

THE *ecological landscaper*

The Newsletter of the Ecological Landscaping Association

Vol. 14, No. 2

Summer 2007

Don't Bug Me!

If all mankind were to disappear, the world would regenerate back to the rich state of equilibrium that existed ten thousand years ago. If insects were to vanish, the environment would collapse into chaos.

– E. O. Wilson

THE INVASION OF THE HOME SNATCHERS

• Bruce Wenning

Many kinds of pests find their way into your home. Some you can tolerate, others you can't. Carpenter ants and carpenter bees are insects that want to move in with you. When they invade your space, the damage can be extensive and costly.

Ants are the most recognized insects on earth, with many subfamilies, genera and species worldwide. They are in the Order Hymenoptera (bees, ants, wasps, sawflies and parasitic wasps). They have three distinct body regions; head, thorax, and abdomen, and their antennae, which are usually elbowed (bent), function as chemical receptors.

Ants nest in colonies and cooper-

ate in raising their young, finding food and defending the colony. They exhibit a caste system comprised of a queen, males and workers. The division of labor in the colony is an integral condition of group living. Queens fly to mate with males, and once mated, a queen will remove her wings and remain dedicated to egg laying for the colony. Males have wings and die soon after mating with the queen. Workers, as their name implies, do most of the colony's work; they are sterile wingless females. Large colonies can have over 3,000 worker ants.

There are many ant species found throughout the United States. The most destructive Eastern species is *Camponotus pennsylvanicus*, the black carpenter ant, which is common in New England. These ants are attracted to damp wood caused by leaking roofs, wood in contact with soil, leaking plumbing fixtures, insulation, blocked gutters, poorly ventilated attics and crawl spaces, and other wooden structures (supports, walls, pillars, siding, joists, sills) that are rotted or water-

damaged. When Carpenter ants invade a home or other wooden structure and establish a colony with a queen, it is usually bad news.

Carpenter ants can be found around the periphery of your home in moist foundation mulches, piles of damp leaves and branches and woodpiles. The best approach to the carpenter ant problem is preventive: eliminate damp habitats around the exterior of your home (as well as inside).

Carpenter ants are frequently confused with termites, which are also wood-destroying insects. Termites are soft-bodied and usually white or cream colored; they are sometimes called, erroneously, "white ants" although they are more closely related to cockroaches than to ants. Carpenter ants, in contrast, are hard-bodied and black or dark brown in color. Termites (which are in the small order Isoptera, meaning equal wings) have fore and hind wings that are nearly equal in size and which fold

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Write to us! We welcome comments, letters, articles, topic ideas, and opinions. Send to:

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Send all other ELA business, including address changes, to the Framingham address listed above.

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at rest close to the body. Carpenter ants, whose fore wings are larger than their hind wings, usually extend or hold their wings above their body at rest.

Termites do not have a "waist" (constriction between the thorax and abdomen), whereas carpenter ants do have this constriction. Termites have bead-like antennae while carpenter ants have their antennae in segments resembling a short "arm" and "elbow." Unlike termites, carpenter ants do not eat or digest wood, but instead excavate mostly moist and soft wood (and sometimes dry wood) and deposit the resulting "sawdust"



A carpenter ant

Photo by Clemson University USDA
Cooperative Extension Slide Series

outside their colony, while keeping their galleries clean. Wood digesting termites, on the other hand, line their galleries with moist soil. Carpenter ants are both predators and scavengers, feeding on live and dead insects, plant sap of certain plants, aphid and sap sucking insect honey dew, and various food scraps.

Another type of wood-destroying insect, sometimes mistaken for bumble bees, are carpenter bees, also in the order Hymenoptera (like carpenter ants). They differ from bumble bees in their body markings. Carpenter bees have black abdomens while bumble bees have yellow abdominal markings. Carpenter bees tend to fly and hover high up against buildings and windowsills to excavate their galleries in dry wood. Females have a stinger but rarely sting. Males do not have a stinger and are harmless to humans.

The US has seven species of carpenter bees. The most destructive to homes and other wooden structures is the East-

ern species, *Xylocopa virginica*. They can cause significant damage by boring into and excavating wood year after year. You may see this species flying near window-sills, eaves, wooden siding, fence posts, railings, and other very dry wooden structures. An infestation is first detected by finding large amounts of sawdust below half-inch diameter entrance holes in wood. Applying linseed oil to dry wood can reduce the attractiveness of such wood to these bees.

Carpenter ants, carpenter bees, and termites utilize trees and other woody plants and materials as part of their life cycle. Each is important in its respective niche, but when they invade our domain they become pests. Homeowners who find it necessary to control or eradicate them should consult a certified pest control company and request that they deal with the problem in the most environmentally benign way possible.

For more information see Arnold Mallis, Handbook of Pest Control; Hansen & Klotz, Carpenter Ants of the United States and Canada, and www.ceinfo.unh.edu.

Bruce Wenning is a horticulturist working at Land Sakes in Newton and serves on the Board of Directors of the Ecological Landscaping Association.

This article originally appeared in The Newton TAB in 2006.

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FROM THE PRESIDENT:

Checking the pulse of ELA

• **Dennis Collins**

It is an honor for me to address the membership of ELA and readers of the newsletter as the incoming president of the ELA Board of Directors. I had earlier volunteered to write an article for this issue about how members and colleagues, and the ecological landscaping industry in general, are faring in various parts of the country. As it also seemed appropriate to introduce myself and share a few thoughts with you on how I see the organization at this point in time, this effort became a hybrid.

Although my family may have good reason to question my sanity for voluntarily serving in this role, I think most people who are aware of the need to change the way a lot of us approach landscaping/gardening, who see the stakes involved, want to help when and wherever they can. This is just my chance to help in a small way. I say "small" because, unlike the national presidential candidates, I have no political platform or agenda to pursue. ELA already has a mission and I see my role as simply helping the organization achieve it. That mission, in a nutshell, is to educate both landscape

professionals and the general public about the ecological and human health hazards of some conventional landscaping practices.

Only time will tell if I have what is necessary for this job. Other than a willingness to serve, my experience in landscaping and horticulture (about 25 years) and in another professional organization, the American Public Gardens Association, make up my qualifications. My "real job" is with Mount Auburn Cemetery, a botanical garden and cemetery founded 176 years ago by the Massachusetts Horticultural Society, where we are trying to move towards an ecologically sustainable horticulture program.

As luck would have it, this seems like an interesting time for me to be serving in this role. This organization, and the American landscaping/gardening public as well, seem to be in rather critical states of transition. ELA recognizes that educating about the environmental costs of conventional landscaping practices, and offering alternatives to it, will not have the desired impact until a critical mass of public awareness is reached. Since most of our problems arise from the sheer number of people overtaxing water supplies and misusing pesticides and fertilizers, the solutions lie in reaching the largest possible audience with the message. Fortunately, our membership is growing and members are coming from diverse geographic areas. ELA is coming to terms with how best to serve its members nationwide (and there is good news on that front). Also, due to a convergence of factors including climate-change, a rise in petroleum prices and headline news about soil and water contamination, the American public seems more receptive

to the message than ever before.

Obviously, the stakes are high. Development and population growth present some sobering statistics. The EPA suggests that 8 billion gallons per day (about a third of residential water use) is used in residential lawn and garden irrigation, a figure that will vary significantly in dry regions and during droughts. Worldwatch Institute, a Washington-based think tank, estimated that our roughly 18,000 golf courses use another 4 billion gallons of water per day for irrigation. Recent surveys by the National Gardening Association and the Garden Writers of America Association (2005-2007) present an attention-grabbing picture for residential landscaping. First, there are 82 million Americans who have at least a garden or a lawn. While 78% of American homeowners claim to do something in the way of work in their yards, just over a third of all households hire a professional contractor to do some sort of landscape/lawn service. Thus, the majority of residential landscaping (more than 54 million homes) is still being done by nonprofessionals. We know that most Americans choose to have lawns, though the number of lawns, and their sizes, are declining. Figures for corporate landscapes are more elusive, yet most of us are familiar with typical office park developments that rely heavily on large-scale turf. Finally, the US Fish and Wildlife Service announced a few years ago that homeowners use 10 times more pesticides per acre on their lawns than farmers use on their crops. Personally, as a food consumer, I don't know whether this should make me happy or not.

2007 Membership Directory Supplement

The printed supplement to the 2007 Membership Directory will be mailed out shortly to ELA members. It will contain the contact information of members who joined after the Directory was produced in April 2007.



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Rather than be discouraged by all this, we could consider that there has actually been improvement in recent years. An organization called Beyond Pesticides (formerly National Coalition Against the Misuse of Pesticides) notes that 5 million homes now use only organic lawn treatments and another 35 million use a combination of organic and conventional treatments. They cited a Wall Street Journal article from 2006 as evidence that the issues have finally become mainstream in the public's consciousness.

The golf industry, and its contribution of \$49 billion annually to the US economy, is a force to be reckoned with. The sport saw a dramatic construction boom during the 1980s and 90s and a corresponding number of avid golfers took up playing (now estimated at 26 million). I think there is an interesting dynamic at work between golf courses in general and Americans' love affair with the lawn. A

common expression for describing a "perfect" lawn is to say it's like a golf course. Perhaps the overzealous pursuit of perfect lawns during the past twenty years is related to the millions of people spending time on golf courses (that, and of course, peer-pressure and multi-million dollar marketing budgets). It's possible that this relationship with golf might someday lead many people towards more ecologically responsible landscaping in their homes. After being a favorite target of environmentalists for many years, golf courses are beginning to change. There are still very few strictly organically managed courses today, but an impressive number of courses are exploring alternative management practices that include integrated pest management, reduced irrigation, biological controls for disease and insect problems and more restrained use of chemical pesticides. More than 2,000 courses are participating in the Audubon Cooperative Sanctuary Program where changing maintenance practices can lead to certification. Clearly, the industry is responding somewhat to negative publicity when it launches and promotes its green initiatives. The trend in this direction might continue if the public supports those courses that embrace environmental stewardship, thereby creating more demand for more of them. What is even more promising is that by shifting the golf-

ing community's attention toward ecological practices, the widespread attitudes about residential lawns might eventually be changed as well.

Other types of large-scale landscape managers are also playing a role in changing to non-conventional practices, especially botanic gardens and college campuses. In southern California, where everything revolves around water use, three notable efforts are underway to find suitable lawn substitutes. Leaning Pine Arboretum, on the campus of California Polytechnic State Institute, is testing a turf of *Carex praegracilis* (Dune Sedge) with promising results. At the Charles Lummis Home and Garden, an historic property owned by the city of Los Angeles, a lawn of *Achillea millefolium* (Yarrow) is now well established. [See Alex Feleppa's article in the previous issue of the Newsletter for a similar testing in Oregon.] The Rancho Santa Ana Botanic Garden, in Claremont near the San Gabriel Mountains, has installed a new lawn of *Koeleria macrantha* 'Barykoel' (a cultivar of Prairie Junegrass).

On the opposite coast, Brookside Gardens in Silver Spring, MD is in its 11th year of producing and using high quality compost. This 50 acre garden processes 300-400 cubic yards of raw material annually, yielding about half this volume of finished compost. This is then used for topdressing beds in the garden, amending soils in garden renovation projects, and makes up part of the potting media in the garden's production greenhouse. Bert Zeitler, who oversees the composting operation, says that in addition to water conservation, the most noticeable benefits are reduced amounts of fertilizer and fungicide in the greenhouse and nursery program.

Residential landscaping is where ELA members tend to be found. Before writing this, I conducted an informal survey with 18 of our members scattered around the country and with



The early stages of compost production at Brookside Gardens in Maryland. Different raw materials are mixed together and allowed to mature (with occasional turning) for a little more than a year.

Photo: D. Collins

some people from outside the organization. Their comments seem to suggest that public demand for ecological services, while still relatively small, is nonetheless growing. As colleagues from various places note similar challenges and report stories that seem familiar to all of us, we get a sense that while plant palettes and climate may differ, the ecological landscape movement is truly a national effort that we're engaged in.

Water use is the biggest issue that we share in common. Whether from dire need in places where water is scarce, such as in the west and southwest, or from a sense of responsibility in those places where more rain falls, people are trying to build landscapes with lower water needs. Yet other aspects of rainfall are also prominent. In the mountains of North Carolina, landscaper Thomas Young reported that a severe thunderstorm drew intense media coverage on flooding caused by improper sediment control by developers. Sadly, public awareness often lags until a disaster calls attention to a problem. Rain gardens are starting to become more common. Ken Christensen, from Kent, Ohio, was astonished to find one recently at a Sheets Gas Station. He noted that "...

they got the plant selection wrong, but it was nice to see the concept used".

The obsession with lawns can still be found in most parts of the country. Celia Ryker, in Ortonville, MI, thinks "...it will be a long time before we see fewer lawns, but my hope is that we can make them less chemical dependent". However, Michael Kusiak reports that his clients in the Santa Cruz, CA area are now more willing to reduce the size of their lawns, if not abandon them entirely. Yet a curious contradiction can be found in the debates about whether to have a lawn or not have one. While Terry Childs in Gananoque, Ontario says people really like their lawns because of their low maintenance, Bill Jewell in Brattleboro, VT says he has the most success



A new landscape in Santa Cruz, CA with no lawn area. Note the retaining wall built from recycled pavement fragments.

Photo: Michael Kusiak © 2007

convincing people to forego lawns with older folks who no longer want the trouble of maintaining them! How can it be both ways?

I suspect the answer lies in public perceptions about what constitutes "low maintenance". They must vary as much as people's expectations about how long it should take for new landscapes to look good following installation, which was another common response to my question on the biggest challenges people faced. All Landscapers, no matter their methods, have to contend with that one, though some have the quick-fix bluegrass sod available in their toolbags. The public seems

to be in the habit of expecting instant results in landscape renovation as well as in projects that happen inside their homes. From what the people I polled indicated, most of them being ecological landscape professionals, teaching the client is a large part of the jobs they do. Most say it has always been that way for them, and that they are used to it by now.

Somehow it seems about right that so many members of ELA, an organization established for the purpose of educating, are finding themselves teaching as much as they do. There is a symbiotic and radiating progression at ELA with members learning from programs, teaching programs, and also teaching the public through their clients (a sort of private tutoring?). Ultimately, the work of this organization is done by individual members who contribute time and energy to it. If it seems unbalanced that they should also have to spend so much time teaching on their own, then it's my job to point out that as ELA succeeds in its mission, their jobs will become easier. That elusive "critical mass of public awareness" that we need will radically change the way ecological landscaping is practiced in America, once it is reached. Meanwhile, the contribution of time and energy from all of ELA's members is sorely needed.

If you've offered to volunteer for projects in the past, but have not been called on, then it's my job to say we will try harder to match volunteer offers with tasks that are needed. I urge you to get involved in any way you can. As the organization enters a new growth phase, there will be no shortage of those tasks. At the ELA board meeting, held on July 25th, the process for forming ELA regional chapters took a step forward. After receiving an informative analysis conducted by the law firm that was retained to help draft the chapter documents, the board re-affirmed its final vision for chapters which was the result of several years of

planning. The lawyers will now finish drafting the chapter policy and legal papers. The board also agreed to proceed with plans to upgrade the website by providing expanded content and interactivity. There will be more announcements as the site nears completion this Fall.

My willingness to serve as president is based on the hope that you will help me. I welcome and encourage your comments and suggestions because I believe that if we know best how to improve ELA specifically for you, we will know how to make it better for those members we anticipate joining in the future.

BETTER GRUB AND INSECT CONTROL:

Combining pesticides and nematodes improves results

What do you get when you mix certain pesticides and insect parasitic nematodes? The perfect killer.

According to Parwinder S. Grewal, an entomologist with the Ohio Agricultural Research and Development Center (OARDC), some insecticides can increase the effectiveness of entomopathogenic nematodes, which are used to control pests such as white grubs and fungus gnats.

“While some pesticides can be toxic for the nematodes, others enhance their parasitic effect,” Grewal explained. “The pesticide and the nematodes act in a synergistic way.” Which means the pesticide does not turn nematodes into mutant killers, but rather works as a loyal sidekick while the nematodes combat harmful insects.

Found abundantly in the soil, nematodes are microscopic worms that kill many insect and mollusk agricul-

tural pests. Several species have been successfully used for pest control in citrus, cranberries, mint, strawberries, mushrooms, nurseries, greenhouses, and turfgrass in North America, Europe, Japan, and Australia. Grapes are expected to join the list next year.

“We’ve been studying the compatibility of nematodes with other pest control sources over the last few years,” Grewal said. “This is a very nice discovery because the lack of compatibility information has been a major impediment to further expansion of the [nematodes’] use.”

Together with colleagues from Rutgers University, New Jersey, and the University of California at Davis,

Grewal discovered that he insecticide imidacloprid and the nematodes *Heterorhabditis bacteriophora* and *Steinernema glaseri* interact synergistically against turfgrass’s biggest nemesis: white grubs.

White grubs are the root-feeding larvae of scarab beetles (such as masked chafers, the Japanese beetle, and the oriental beetle), which cause significant damage to many agricultural and horticultural plants.

One of the most widely used agents to destroy white grubs is imidacloprid—an insecticide found in products such as Admire, Condifor, Gaucho, Premier, Premise, Provado, and Marathon. However, the efficacy

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:

Board of Directors – The board is a core group of volunteers who do the month-to-month work to keep the organization healthy, growing and vital: policy setting, program development, strategic planning and financial management. We’re especially looking for people with some experience in finance, grant writing and fundraising, computer technology, marketing, public relations and organizational development. The board generally meets once per month between September and March.

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.

of this insecticide declines as the white grub develops, so it has to be applied preventatively to large turf areas that may or may not be infected.

Entomopathogenic nematodes, on the other hand, are effective against the later stages of the white grub. After entering the body cavity of insects through a variety of openings, nematodes release bacteria that multiply and kill the host within three to four days. The nematodes then feed on the dead insect, reproduce, and migrate in search of new hosts.

Nonetheless, white grubs have developed a series of behavioral, morphological, and physiological barriers to infection during their co-evolution with nematodes, which makes it harder for the worms to penetrate their hosts. That's where imidacloprid comes into play.

"Imidacloprid disrupts white grubs' normal nerve function, breaking down the defenses that they display in response to nematode attack," Grewal explained. "This helps the nematodes get inside the grubs and start the parasitic cycle."

Since the later white grub stages are easier to detect, Grewal suggests applying an imidacloprid-nematode mix to infected turf. This combination reduces costs and provides a safer and more environmentally friendly alternative to more hazardous agro-chemicals used for turfgrass pest control.

Grewal has also studied the resistance of the nematode *Steinernema feltiae* to fungicides such as Nimbecidine, cinnamaldehyde (Cinnamate), ZeroTol, and azoxystrobin (Abound). *Steinernema feltiae* is used for the control of fungus gnats.

"It is usually more economical to tank-mix nematodes with one or more inputs for application," Grewal said. "Nematodes are tolerant to short exposures of most fungicides, but in some cases these chemicals can reduce nematode viability and virulence. That's why we needed to know for sure

which fungicides were safe."

Grewal concluded that Nimbecidine, Cinnamate, and ZeroTol were toxic to nematodes. Meanwhile, Abound and neem (the active ingredient in Nimbecidine, used in this case as pure oil without any additives) caused no harmful effect on the nematodes.

"The more we learn about the interaction of nematodes with agro-chemicals, the better we are equipped to offer safer and more cost-effective insect management methods," Grewal remarked. "With this knowledge, nematodes are more likely to be accepted by growers as an effective way to fight pests."

Entomopathogenic nematodes have been mass-produced since the mid '80s, and their use is becoming more popular. Florida orange growers, for instance, apply nematodes to

50,000 acres each year to help control the citrus root weevil. Unlike pesticides, nematodes continue working for quite some time after the first application—a single host can produce 300,000 to 400,000 new nematodes, which then seek additional victims.

Grewal's research on the compatibility of nematodes with pesticides was funded by an OARDC grant. OARDC is the research arm of Ohio State University's College of Food, Agricultural, and Environmental Sciences.

- from News and Media Relations, College of Food, Agricultural, and Environmental Sciences, The Ohio State University; Columbus: (614) 292-2011; Wooster: (330) 263-3775.

ELA's 2007 Annual Meeting Recap

The recent ELA summer Annual Meeting provided an opportunity to celebrate another successful year as a leader in environmental education and stewardship. In addition to the annual business meeting and report on the annual ballot results, an appreciation potluck dinner was held to thank the many volunteers that have contributed to the ELA efforts throughout the year.

Thanks to Andrea Knowles and Kathy Sargent-O'Neill for helping to organize this year's Annual Meeting at the Wolbach Farm in Sudbury, Massachusetts, the permanent home of the Sudbury Valley Trustees, www.sudburyvalleytrustees.org.

2007 Ballot Results

The slate of ELA officers for the upcoming year is: Dennis Collins, President; Sandy Vorce, Vice-President; Sue Storer, Treasurer; Owen Wormser, Secretary. Incumbent Board members elected to serve additional terms are: Dennis Collins, William Jewell, Chris O'Brien, Kathy Sargent-O'Neill, and Robert Levite. Newly elected to the Board are: Maureen Sundberg and Peter Hinrichs. Board members serving existing terms are: Sue Storer, Cathy Rooney, Bruce Wenning, Donald Bishop, Owen Wormser, Andrea Knowles, Karen Dominguez-Brann, Sandy Vorce, and Joanna Campe.

THE ENCYCLOPEDIA OF GRASSES FOR LIVABLE LANDSCAPES

Text and photography by Rick Darke

Published by Timber Press

Rick Darke has created a very informative, photographic tour of the world of grasses. This book is a comprehensive resource for anyone, from landscape designer to home gardener, who is interested in using grasses in ecological landscaping. The photos, ideas, and references, presented are quite varied from regional to world landscapes, rural to cityscapes, diverse habitats to seasonal displays, and small backyards to sprawling open spaces.

The book is hefty at almost 500 pages and at first glance, with over 1000 pictures would appear to be solely a rich photo reference. Delving into the book reveals a more intricate relationship between the author and his subject. Darke's depth of experience and expert knowledge of grasses unfold with both sensitivity and detail. He allows for the reader to enter a worthy conversation and gain perspective from looking at grasses and landscapes from many different angles.

The first several chapters draw you into a display of aesthetic and design possibilities, while exploring the relationship between grasses, native habitats, and human culture. Chapter five provides practical information on cultivation, growth and maintenance, and Chapter 7, still replete with photos, delivers a comprehensive, alphabetical, encyclopedia of the plants themselves. One can choose to bask in the images taking in the beauty of grasses or flip directly to an entry for a particular plant to learn its habitat, behavior and hardiness. The grasses presented include True grasses (Poaceae), sedges (Cyperaceae), rushes (Juncaceae), restios (Restionaceae), and cattails (Typhaceae).

This work includes a dialog around the concept of *Livable Landscapes*. "Livable landscapes are gardens that are personal, intimate spaces that simultaneously celebrate community and the joy of the connected landscape. They include local approaches that are cognizant of global realities and trends." Darke uses grasses as a lens to explore issues of sustainability and ethical approaches to landscaping. More about the book, its author and concepts can be found at <http://www.livable-landscapes.com/>. Contact the publisher at www.timberpress.com for availability of this book. Timber Press is a Portland, Oregon, publisher of books about gardening, horticulture, and botany.

– Review by Sandy Vorce

Welcome to New ELA Board Members

We are delighted to have two outstanding additions to the ELA Board: Maureen Sundberg and Peter Hinrichs.

As ELA continues to expand its outreach to the homeowner community, it is with great enthusiasm that we welcome Maureen Sundberg as our first homeowner representative to the ELA Board. Maureen is a passionate gardener, environmental advocate, and active community volunteer. As a Girl Scout leader for more than 10 years, Maureen has been instrumental in introducing environmental awareness and ecological gardening practices to countless young girls. Recently, Maureen helped girls organize and run a Green Power Day for Andover/North Andover children and construct Barred Owl houses to be installed at local conservation properties. Maureen lives and gardens with her family in Andover, MA.

Peter Hinrichs comes to ELA with an extensive background in gardening and a degree in landscape architecture. With many years work experience in horticulture and landscaping in both the private and nonprofit worlds, Peter's background and interests are quite diverse. Peter is currently the Gardens Curator at Massachusetts Horticultural Society where he is involved in many aspects of garden education for both adults and children. Earlier in Peter's career, he worked for Treefrog Landscapes, Inc. on ecological designs and educational programs.

**Please join us in welcoming
Maureen and Peter!**

INSECT FACTOIDS

- Insects can be distinguished from other small animals by their six legs, three body parts (head, thorax and abdomen), antennae, compound eye, and wings (usually, but not always).
- 95% of all the animal species on the earth are insects.
- Over one million species have been discovered by scientists.
- Insects eat more plants than all the other creatures on earth.
- Insects are incredibly adaptable creatures and have evolved to live successfully in most environments on earth, including deserts and even the Antarctic. The only place where insects are not commonly found is in the oceans.
- Grasshoppers can jump 40 times the length of their body
- Ants can carry objects that weight 100 times the weight of their own body.
- There are more than 300,000 species of beetles, making them the largest order of insects in the world.
- A species of Australian dragon fly has been clocked at 36 MPH.

gleanings

⇒ **Landscaping at the Water's Edge: An Ecological Approach**, a new book from UNH Cooperative Extension, explains how landscaping choices affect ground water and demonstrates how, with simple observations, ecologically-based design, and low-impact maintenance practices, you can protect—even improve—the quality of our water resources. Call 862-1564 or order online at: <http://extension.unh.edu/Pubs/Pubs.htm>. Applicable to all of New England.

⇒ Policy on Climate Change

The New England Wild Flower Society's Board of Trustees adopted a Policy on

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

Nancy Askin

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Elkhorn Native Plant Nursery

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Bruce Wenning

Camilla Worden

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

Climate Change on March 21, 2007. To learn more about the New England Wild Flower Society and to read the policy in its entirety visit their web site at www.newenglandwild.org and click on the word "Conservation" or call 508-877-7630 or visit New England Wild Flower Society at Garden in the Woods, 180 Hemenway Rd., Framingham, MA 01701.

⇒ **Green Tips** are now available on the website of the Union of Concerned Scientists greentips@ucsaction.org. A large range of topics are covered from global warming to bottled water.

⇒ CT DEP Advises Anglers and Boaters to Take Precautions to Prevent Spread of "Didymo" Into Connecticut Waters

Highly invasive alga found in Vermont in the Connecticut and White Rivers. The Connecticut Department of Environmental Protection today is advising anglers and boaters to be on the lookout for the highly invasive freshwater alga *Didymosphenia geminata*, known as "Didymo" and to take precautions to prevent its spread into Connecticut waters. The call was prompted when the Vermont Agency of Natural Resources recently confirmed that the alga has been found in the northern reaches of the Connecticut River near Bloomfield, VT, and at several sites along the White River, a tributary of the Connecticut River in central Vermont. This is the first official report of Didymo in the northeastern United States.

During blooms, didymo can form thick mats of cottony material (typically gray, white and/or brown, but never green in color) on the bottoms of rivers and streams that can potentially smother aquatic plants, aquatic insects and mollusks, destroy fish habitat, and negatively affect existing food webs. Didymo is most frequently found in relatively shallow streams and rivers having a rocky substrate. Didymo is not expected to be problem in the lower Connecticut River or in lakes; however, it could have a large impact on fish and other aquatic organisms if introduced to the state's smaller rivers.

Humans are the primary vector responsible for the recent spread of didymo. Anglers, kayakers and canoeists, boaters and jet skiers can all unknowingly spread didymo. This microscopic alga can cling to fishing gear, waders (**felt soles can be especially problematic**), boots and boats, and remain viable for several weeks under even slightly moist conditions. It is recommended that water recreationalists practice **CHECK, CLEAN, DRY** procedures:

- **CHECK** : Before leaving a river or stream, remove all obvious clumps of algae and look for hidden clumps. Leave them at the affected site. If you find any

gleanings con't.

later, do not wash them down drains; dispose all material in the trash.

- **CLEAN** : Soak and scrub all items for at least one minute in either hot (140 degrees F) water, a two percent solution of household bleach or a five percent solution of salt, antiseptic hand cleaner or dishwashing detergent.

- **DRY** : If cleaning is not practical, after the item is completely dry to touch, wait an additional 48 hours before contact or use in any other waterway.

Thought to be native to far northern regions of Europe, Asia and probably North America, the geographical and ecological range of this freshwater alga has been expanding in recent years. *Didymo* has been spreading to diverse areas including British Columbia in Canada, the western US (especially Montana, South Dakota, Idaho and Colorado), New Zealand, and then into the southeast US (Arkansas, Tennessee, North Carolina, Virginia and West Virginia). *Didymo*, a microscopic alga, has also begun developing massive blooms that can sometimes extend for several kilometers of river.

The above procedures will also be effective against other unwanted organisms.

For more information on *Didymo*, visit the US EPA Region 8 website: <http://www.epa.gov/region8/water/didymosphenia/> or the Biosecurity New Zealand website: <http://www.biosecurity.govt.nz/didymo>

(Although the preceding press release is from the CT Department of Environmental Protection and Vermont Agency of Natural Resources, this algae has been found in British Columbia in Canada, the western US (especially Montana, South Dakota, Idaho and Colorado), the southeast US (Arkansas, Tennessee, North Carolina, Virginia and West Virginia) and New Zealand, so we all need to be aware: anglers, boaters, hikers.)

⇒ 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 Fall 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, 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.

events

Sept. 2 – Champion Tree & Garden Tour
Bartlett Arboretum, Stamford, CT
203-322-6971
www.bartlettarboretum.org

Sept. 7-9 – Nasami Farm (NEWFS) Fall Sale
Whately, MA
413-397-9922
www.newfs.org

Sept. 16 – Annual Fall Plant Sale

Arnold Arboretum, Jamaica Plain, MA
617-524-1718
www.arboretum.harvard.edu

Sept. 21-23 – Common Ground Country Fair

Main Organic Farmers and Gardeners' Association, Unity, ME
207-568-4141
www.mofga.org

October 28-31, 2007 – Ecological Landscaping Conference: From scientific principles to public policies and practices,

Cleveland, Ohio. The Ohio State University Urban Landscape Ecology Program announces an interdisciplinary conference and is soliciting abstracts for contributed oral and poster sessions. More information visit the official conference website: www.oardc.ohio-state.edu/ulep/Conference.htm.

November 3, 2007 – Connecting Children and Nature: Exploring New Avenues for Environmental Education

Wheelock College, Boston, MA
Conference sponsored by Mass Audubon and Wheelock College. Keynote Speaker: Richard Louv, author of *Last Child in the Woods*. For information visit , <http://www.massaudubon.org>.

November 7-9, 2007 – U.S. Green Building Council Conference

Chicago, Illinois at the new McCormick Place West Building (2301 S. Lake Shore Drive, Chicago, IL 60616). For information visit U.S. Green Building Council , <http://www.greenbuildexpo.org>



announcements

ELA-CALIFORNIA

September 11, 2007; 6-8pm. Monterey Bay Working Group Regular Meeting.
Live Oak Grange, 1900 17th Ave., Santa Cruz, CA 95062. ***This meeting repeats every other month on the second Tuesday.***

SAVE THESE DATES! March 6-8, 2008
Ecological Landscaping Association's
2008 Winter Conference & Eco-Market-
place. Great speakers, cutting-edge topics
 and a chance to network with like-mind-
 ed individuals!

- MassMutual Center, Springfield, Massachusetts – a spacious, easy to reach, state-of-the art facility.
- Thursday, March 6: Pre-Conference Keynote with John Todd
- Friday & Saturday, March 7-8: Three Educational Tracks, demonstration workshops, live exhibit displays, and the 5th Annual Eco-Marketplace

Visit www.ecolandscaping.org for updated vendor and attendee information starting October 2007 and look for more information in the Fall and Winter Issues of ELA's member quarterly newsletter the "Ecological Landscaper". See you there!

unclassifieds

WELL WATER CONNECTION, INC.

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Newsletter Editor Position Available

ELA is looking for an Editor for the *Ecological Landscaper*, our quarterly publication

- Duties: Sourcing and procuring articles, excerpts, and other content that may be of interest to our newsletter readers. Securing appropriate permission to reprint articles when necessary. Develop and procure other content including events listings and resources.
- Work with Newsletter liaison to ensure all material is suitable for printing in the areas of grammar, coherence, style consistency, and content.
- Salaried position. Position available immediately.

Send resume or contact ELA, 1257 Worcester Road, #262, Framingham, MA 01701 or call the ELA Message Center at 617-436-5838 or email us at ELA.info@comcast.net.

Order *Discover Ecological Landscaping*

As part of ELA's outreach efforts, we are offering an opportunity to purchase the *Discover Ecological Landscaping* booklet in bulk. ELA members and professional colleagues have expressed interest in purchasing the booklet for distribution to their clients, workers, and attendees at their talks. We have heard your requests, and now the *Discover Ecological Landscaping* booklet is available to you!

Discover Ecological Landscaping is a 12-page booklet that will help you and your clients discover how easy and fun it is to landscape with ecology in mind – you may learn that you are doing some of these things already!

Bulk orders are sold in bundles of 100 booklets at a cost of \$110 (includes sales tax, shipping, and handling). To order, please mail the completed form, with your check, payable to Ecological Landscaping Association, to:

ELA
Attn: Discover Program
1257 Worcester Rd., #262
Framingham, MA 01701

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PLEASE DO NOT SHARE MY CONTACT INFORMATION.

Thank you for your continued interest and support of ELA's mission to educate, collaborate, and network. (revised 8/07)

SAMPLE



ecological landscaping

ECOLOGICAL LANDSCAPING IS A METHOD of designing, building, and maintaining landscapes that considers the ecology of a site and creates gardens that enhance the surrounding environment for the benefit of humans and all other life in the ecosystem.

When the earth is disturbed during the construction of buildings, homes, driveways, and roadways, the land is forever altered. Although the natural landscape can never be restored completely, with thoughtful attention to the site, ecological landscapers can create outdoor spaces that are practical, healthy, and aesthetically pleasing. Ecological landscaping strives to balance the building site with the natural environment. It draws upon the wisdom of natural systems. By studying the inter-relationships between living things, non-living things, and the environment, ecological landscapers can create a landscaped community that will conserve natural resources, preserve biodiversity, and protect the environment. With proper design and implementation, a healthy pattern begins to form with each component in the landscape; people, animals, plants, water, soil, insects, and wildlife, all interacting in a sustainable way.

Conservation is an important part of ecological landscaping. The objectives of an ecological landscaper are to reduce water consumption, preserve water quality, prevent soil erosion, protect biodiversity, diminish the use of toxic pesticides, and minimize the use of non-renewable resources. By striving toward these goals, the ecological landscaper can create gardens that are both environmentally responsible and enjoyable to experience.

“We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.”

— ALDO LEOPOLD

SAMPLE

how to choose an ecological landscaper

ECOLOGICAL LANDSCAPERS ARE PROFESSIONALS who have an understanding of natural systems — geology, climate, soils, plants, and ecology. They incorporate this knowledge with landscape design, construction, and maintenance to make ecologically-sound decisions for your property. An ecological landscaper differs from a conventional landscaper through the approach, techniques, and products used while managing the soil, plant life, and landscape. They strive to create gardens in an environmentally responsible way with a goal to improve and enhance the site conditions for both humans and wildlife alike.

An ecological landscaper begins with a study of the entire site...

PLANT INVENTORY — Cataloging the plants that exist on the site

SITE LOCATION — Hardiness zone, topography, microclimate, exposure to wind and sun, and availability of water

SOIL SAMPLES — pH test, soil composition, texture, moisture retention, and fertility

SITE HISTORY — Recurring problems in the landscape, wet areas, stressed plants, erosion

Ecological landscapers use data from their site analysis to provide a design that is appropriate for the site. They will build healthy soil and choose plants that will grow and thrive, selecting for disease resistance, drought or wet tolerance, and non-invasiveness.

To minimize the use of toxic chemicals, an ecological landscaper will proactively monitor plant material and soils for key pests and diseases that arise in stressed situations. Problems are addressed on a case-by-case basis using the solution with the least environmental impact.

Listen for these terms when interviewing a landscaper...

- Soil tests
- Site analysis
- Integrated pest management
- Compost as soil amendment
- Endophytically enhanced grass seed
- Mulches of leaf mold or compost
- Low impact solutions
- Least toxic pesticides

Products used by an ecological landscape professional...

- Insecticidal soap
- Horticultural oil
- NEEM
- Bt
- Compost tea
- Beneficial nematodes
- Low nitrogen fertilizer