocacy, education, communication, and fellowship. Members of the Society use their "ASLA" suffix after their names to denote membership and their commitment to the highest ethical standards of the profession. Learn more about landscape architecture online at www.asla.org.

About the Lady Bird Johnson Wildflower Center: The Lady Bird Johnson Wildflower Center at The University of Texas at Austin is dedicated to increasing the sustainable

use and conservation of native plants and landscapes. Founded in 1982 by Lady Bird Johnson, the former first lady, the Wildflower Center maintains an extensive native plant botanic garden and offers professional and adult education. The Wildflower Center also conducts research on landscape restoration and plant conservation at its 279-acre site, promoting the role of native plants in addressing ecological problems. Recent research initiatives focus on native turf grasses, green roof technology in a sub-tropical climate, prairie restoration methods including prescribed fire, the control of invasive species, and ways in which native plants can aid in combating climate change in urban landscapes. Learn more at www.wildflower.org.

About the United States Botanic Garden: Dating from 1820, the United States Botanic Garden (USBG) is one of the oldest botanic gardens in North America. The Garden informs visitors about the

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importance and fundamental value of plants to the well-being of humans and our planet. It also highlights the diversity of plants worldwide, particularly their aesthetic, cultural, economic, therapeutic, and ecological significance. Formally placed under the jurisdiction of the Joint Committee on the Library of Congress in 1856, the U.S. Botanic Garden is administered through the Office of the Architect of the Capitol in the Legislative Branch since 1934. With nearly a million visitors annually and located on the National Mall, the USBG strives to demonstrate and promote sustainable practices for individuals, organizations, and institutions. Learn more online at www.usbg.gov.



IPCC Fourth Assessment Report

On November 16, 2007 the much anticipated "Climate Change 2007", the 4th (and final) Assessment Report from the Intergovernmental Panel on Climate Change (IPCC) was due to be released. On November 17th, the Synthesis Report, which summarizes all four individual reports and presents the findings in a user-friendly way, comes out. You can find out more information at: <http://www.ipcc.ch/>



NOAA National Environmental Satellite, Data and Information Service

U.S. National Overview
October 2007

For the contiguous United States, the average temperature for October was 56.9°F (13.8°C), which was 2.1°F (1.2°C) above the 20th century mean and tied with three years as the ninth warmest October on record, based on preliminary data.

Temperatures were generally warmer than average across the Lower 48 states, with the exception of cooler than average conditions in the states of the West Coast.

The states of Delaware, Maryland, New

Jersey, Pennsylvania, and Rhode Island set record high average temperatures during October, and the Northeast as a whole was the 2nd warmest on record. Readings on October 8th reached levels more common in the summer months, breaking daily and monthly high temperature records in the New York City metro area.

The unusually warm conditions reduced energy demand for heating in the heavily populated Northeast, and, for the nation as a whole, temperature related energy demand was 15% below average based on NOAA's Residential Energy Demand Temperature Index.

No new low precipitation records were set; this was the twenty-sixth wettest October in the 1895—2007 record. An average of 2.56 inches (65.0 mm) fell across the contiguous U.S. this month, which is 0.5 inches (11 mm) above average.

Although above normal rainfall in October led to a reduction of the drought in parts of western Tennessee, much of Kentucky, and parts of Virginia and North Carolina, much of the Southeast remained in an exceptional drought. Many cities in the region have instituted mandatory water restrictions, with some locations having only a three-month supply remaining. In North Carolina, Gov. Easley has said, "If we do not get significant rain, some areas face the once unthinkable possibility of water rationing and potentially running out of water entirely."

More than six inches (150 mm) of rain fell in many drought affected areas of western Tennessee in October, much of it in the last week of the month, but year-to-date precipitation deficits ranging from 10 to 20 inches (250-500 mm) remained widespread. Several communities were already under mandatory water restrictions. Heavy rain brought some drought relief to parts of Virginia and North Carolina, but near the end of October, drought covered 67% of the Southeast.

Drought also continued to affect more than half of the western U.S. In late October, ongoing drought and strong Santa Ana winds brought devastating fires to parts of Southern California. According to

preliminary estimates, over 900,000 acres (3600 km²) had burned during the month across the southern portion of the state, burning more than 2000 homes and affecting hundreds of thousands of people.

Based on preliminary estimates from the National Interagency Fire Center (NIFC), over 9.2 million acres (37000 km²) had burned across the U.S. as of the end of October. Drought, which has affected the West since the late 1990s, has contributed to extremely active wildfire seasons in recent years.

The past four years have been the most active on record in terms of acreage burned in the U.S. As of the end of October, the 2007 fire season was the second worst on record, exceeded only by the 2006 season when 9.8 million acres (39700 km²) burned.

A dry cold front swept through Southern California on the 16th, kicking up strong winds in the Mojave Desert of California. Winds gusting to 60 mph (96 km/hr) reduced visibility to zero from blowing dust. Four deaths were attributed to the sandstorms with dozens of vehicles involved in at least four separate wrecks. October 2007 was a very busy month for severe weather across the Midwest. Tornadoes occurred during every week except the last, with the peak of the activity occurring during October 17-18, when 67 twisters occurred in the Midwest.



Member's web page links

are now "live" on the ELA website in the *Find an Eco-Pro* section. Please be sure to provide your most current website address when sending in your membership renewal.