

# THE ecological landscaper

The Newsletter of the Ecological Landscaping Association

Vol. 12, No. 5

Spring 2006

## Wetlands: fauna and flora

### It isn't easy being green . . .

This often is the plight of poor Kermit the frog and other critters who depend on wetlands and other water bodies for habitat. We hope that you'll find some ideas and resources in this issue that will help you be kind to our web-footed friend and their fellow water dwellers.

### FROG-FRIENDLY BACKYARDS

• Randy Korb

The soft trills of toads and melodic calls of frogs on warm spring evenings can be very soothing, especially from the comfort of your home. Well-designed water gardens and backyard ponds not only provide ambience, they add to the amount of wetland habitat in communities and attract wildlife, especially amphibians.

The term "frog" includes both frogs and toads, but the reverse is not true. Toads have dry, warty skin, short back legs and stocky bodies. Frogs have smooth, moist skin with long back legs and streamlined bodies.

The needs of amphibians (water, food, shelter) change seasonally. Frogs and toads move predictably over the landscape to satisfy these needs. In the spring, they spend a week in water to breed and lay eggs. Then they leave their larvae behind and spend the summer in distant fields, sitting on the forest floor, or perched along shorelines waiting for passing insects and hiding from bigger frogs and other "hungrys." In winter, they burrow into the soil and beneath leaf piles or slip back into water to hibernate. Making your yard frog-friendly will bring frogs and toads from local populations. Amphibians are attracted to the reflective surface of the water. Be patient—it may take a year. Do not go out and collect adult frogs from other areas. Even if the habitat is favorable they won't recognize it as "home" and will likely leave and die in strange surroundings. Frogs and tadpoles bought from pet shops may carry and spread diseases. As a last resort, it is possible to relocate eggs or tadpoles from a nearby wetland and raise them in your pond. Wait until your pond is well

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Dear Member,

We realize that this is a late Spring newsletter and we thank you for your patience. We are looking to improve the content of the newsletter and to explore how we can better provide cutting-edge information to our knowledgeable membership.

To that end, we would like to ask you, the reader, for comments, letters, articles, ideas, and opinions. Suggest topics that peak your interest and that will provide an incentive for us all to be greener in our practices.

We're also looking for production personnel, both editor/layout designer or editor and layout designer. If you (or someone you know) are interested, please review the detailed job description (pg. 11) and contact us. The sooner we hear from you the better as the Summer issue deadline is just rounding the corner.

Thank You.

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*"Gramma said when you come on something good, first thing to do is share it with whoever you can find; that way the good spread out where no telling it will go. Which is right."*

—Little Tree in *The Education of Little Tree*, by Forrest Carter



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[www.ecolandscaping.org](http://www.ecolandscaping.org)

Talk to us! We welcome comments, letters, articles, ideas, and opinions. Write to us with your ideas for newsletter content.

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

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

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established with a layer of detritus and algae to serve as tadpole food.

#### Backyard Basics

Locate the pond away from lot lines, trees, underground and overhead power lines, and the neighbor's bedroom window. Toads, especially, can be quite noisy. (In Kaukana, WI, a homeowner with toads in his pond was fined for violating a noise nuisance code. [I have to wonder what the local fine is on leaf blowers?—ed.]) Avoid runoff from mature piles, compost piles or chemically treated lawns. Any contaminants in the water will pass quickly through the skin and into the bodies of tadpoles and adults. Know your local bylaws on permits and fencing needs.

There are four types of backyard ponds: concrete, pre-fabricated fiberglass, clay lined and flexible liner. Concrete ponds and fiberglass ponds are the most expensive. Fiberglass shells, however, are steep-sided death traps unless a rock pile, branches or boards are added to allow frogs out of the pond. Clay lined ponds generally require professional installation and, if they dry out, the clay layer may shrink and crack. Flexible liners are generally inexpensive and dependable. A 45mil EPDM (Ethylene Propylene Diene Monomer) liner is very inexpensive, does not leach toxins into the water, and holds up well in cold climates.

Make the pond at least six by twelve feet and the center of the pond below the frost line, about five feet deep; more shallow ponds will freeze in the winter, killing the remaining tadpoles and adults. Form a simple oval or crescent. More elaborate shapes will cause the liner to fold and detritus will collect in the creases. If you use fiberglass pools, place two or three small ones together.

Both American toads (*Bufo americanus*) and green frogs (*Rana clamitans*) adapt well to urban backyard environments and are abundant throughout their widespread ranges.

They are often the first to appear in a new pond.

#### Toads

Toads, especially, live comfortably around urban and suburban homes and gardens. The ideal toad pond is a shallow scrape in an open sunny area that fills with melt water in spring and dries out by the end of June.

New homeowners tend to quickly fill in wet areas like this and seed them over with grass. Rather than eliminating these low areas, dig them deeper and add a flexible liner. Simply building a small berm or dam at the outflow will also pool the water. This gives metamorphs (newly developed from the larval stage) an extra week or two of water to complete their metamorphosis before the pond dries. Metamorphs are vulnerable to birds, cats, large spiders and other predators as they leave the water. The area surrounding the pond should have tall, thick grass and a variety of native plants, logs, and rocks for cover.

#### Winter

Green frog tadpoles take two years to complete metamorphosis. To support them a pond must be deep enough for them to over winter at the bottom.

Toads burrow into an area of sandy, loose soil or your compost pile to escape the frost. If you live in or near a wooded area, leaf piles and rotting logs will get wood frogs, spring peepers (*Pseudacris crucifer*) and other tree frogs through the winter.

Meeting these requirements will keep your frogs and toads happy and healthy the year round.

*Randy Korb is an environmental educator in Wisconsin and Illinois public schools and conducts workshops for adults. He also develops educational nature products. Randy's book "Wisconsin Frogs: Places to Hear Frogs and Toads Near Our Urban Areas" includes a CD set of frog calls; it is available through Northeastern Wisconsin Audubon, Inc. (P.O. Box 1963, Green Bay, WI 54305, \$18.45 including shipping.)*

## PROTECTING VERNAL POOLS AND THEIR INHABITANTS

• Jennifer Pettit

Many years ago, Cindy Kollarics wrote an article for *The Ecological Landscaper* describing vernal pool habitat and how the creatures that travel to these special areas in early spring might be protected by not liming or fertilizing at this time of year.

So who are the creatures that utilize vernal pools? Some of them are New England's mole salamanders and frogs. This piece describes their appearances and habits and focuses on ways to provide some protection of their essential vernal pool habitats.

### Wood Frog

(*Rana sylvatica*)

This is one of the first arrivals to the vernal pool. These frogs are able to survive temperatures below freezing because of the glycerol-based natural "antifreeze" they produce. Their range extends from Georgia through the northeast United States to beyond the Arctic Circle. There are some populations in Colorado, Arkansas, Missouri, and Wyoming.

Relatively small frogs, they range from 1½-3" long, with rear legs nearly twice their body length. Males and females both have a black or brown mask and a white stripe that runs around the sides of the head down to the shoulder. Chromatophores in their skin produce varied brown pigments that enable them to mimic the color of fallen leaves.

Breeding migrations occur during a warm rain in early spring, sometime before the ice has completely melted. There is no mistaking their return; the males have a very raucous, duck-like call that can be deafening near a large congregation! All mating takes place quickly; in a few days, they lay their eggs and the adults leave the pools. In a year when breeding occurs

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## 2006 WINTER CONFERENCE & ECO-MARKETPLACE REVIEW

• Chris O'Brien

The 2006 Winter Conference & Eco-Marketplace, An In-Depth Look at Ecological Land Management was held March 3 and 4 in Marlborough, Massachusetts. The conference program featured local and national speakers: Amy Vickers (water conservation), Les Mehrhoff (invasive plants), Eric Grissell (insect ecosystems) and other knowledgeable and engaging speakers. Topics ranged from green golf courses to insect ecosystems, water conservation in the landscape, healthy trees, bio-control of invasive plants, targeted compost and much, much more – 20 sessions in all.

The success of the ELA's 2006 Winter Conference & Eco-Marketplace was not mere happenstance. A large group of dedicated board members and volunteers, assisted by a woefully underpaid staff, smoothly produced and ran this year-long effort.

Special recognition must go to the Conference/Marketplace Planning Committee. Education Committee Chair, Nancy Askin, and the educational committee maintained ELA's standards by finding knowledgeable, respected speakers. Eco-Marketplace Co-Chair, M. L. Altobelli, provided the drive to put together the Eco-Marketplace. This is the fourth year that conference guests have been able to meet with vendors of landscaping products with an ecological bent. Co-Chair, Cathy Rooney, brought years of experience with trade shows and event management. The scheduling and management Volunteer Coordinator, Karen Lindquist, assured the event ran like clock-work! Pat McAlpine, ELA's administrative assistant, provided support to all. No detail was too small to escape the attention of Kathy Sargent-O'Neill. These individuals are the backbone of the effort and are responsible for the reputation ELA has acquired for an outstanding and well attended Winter Conference & Eco-Marketplace.

**Congratulations to all for a job well done.**





before freezing conditions are past, the developing embryos may be killed by new ice that forms on the pool. If the vernal pool dries too quickly in the summer, an entire generation of tadpole might also be killed.

The Wood Frog's jelly-like egg masses of 1,000 to 3,000 loosely clumped eggs are usually attached to submerged plants or fallen twigs. The eggs have a dark purplish hue and algae growth within the masses can add a greenish tinge. Although Wood Frogs are common, destruction from development of vernal pools and surrounding critical habitat areas directly affects these amphibians.



### Spotted Salamander

*(Ambystoma maculatum)*

This is another which visits the spring pool. While growing up in Connecticut, I would often rescue these gentle little creatures from certain death as they crossed roads on wet spring nights. Throughout New England, rescue groups have organized efforts to help protect this annual migration by closing roads or building tunnels.

The Spotted Salamander seems to be the most predominant of the mole salamanders in my area of northeastern Massachusetts. They spend most of their lives in underground burrows in deciduous or mixed coniferous/deciduous woods. Their color is a beautiful dark blue or black with contrasting bright yellow spots that run down their back. They grow to 6-9" long and can live for over twenty years. Their range extends from Nova Scotia south to northern Florida and west to portions of Texas, Oklahoma, and Kansas. Their diet consists of slugs, snails, earthworms, spiders, crickets, and beetles.

Although the adults may ven-

ture far from their vernal pool after breeding, they usually return to their ancestral pool every year.

With the arrival of the first warm spring rain, the males emerge from their burrows and migrate to their pools; in some years they will even wriggle across snow to arrive at the pool before the females. When the females arrive, they engage in an elaborate courtship dance. (Note: If you venture out to a pool to witness the dance remember ear protection as well as rain gear; the chorus of Wood Frogs and Spring Peepers is extremely loud at close range.) The female then deposits her eggs in round, jelly-like masses of 100-200 eggs attached to sticks or vegetation. They sometimes turn a milky color, or are tinged with green from algae, and are easy to spot against the dark leaves on the bottom of the pool.

Hatchlings are about a ½" long and greenish-yellow in color and could be mistaken for tadpoles except for their little legs and distinct gills resembling ornamental feathers on each side of the larvae's head. These little amphibians have voracious appetites. They devour water fleas, the larvae of mosquitoes and other insects, and occasionally may even eat other salamander larvae or tadpoles.

### Marbled Salamanders

*(Ambystoma opacum)*

Though once found in such profusion they are now classified as "threatened" in Massachusetts. Their decline is likely caused by road traffic near breeding pools, acid rain, and pesticide use. They are small and stocky, about 3½-4" in length, and dark gray to black in color. They have distinct sliver or white markings (brighter in the males and sometimes enclosing black

spots) which run down their backs. Mostly terrestrial, they can be found under leaf litter, stones and logs. New Hampshire and central Massachusetts seems to be the northern limit of their range.

Unlike most mole salamanders, the Marbled Salamanders visit wooded

vernal pools in the late summer and fall to deposit their eggs when the pool is dry. The

female deposits 50-230 eggs and often remains to protect them until rains fill the pool. Eggs usually hatch in the fall, but they can survive over the winter to hatch early in the spring. The larvae leave the pool in late summer or early fall, depending on water levels.

### Blue Spotted Salamander

*(Ambystoma laterale)*

This one is rarely seen above ground. Long (3½-5") and thin, it has sky blue markings on its dark blue to black body. Its range is from the Gulf of St. Lawrence through southern Canada and New England into New Jersey and parts of the Midwest. The preferred habitat is hardwood and hemlock forest.

Their spring breeding rituals are similar to the Yellow Spotted salamander. The female lays 6-10 eggs per mass, with up to 500 accumulating in a clutch. Most larvae leave the pools by late August.

Altogether, there are about 130 kinds of salamanders including other mole salamanders (such as the Jefferson Salamander), newts, mud puppies, Giant or Olympic Salamanders, Blind Salamanders, Tree Salamanders, and others, each with particular habitat needs. Our willingness to protect vernal pools and surrounding areas may make the difference between extinction or survival for these amphibians.

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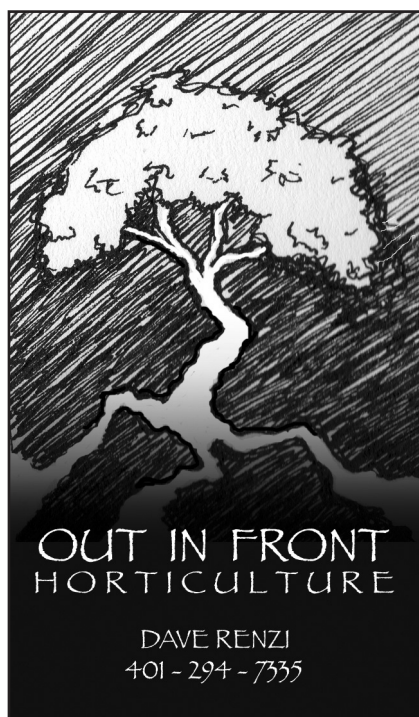
***Our willingness to protect vernal pools and surrounding areas may make the difference between extinction or survival for these amphibians.***

In Massachusetts, the Massachusetts Natural Heritage and Endangered Species Program (under the Division of Fisheries and Wildlife) can certify a vernal pool. There are a number of criteria, including presence of certain “obligate” species, amphibian and otherwise. (See “**sources**” for address). Certified pools are protected from filling and discharges. The Massachusetts Wetland Protection Act (310 CMR 10.00) only protects vernal pools located within a wetland resource area. Some towns have local bylaws that protect vernal pools in upland areas.

There is no administrated certification procedure in any other New England state. There is a citizen’s guide to vernal pools available for Maine, and a volunteer information-gathering network in New Hampshire under the auspices of N.H. Audubon (note: New Hampshire is currently trying to pass some legislative measures which would protect vernal pools but is meeting strong opposition from land owners and developers).

Amphibians are in decline everywhere, most likely due to the effects,

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### Some specific means to protect amphibians’ habitats

- Don’t clear the native shrubs and trees from around a pool; leave a buffer area of at least 50 feet in a natural state.
- Keep development such as roads, structures, and even lawns as far away as possible from known vernal pools.
- Locate vernal pools and apply for certification to protect them from development.
- Locate vernal pools so they will not be damaged even in the “dry” season.
- Do not permit heavy equipment in pool depressions. Landings and haul roads in logging or clearing operations should be kept at least 200 feet away. Soil compaction can damage the vernal pool’s delicate ecosystem, and ruts deeper than six inches can disrupt migration routes.
- Keep treetops and slash out of the vernal pool depression.

### If land development *does* takes place next to a vernal pool, here are some “remedies” which will help to keep it a breeding area:

- **Leave an uninterrupted cover area of shrubs** and herbaceous plants along the shore to shade and cool the area and to provide protection from predators. Attractive wetland shrubs to consider include *Clethra alnifolia* (Summer Sweet), *Ilex verticillata* (Winterberry), *Lindera benzoin* (Spice Bush), and *Vaccinium corymbosum* (Highbush Blueberry). Add some large trees to provide a canopy layer.
- **Build Greenways:** belts of trees, shrubs, and herbaceous plants that might weave through the property to provide protected travel areas between the pools and the equally critical upland forest areas. In these places, leaf litter should be left for foraging and hibernation. If possible, these requirements should be considered in the planning stage of any development.
- **Keep fertilizers, pesticides and any toxic materials away from the pool.** Do not lime or fertilize nearby lawns when salamanders are breeding or emergent young are leaving the pool. Do not drain swimming pools into vernal pools areas. A Salamander’s skin is extremely sensitive to any foreign material.
- **Avoid using Bt (*Bacillus thuringiensis*),** in vernal pools. This often recommended, so-called environmentally friendly control for many insects, including mosquitoes can greatly reduce food supply for developing amphibians.
- Breeding pools that have been degraded by a major disturbance such as pollution, drainage, or filling can possibly be restored. **Get some professional advice** on how to accomplish this.

direct or indirect, of human activity. I hope that those involved in planning, landscaping, and development will learn about these creatures and their critical habitats and share this information with clients and landowners. We have the opportunity and responsibility to protect these delicate creatures for future generations.

#### Sources for more information

For fact sheets and Massachusetts certification forms:

Mass. Natural Heritage and Endangered  
Species Program  
Mass. Division of Fisheries and Wildlife  
1 Rabbit Hill Road  
Westborough, MA 01581-3337  
(508) 792-7270  
<http://www.mass.gov/dfwele/dfw/nhesp/nhesp.htm>

Other sources of information:

Vernal Pool Association  
c/o Reading Memorial High School  
62 Oakland Road  
Reading, MA 01867

.....  
c/o Leo Kenney  
The Wright Center Tufts University  
Medford, MA 02155  
(617) 628-5000, ext. 5395

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Massachusetts Audubon Society  
Great Road  
Lincoln, MA 01773  
(617) 259-9500

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J. F. K. Federal Building  
Boston, MA 02203  
(617) 565-4868

*Jennifer Pettit is a member of the ELA and has been a member of the Townsend, MA Conservation Commission for many years.*

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## INSECTS AND WATER

• **Arzeena Hamir**

When home gardeners think of installing a pond, they often do so for aesthetic reasons. The sound and sight of water brings tranquility into any setting. But ponds can also create a wonderful ecosystem, attracting a number of beneficial insect species. Predatory insects are just one group

of beneficials that thrive near ponds. These insects control pests naturally and are a sure sign of a healthy garden.

#### Types of Predatory Insects

A predatory insect is one that preys on other insects. The most common and easily recognizable predator is the ladybug, *Hippodamia convergens*. Gardeners revere these brightly colored insects for their pest control capabilities. Young ladybug larvae will eat up to 30 aphids a day, saving roses, nasturtiums, and other plants from being overwhelmed by this pest. A single adult may eat more than 5,000 aphids in its lifetime.

Lacewings, *Chrysoperla* spp., are another type of predatory insect. The adults are green with large, gauze-like wings that give them their characteristic name. Along with aphids, lacewings fill their diet with mites, thrips, scale insects, mealybugs, and even tomato hornworms. Lacewing larvae are also known as “aphid lions” for the number of aphids they eat on a daily basis and the way they impale their prey when they detect them.

Syrphid flies (family: Syrphidae), also known as hover flies, float over plants as they search for insects and nectar. Like lacewings, these predators feast on a variety of insect pests but also pollinate a number of flowering plants, especially those whose flowers are too small for the average honeybee. Because they are small ( $\frac{1}{4}$ – $\frac{3}{4}$ " long) and not as easily identified as ladybugs or lacewings, they don't often get the credit they deserve for controlling pest populations.

Although the name frightens most people, the experienced gardener knows what a blessing predatory wasps can be. Unlike their stinging counterparts, these tiny wasps prefer to feed on other insects. Some lay their eggs inside soft-bodied insects, thereby killing them, while others carry off caterpillars to feed their young. One wasp with blue/black wings and two yellow spots on its abdomen is often

found hovering over lawns, looking for white grubs.

#### Food Sources

All of these predatory insects supplement their diets with pollen and nectar. Plants that particularly attract them include the following: coriander (cilantro), garlic chives, lovage, fennel, dill, Queen Anne's lace, rue, thyme, peppermint, goldenrod, buckwheat, sweet alyssum, sunflower, bee balm, horehound, parsley, yarrow, blanket flower, coneflower, coreopsis, cosmos, tansy, goldenrod, buckwheat and hairy vetch.

#### Provide a Source of Water

Planting food sources for these beneficial insects is the easy first step to attracting them in the garden. However, most gardeners forget that besides food, small predators need a source of water as well. Pest insects like aphids and cutworms get their moisture by sucking or feeding on plant juices. Predators need an open body of water to meet their moisture requirements. Just the small addition of a saucer of water has been shown to double the amount of eggs laid by beneficials. Water sources are particularly important during hot summers.

Predatory insects require a very specific type of water body. A shallow pond is best, with enough area around the perimeter for insects to land, and drink safely. Deeper ponds can be made beneficial-friendly by placing flat rocks so that they protrude from the surface to form “landing pads”. Without these safe havens, insects can be pulled into the water from the force of surface tension.

Lacewings and dragonflies are particularly attracted to ponds that feature fountains or waterfalls. The mist created by these structures appeals to these delicate creatures and the movement of water also discourages mosquitoes from breeding.

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### Maintaining a Healthy Garden

If pest insects do build up, it is important to control them naturally, without affecting the population of beneficials. Insecticidal soap and the microbial insecticide Bt are specific to pest species and do not harm beneficial ones. Be careful with other natural pesticides. Even botanically derived ones like rotenone and pyrethrum will kill beneficial insects. In addition, remember that pests like aphids, mealybugs and cutworms are food sources for predatory insects so try to tolerate a few of them in your garden.

Water is a critical component to attracting beneficial insects. A well-designed pond will not only provide pleasure to its owners, but will also provide the foundation for a healthy ecosystem. As more beneficial insects find a home in the garden, the amount of time spent on controlling pests will decrease, giving you more time to enjoy the pond and the wonderful buzz of insects around it.

*Arzeena Hamir is an agronomist and garden writer specializing in organic gardening. Terra Viva Organics [arzeena@tvorganics.com](mailto:arzeena@tvorganics.com)*

## RESOURCES FOR PROTECTING WETLANDS: FAUNA AND FLORA

Roads have devastated amphibian populations and the wetlands where they breed. For more information on **Federal Highway Administration** (FHWA) activities and on ways biologists and land planners are teaming up to design eco-friendly roads that animals can traverse without having to risk life and limb, go to: <http://magazine.audubon.org>

• **Izaak Walton League** staff provides quality workshops on a variety of stream and wetland conservation and education topics. If you are an individual interested in attending a workshop, please check our calendar of events for workshops in your area. If you are an organization, agency, or company please contact us at 800-BUG-IWLA (284-4952) or email [sos@iwla.org](mailto:sos@iwla.org) to schedule a workshop.

• **Environmental Law Institute** provides many on-line resources and threads to articles:

Home page and National Wetlands Newsletter:  
<http://www2.eli.org/nwn/nwn/login/index.cfm>

Protecting Water Resources:  
<http://www2.eli.org/research.htm>

### • US EPA Site

#### Water

This page provides links to topics relating to all bodies of water:  
<http://www.epa.gov/owow>

#### Wetlands

This page provides an overview of basic wetland information and answers frequently asked questions:  
<http://www.epa.gov/owow/wetlands>

Links to private organizations/agencies on the topics of **River Corridors and Wetland Restoration** can be found on this site which provides reports and updates on new and cutting-edge technology. The website also provides an overview of basic wetland information and answers frequently asked questions: <http://www.epa.gov/owow/wetlands/restore/privlinks.html>

**EPA Watershed News:** Watershed News is a publication of EPA's Office of Wetlands, Oceans & Watersheds. Webcasts by a variety of speakers on cutting edge topics:  
<http://www.epa.gov/win/news.html>

**Urban Wetlands Biocomplexity Project:** This is a growing website that provides summary and contact information for the research group at Oregon State University. This project is supported by a National Science Foundation incubation grant through the Biocomplexity in the Environment Program. There are many interesting articles on this site:  
<http://water.oregonstate.edu/wetlands/index.htm>

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**SPIRANTHES CERNUA VAR.  
ODORATA 'CHADDS FORD'**

• Barry Glick

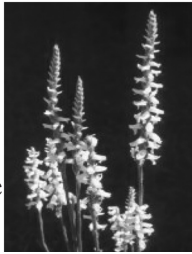
Like far too many native plants these days, *Spiranthes cernua* var. *odorata* 'Chadds Ford', a native orchid, was discovered just as its habitat was about to be destroyed. Dick Ryan, an eccentric character with a passion for native orchids, found the plant back in the 1960s in a wet ditch near his hometown of Bear, Delaware. At the time, Bear was a rural crossroads town. Today, this former orchid habitat is overrun by tract homes.

It didn't take long for word about Ryan's exquisite discovery to spread. Dr. Merlin Brubacker, a plantsman with a keen interest in tropical orchids, was smitten by this denizen of temperate Delaware. In 1973, a division of the orchid grown by Dr. Brubacker received the coveted Certificate of Cultural Merit from the American Orchid Society.

**Nodding Ladies Tresses**

*Spiranthes cernua* var. *odorata*, a fragrant form of the species commonly known as nodding ladies tresses, is found in coastal regions of southeastern states from Virginia to Florida and west to Texas, where it flowers from fall through winter.

Nodding ladies tresses grow to about 3 feet tall, with 3 to 6 glossy, dark green leaves up to 8 inches long on the lower part of the stem. Its yellowish white blossoms are larger than those of the species, *Spiranthes cernua*, which is found throughout eastern North America. Like other members of the genus *Spiranthes*, the flowers of this species are arranged in a twisted, spiral-shaped spike. (The name *Spiranthes* comes from two Greek words, *speira*, meaning spiral, and *anthos*, meaning flower.) Members of the spe-



cies are called nodding ladies tresses because of the nodding habit of the individual florets that make up the flower spike.

**A Smell of Jasmine**

One of the most distinctive features of *Spiranthes cernua* var. *odorata* is its potent, sweet fragrance, often compared to that of vanilla or jasmine. 'Chadds Ford' is a wonderful cultivar – a vigorous grower with large, extremely fragrant flowers. Although the plant was discovered in Delaware, it was named in honor of Chadds Ford, the town in southeast Pennsylvania where Dr. Brubacker lived.

Since the dawn of gardening, orchids have had a mystique. In the words of botanist Welby R. Smith, who has written an entire book on the orchids of Minnesota alone, "Orchids are often thought of as rare, fragile objects d'art, existing only in steamy tropical forests or Edwardian greenhouses. In reality, nothing could be further from the truth. Orchids occur worldwide from the arctic tundra to Tierra del Fuego. They are absent only from the driest deserts and the wettest aquatic habitats." Orchids make up one of the largest plant families, with 725 genera and more than 20,000 species and account for some 7 to 10 percent of all flowering plant species on Earth!

Nearly everyone is familiar with the multitude of orchids from the tropics, where the majority of orchids live. In most regions of this country, these must be grown as houseplants. Few gardeners are aware of the surprising diversity of terrestrial orchids native to the U.S. (As the name implies, terrestrial orchids are those that are rooted in soil. All orchids in temperate regions are terrestrial; most tropical orchids are epiphytic, meaning they grow on another plant—but aren't parasitic—usually in the canopies of the tallest trees.) Some 216 species of terrestrial orchids are native to North

America. Among the many genera of native orchids are *Cypripedium*, the lady slippers; *Isotria*, the whorled pogonias; *Platanthera*, the fringed orchids; *Pogonia*, the beard flowers; *Goodyera*, the plantain orchids; *Listera*, the twayblade orchids; *Corallorhiza*, the coral root orchids; and *Tipularia*, the crane-fly orchids.

**An Elusive Prize**

Until recently, orchid lovers have only been able to appreciate native orchids in the wild, not in the garden. Many of these plants are slow to propagate and therefore are not readily available from commercial sources. For decades, orchids have been dug up from the wild by unscrupulous collectors who have decimated entire plant populations. This, in addition to loss of habitat to development, is a major threat to the long-term survival of many orchids as well as other native species. For this reason it's important to buy native orchids only from nurseries that are propagating them vegetatively, not collecting them from the wild. Fortunately, in recent years, there have been great strides in propagating even the most difficult orchids, such as the lady slipper *Cypripedium reginae*, which is being propagated by tissue culture by Bill Steele of Spangle Creek Labs in MN ([scl@uslink.net](mailto:scl@uslink.net)).

Orchids are not only difficult to propagate; they also have a reputation of being almost impossible to grow. The most commonly accepted theory on why they're so temperamental is that the symbiotic relationship with mycorrhizal fungi found on the root tips, essential for the breakdown of nutrients in the soil to forms the plants can use, is difficult to simulate in a garden setting. *Spiranthes cernua* var. *odorata* 'Chadds Ford' is the exception to the rule. It's not only easy to grow but also forms colonies quickly.

**A Prodigious Beginning**

In August 1992, Dr. Richard Lighty,



director of the Mt. Cuba Center for the Study of Piedmont Flora in Greenville, DE, gave me a 6" pot of 'Chadds Ford'. I kept the plant in a moderately heated greenhouse (45°). By December 30 I was able to divide out thirty-two 2-½" pots, eighteen 4" pots and put the stock plant back in its original pot.

The following spring, I transplanted several divisions outside in the garden. By midsummer, flower buds had begun to form. In late summer, my garden was graced with 18" spikes of waxy white orchid flowers, tinged with green and scented vanilla. The flowers persisted into late fall.

Like others of its species, 'Chadds Ford' prefers wet feet. However, it will do perfectly well in any rich, moisture-retentive soil, in sun or shade. Given these conditions, this plant, which is stoloniferous, will multiply in no time at all. I highly recommend it, even for the novice gardener.

#### Further information

Resources are plentiful for those of you whose interest has been peaked. If you'd like to learn more about native orchids, take a look at the following books. Some are out of print but can be found in any good horticultural library:

- Hardy Orchids by Phillip Cribb & Christopher Bailes. Timber Press, Portland, 1989.
- Orchids for the Outdoor Garden by A. W. Darnell. First published by L. Reeve & Co., Ltd., Ashford, Kent, England in 1930. Reprinted by Dover Publications, New York, 1976.
- Wild Orchids of the Middle Atlantic States by Oscar W. Gupton and Fred C. Swope. University of Tennessee Press, Knoxville, 1986. ISBN 0-87049-509-7
- Flora of West Virginia by P. D. Straub and Earl Core. Seneca Books, Morgantown, 1978.
- Orchids of Indiana by Michael A. Homoya, Indiana University Press, 1993. ISBN 0-253-32864-0

- Orchids of Minnesota by Welby R. Smith. Univ. of Minnesota Press, Minneapolis, 1993.
- Wild Orchids of The Northeastern United States by Paul Martin Brown, Cornell University Press, 1996, ISBN 0-8014-8341-7
- Hardy Orchids by Cribb & Bailes, Timber Press, 1989, ISBN-0-7470-0416-1

I'd also like to suggest joining The North American Native Orchid Alliance. They publish an amazing 100 plus page journal quarterly. It is loaded with easy to understand cultural and identification information and many line drawings and color photos, a bargain at \$29 per year. Contact

NANO, c/o Nancy Webb  
84 Etna St.  
Brighton, MA 02135-2830

#### Growers:

Cypripedium Haven  
[www.c-we.com/cyp.haven/](http://www.c-we.com/cyp.haven/)  
Carson Whitlow  
2291-280th St  
Adel, IA 50003  
Phone/FAX 515-993-4841  
SlipperGuy@aol.com

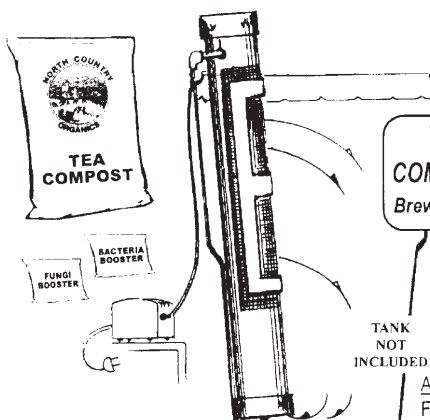
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Spangle Creek Labs  
www.uslink.net/~scl/  
Bill & Carol Steele  
2295 County Road 445  
Bovey, MN 55709  
scl@uslink.net

Sunshine Farm & Gardens  
www.sunfarm.com  
Barry Glick  
Rt 5F  
Renick, WV 24966  
PH 304-497-2208, FAX 304-497-2698  
barry@sunfarm.com

*Barry Glick has written for numerous Gardening and Landscape publications over the last 34 years and is the proprietor of Sunshine Farm & Gardens, a 60-acre Arboretum, Botanic Garden, and Nursery in the mountains of Greenbrier County, WV. 304-497-2208, barry@sunfarm.com - www.sunfarm.com*

## PLANNING YOUR LIVABLE LANDSCAPE: LECTURE BY BRITT ECKHARDT SLATTERY

• Reviewed by Jana Howe

**B**ritt Eckhardt Slattery of the US Fish and Wildlife Services came all the way from the Chesapeake Bay Area to present her talk on “conservation landscaping techniques. What I found at this year’s ELA Winter Conference to be most interesting were her perspectives on the flow of water through a property. I was intrigued by her suggestion that it is much more important to install plantings at the point where water leaves a property than at the foundation, where the land slopes away from the building. These plantings can act as filtration strips.

Also, I hadn’t heard of “rain gardens,” shallow depressions that are filled with plants that can handle periodic flooding. The goal is to trap and filter the first half inch of rain water for 12 to 48 hours, giving it a chance to soak in instead of running off into a sewer. Mosquitoes can’t breed in such a short window of time.

I thought Slattery presented her material very well and gave a good review of basic conservation landscap-

ing techniques. I would have preferred to have heard more on the history of the Chesapeake Bay and its watershed and on the particular problems the Bayscapes program addresses. I also would have liked to learn more about the continued efforts to reestablish the health of the Chesapeake Bay area through conservation landscaping. Fortunately, ELA is planning to co-host a conference with the Chesapeake Conservation Landscaping Council and the Chesapeake Bay Foundation in November, 2006. [Details will be available in upcoming issues of the newsletter.]

*Jana Howe is a former English major who later studied arboriculture at the Stockbridge School at UMASS Amherst. She now works for herself maintaining landscapes, minimizing environmental impacts, and maximizing the ecological benefits of a well-planned garden.*

## LOUISIANNA IRISES

• Barry Glick



**L**ouisiana Irises have to be one of the best kept secrets of the garden world. The word Louisiana conjures up images of steamy bayous and tropical foliage but that’s not quite correct in this case. Yes, most of the five species that make up this incredibly variable mix of plants do make their natural home way south of the Mason Dixon Line. But people are growing them in virtually every state of the union and most likely in every country in the world.

My first experience with this vibrantly colored, vigorous group of floriferous plants came over a decade ago as I was cruising a group of holding beds that I’d rarely visited higher up the mountain. These are beds that I “toss” plants into until a time that I can figure out their final destination in the garden. It was early spring and, much to my astonishment, a huge clump of iris appeared in one of the

back beds with over twenty lovely blue flowers. At first I thought they were Japanese iris, but it was much too early in the season. I dug around and found a faded tag that said “Louisiana iris.”

Louisiana iris are interspecific hybrids encompassing varying percentages of *Iris nelsonii*, *Iris brevicaulis*, *Iris fulva*, *Iris giganticaerulea* and *Iris hexagona*. Each one of these species brings a different range of color and form to the group. These are mainly “water irises,” but they do quite well in average garden soil. The wetter the soil, the more vigorous the growth. I’ve had equal success in shade or sun but, in most climates, if you grow them in full sun, they appreciate more moisture.

Propagation is by division and couldn’t be easier. The rhizomes resemble lobster tails and new plants grow from both sides of the front of the rhizome as it creeps along the ground. How slow or fast it creeps is determined mainly by soil moisture. The sometimes fist-sized seed heads yield handfuls of seed per plant. They are huge seeds and germinate slowly over the period of a few years. Seedlings of open pollinated plants vary widely, but I’ve never experienced an “Ugly Duckling” in the lot. This group of plants has not yet succumbed to the insanity that the daylily world has seen with hundreds of thousands of named cultivars. I certainly hope that it doesn’t.

**Resources.** The popularity of this group of plants is most definitely on the rise, and if your interest has been piqued, you should think about joining the Society for Louisiana Iris (SLI): <http://sliris.bizland.com>.

*The Louisiana Iris*, edited by Marie Caillett and Joseph Mertzweiller is 225 pages of an extremely well composed treatise, covering history, hybridization techniques, culture and propagation (The Texas Gardener Press, [254-772-

..... continued on next page

8696], 1988, Library of Congress number 88-05000, ISBN 0-914641-09-3). This may be out of print but it is available used, for \$20 at [www.Amazon.com](http://www.Amazon.com). That is a real bargain!

*The Louisiana Iris: The Taming of an American Wildflower*, new from Timber Press and is available at substantial savings from the SLI. Read the in-depth description and obtain purchasing information at <http://sliris.bizland>.

## ELA NEWS

### A Feather in ELA's Cap

Carol Stocker, Boston Globe garden writer and author, lists ELA at the top of her list of "Supplies and Advice" in her recently released almanac *The Boston Globe Illustrated New England Gardening Almanac*!

### Wise Guys on the West Coast

CA-ELA member Owen Dell, County Landscape & Design, of Santa Barbara, CA and Billy Goodnick, City of Santa Barbara Parks & Recreation Department, both landscape architects, are a.k.a. the *Garden Wise Guys*! Their quarterly, thirty-minute TV show *Garden Wise Guys* gives viewers the basic information they need to start making changes in their own yard. With a unique sense of humor, the Garden Wise Guys talk about designing & maintaining a sustainable landscape. The show is produced by City TV and funded by the Santa Barbara County Water Agency, the City of Santa Barbara Public Works Department, and the Goleta Water District. Visit [www.citytv18.com](http://www.citytv18.com) or [www.sbwater.org](http://www.sbwater.org) for a complete broadcast schedule of the *Garden Wise Guys*.

## HELP WANTED

### ELA is looking for you! Or, someone you know!

It soon will be time to elect the 2006-2007 board of directors. We'd like your help in finding motivated, energetic people to jump in and help us build the organization. Do you know someone who might be interested in donating some time and effort, either in a committee or on the Board to help ELA become better advocates for the environment?

We are especially looking for folks with experience, expertise, or interest in the following areas: financial planning/budgeting; public relations/outreach; nonprofit organization management; project management, and fundraising.

If you are interested or know of anyone who might be, please contact Andrea Knowles, at 978-663-8298; ELA Phone Center, 617-436-5838; or write the [ELA.info@comcast.net](mailto:ELA.info@comcast.net). Thanks.

**ELA is looking for an Editor/Layout Designer** 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.
- Reviewing all material for grammar, coherence, style consistency, and otherwise ensuring its suitability for printing. Layout out content of the newsletter.
- Salaried position. Position available immediately. Send resume or contact ELA, 60 Thoreau St. Concord, MA 012742, 617-436-5838.

## ANNOUNCEMENTS

### In Appreciation

Thanks to all who renewed their ELA membership this year. Your support helps improve and expand ELA's program and mission. We can't do it without you. See what's new for ELA Members in 2006 in the announcement below.

### The ELA "Find an Eco-Pro" on-line nationwide directory is now live!

Visit [www.ecolandscaping.org](http://www.ecolandscaping.org) and check it out. This on-line service will assist potential clients in their search for you, an ELA member, who provides ecological services or product.

### Printed Membership Directory

The 2006 printed Membership Directory is hot off the presses and will be arriving in your mail box very soon. This great resource may help you find a contact, a referral, a product, or an answer. Just open it up, it's a tool that doesn't need sharpening, cleaning, or repair!

### Annual Meeting

The ELA Annual Meeting is scheduled for July 26, 2006. TBA: time and place. A formal announcement along with the 2006 slate of ELA officers and board of directors up for election, and if applicable bylaw changes, will be mailed to ELA members in June.

### Good Bye

Best of luck and good wishes to Pat MacAlpine, ELA Administrative Assistant, who retired this March. Pat kept ELA (and us!) running smoothly for the past 5 years. We'll miss you.

&

**Welcome to Penny Lewis**, ELA's new Executive Administrator. Penny brings many years of experience working with non-profits and in the computer industry. She too will keep ELA running smoothly in high gear in the fast lane on the Internet highway.

## 2005 ANNUAL APPEAL

A big thank you donors! These funds help ELA to achieve its mission.

*Ellen Abdo, Perennial Gardens LLC*  
*Doris Bourwensch*  
*Carroll County Landscape, Inc.*  
*Jan Childs*  
*EarthCare Landscaping*  
*Susan Hall Hess*  
*Abigail Higgins Gardening Services*  
*Ted Kennedy, All Star Trading*  
*Andrea Knowles/Horticulture & Design*  
*Anita F. Kopchinski*  
*Carl LaGrassa Landscaping*  
*Minglewood Designs*  
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## unclassifieds

**Boston-based, high-end landscape company seeks crew member** for 2006 to do garden maintenance, artistic pruning and plant installation. No lawn mowing. Organic philosophy. 9th year in business. Benefits include health insurance/savings plan. FT or PT. Call Christie at 617-327-0330, [Christie@christiedustman.com](mailto:Christie@christiedustman.com).



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## current events

EPA's Watershed Academy Sponsors: Webcast on the Clean Water Act. The **May 19th Webcast** will feature Tom Schueler from the Center for Watershed Protection who will discuss integrating wetlands into watershed protection efforts.

## May 19

Fossil-Free Landscaping 7-9 PM  
**Sponsored by the ELA Monterey Bay Group and the Green Grange.** What are you going to do when the oil runs out? Speakers: Well-known Santa Barbara landscape architect, co-host of the "Garden Wise-Guys" Santa Barbara City TV 18 and environmentalist **Owen Dell of Country Landscape & Design of Santa Barbara**, and local bicycle-powered organic landscaper **Ken Foster of Terra Nova Ecological Landscapes of Santa Cruz**. Fee: sliding scale donation of \$5-\$15. No one turned away for lack of money. Held at: Santa Cruz Live Oak Grange #503, 1900 17th Ave., Santa Cruz, CA. For more information call 831-425-3514.

## summer 2006 events

### June 01-03

Millersville Native Plant Symposium, Millersville, PA. Contact: Brandy Kline, 717-872-3030 [bkline@millersville.edu](mailto:bkline@millersville.edu), [www.millersvillenativeplants.org](http://www.millersvillenativeplants.org)

### June 5-8, 2006

Northeast Regional Master Gardeners Conference & Marketplace  
Hyatt Regency Hotel, Newport, RI  
[www.uri.edu/ce/index1](http://www.uri.edu/ce/index1)

## July 16-22

Perennial Plant Symposium, Montreal PQ CANADA. Contact: Steve Still, 614-771-8431 [ppa@perennialplant.org](mailto:ppa@perennialplant.org), [www.perennialplant.org](http://www.perennialplant.org)

## August 28-31

International Symposium Wetlands 2006: Applying Scientific, Legal, and Management Tools to the Great Lakes and Beyond. Pre-day, August 28 for field trips and special legal symposium. Grand Traverse Resort, Traverse City, MI. Contact: Laura at [laura@aswm.org](mailto:laura@aswm.org)

## gleanings

### Scientists: Endangered Species Act Rewrite Must Be Science-Based

WASHINGTON, DC, March 8, 2006 (ENS) - Over 5,700 scientists with biological expertise have signed a letter to the U.S. Senate in an effort to ensure that the Endangered Species Act, which they call the "cornerstone of the United States' most basic environmental protections," continues to conserve biodiversity by using the best available science. The letter, carrying signatures from scientists in every state and over 900 institutions, was hand-delivered to each of the 100 senators today. <http://www.ens-newswire.com>



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