

The Habitat

A newsletter of the Connecticut Association of Conservation & Inland Wetlands Commissions, Inc.

Summer 2016 volume 28 number 3



Invasive Plants – A Growing Concern

by Donna Ellis, Senior Extension Educator, UConn Department of Plant Science & Landscape Architecture and Co-Chair, Connecticut Invasive Plant Working Group (CIPWG)
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Connecticut's fields, forests, suburban backyards, and urban parks are under threat, imperiled by non-native plants from the faraway continents of Europe and Asia or, in some cases, from other regions of the U.S. Invasive plants are a problem because they establish easily and grow aggressively, disperse over wide areas, displace native species, and reduce biological diversity. These plants invade not only terrestrial habitats but water bodies as well, where they can grow and proliferate undetected for many years. Some invasive plants are more newsworthy because of their beauty (purple loosestrife), their poisonous traits (giant hogweed), or homeowner frustrations trying to control them (Japanese knotweed).



Figure 1. Young Oriental bitter-sweet vines on the forest floor. (Photo by Donna Ellis)

The push to control invasive plants is becoming common nationwide. The estimated annual cost of environmental and economic impacts by invasive species and efforts directed at their control in the U.S. is \$120 billion (Pimental et al. 2005). Connecticut enacted invasive plant legislation in 2003, joining several other New England states including Maine, Massachusetts, New Hampshire, and Vermont.

Determining losses to the environment is quite complex and difficult to estimate. How do we replace a plant or animal species that now faces extinction due to the onslaught of an invasive non-native plant into its habitat? Some insects, for example,
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Save the Date

CACIWC Announces the Preliminary Agenda for Our 39th Annual Meeting & Environmental Conference

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See page 8 for more details

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CACIWC News

Many of our members are aware of the long history of land conservation and habitat protection by their fellow conservation and inland wetlands commissioners and staff throughout Connecticut. Following the enabling legislation of 1961 and legislation to expand their role in 1963, conservation commissions began to form in towns throughout our state. In 1964, the Connecticut Association of Conservation Commissions (CACC) was organized to help educate the expanding number of conservation commissioners volunteering to serve their towns. CACC provided literature and other information to help these new commissioners investigate and protect local habitats. A newsletter, entitled Connecticut's Environment, was developed by CACC and printed by the State of Connecticut Department of Agriculture and Natural Resources for distribution throughout the state. In 1971, when most state conservation and environmental protection activities were transferred to the newly formed Department of Environmental Protection (DEP), CACC continued to be supported through support of its newsletter along with publication of the first Handbook for Conservation Commissions.

Major changes occurred with the passage of the 1972 Inland Wetlands and Watercourse Act creating a new municipal government function, followed by Public Act 73-293, which increased the size of conservation commissions. Following the passages of these acts and within four years of the first Earth Day, the Connecticut Association of Conservation and Inland Wetlands Commissions (CACIWC) was organized in to help support the major expansion of municipal land use roles and responsibilities. CACIWC published the first issue of *The Habitat* in 1974, which received financial support from the DEP until 1993. *The Habitat* continues to be a major part of the CACIWC education and outreach triad, along with our annual conference and our www.caciwc.org website.

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★ Inside



Journey to the Legal Horizon

by Attorney Janet Brooks

Supreme Court Broadly Exempts Farm Roads From Wetlands Agency Jurisdiction: Clear On the Law, Fuzzy On the Facts

*Indian Spring Land Company v. Inland Wetlands and Watercourses Agency*¹

Farmers and grammarians will be happy to read *Indian Spring Land Company v. Inland Wetlands and Watercourses Agency*, officially released by the Supreme Court on July 5, 2016. In the first paragraph of its decision the Supreme Court tackled the difficult second sentence of the agricultural exemption and held: “Upon review of § 22a-40 (a) (1) road construction directly related to farming operations is permitted as of right under the Inland Wetlands and Watercourses Act . . . and, therefore, that the agency did not have jurisdiction to regulate the construction of the plaintiff’s access road.” Clear and concise.

You may recall the farming exemption in C.G.S. § 22a-40 (a) begins:

(a): The following operations and uses shall be permitted in wetlands and watercourses, as of right: (1) Grazing, farming, nurseries, gardening and harvesting of crops and farm ponds of three acres or less essential to the farming operation . . . **The provisions of this subdivision shall not be construed to include road construction or the erection of buildings not directly related to the farming operation,** relocation of watercourses with continual flow, filling or reclamation of wetlands or watercourses with continual flow, clear cutting of timber except for the expansion of agricultural crop land, the mining of top soil, peat, sand, gravel of similar material from wetlands or watercourses for the purposes of sale.

If “**road construction or the erection of buildings not directly related to the farming operation**” does not fall within the exemption, exactly what does fall within in it? The agency argued that the phrase “**not directly related to the farming operation**” only modified erection of buildings and not what came before the “or”: road construction. The Supreme Court definitively disagreed: “the plain language of the text of § 22a-40 (a) (1), as evinced

by the legislature’s sentence structure and use of punctuation, makes it clear that road construction directly related to farming operations is exempt from the regulatory oversight of municipal wetlands agencies.” And then it supported its decision, relying on cases from the United States Supreme Court and the D.C. Circuit Court of Appeals, opining on sentence structure and use of punctuation.

“We cannot read into the Supreme Court decision a reason not supplied by the decision itself.”

The questioning from one of the justices during oral argument in this case foreshadowed the importance that grammar would play in the decision. I was sitting on the edge of my seat, delighting in the questions being peppered on the commission’s lawyer. I don’t think you have to share the Supreme Court’s sustained attention

to the structure of the second sentence of the farm exemption or my enthusiasm for grammar and punctuation. You can be content to know that the Supreme Court has definitively ruled “that the modifying phrase ‘not directly related to the farming operation,’ applies with equal force to both ‘road construction’ and ‘the erection of buildings.’ ”

The Supreme Court also was mindful that it should eschew an interpretation of a statute which might lead to “unreasonable or bizarre results.” It considered that a farmer could erect a building in a wetlands or a watercourse *as of right*. It determined that allowing a commission to regulate the construction of a road to get to and from that barn was “unreasonable and does nothing to further the goals of the Inland Wetlands and Watercourses Act.”

In the previous farm road construction case which came before the Supreme Court, *Taylor v. Conservation Commission*, 302 Conn. 60 (2011), I made these same sentence structure and comma comments on

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farm roads, continued from page 3

behalf of the Connecticut Farm Bureau. At that time, the Supreme Court in *Taylor* favored a Gertrude Stein approach: filling is filling is filling and requires a permit from the would-be farmer.

The Supreme Court's decision in *Indian Spring Land Company* seemed a turn-around for farm roads. It seemed that the decision implicitly overruled the *Taylor* decision. Would the Supreme Court explicitly overrule the 2011 decision? At the end of the *Indian Spring Land Company* decision the Supreme Court explicitly affirmed its decision in *Taylor v. Conservation Commission*, 302 Conn. 60 (2011), stating "section 22a-40 (a) (1) does not permit the filling of wetlands for the purpose of road construction, regardless of the road's relation to the farming operation, because the statute clearly provides for the regulation of activities that require wetlands to be filled." Then, it narrowed its holding in the *Indian Spring Land Company* case:

"In conclusion, the plain language of section 22a-40 (a) (1) provides that road construction directly related to a farming operation is excluded from the regulatory oversight of municipal wetlands agencies, **unless the manner of that construction implicates some other matter within the scope of that oversight, as in *Taylor***. Accordingly, the agency had no jurisdiction to attach special conditions to the plaintiff's gravel access road into the northeast compartment, as the road was to be constructed solely for the purpose of transporting equipment onto the property to complete forestry work. We therefore conclude that the trial court improperly determined that the agency had jurisdiction over the plaintiff's access road and improperly rendered judgment dismissing the plaintiff's appeal." (Emphasis added.)

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What is the manner of construction in the two cases? Notice that the Supreme Court didn't set out the contrasting manners of construction. It focused on the purpose of the road – its exclusive use as a farm road. It's time to compare apples to apples, or in this case, gravel road to gravel road. Two of the three roads proposed in *Taylor* as "necessary for vehicle/tractor access to the central crop of Highbush Blueberry" and as "necessary for vehicle/tractor access to the nursery crop production" are located in wetlands.² The *Taylor* farm roads were to be constructed with gravel.³ *Taylor*, 302 Conn. 60, 66 n.8 (2011).

It is clear that *Indian Spring Land Company* is free to construct its bridge (the footings of which will not be located in wetlands) and to put gravel fill in several vernal pools in order to construct its road – all without a wetlands permit. The *Indian Spring Land Company* road will be constructed with gravel and will fill "several vernal pools." The *Taylor* gravel road will be constructed and fill wetlands.

If gravel fill was subject to wetlands agency jurisdiction in *Taylor* why isn't that same gravel fill in *farm roads, continued on page 5*

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farm roads, continued from page 4

Indian Spring Land Company subject to agency jurisdiction? The Supreme Court explicitly stated there is a difference in the manner of construction. The manner of construction is the same: gravel is used to construct a road.

The Supreme Court could have examined a different phrase in the farming exemption which differentiates between filling of wetlands and filling of watercourses with continual flow. That is, the exemption does not allow within the exemption, filling of wetlands or watercourses with continual flow. Thus, it would seem that filling of watercourses that are not of continual flow could fall within the exemption. If the only resources to be filled with gravel in *Indian Spring Land Company* are vernal pools, perhaps then the gravel fill would fall within the exemption. However, there are too many unknown facts: are the vernal pools surrounded by wetlands? Do the vernal pools have continual flow? Evidently the parties did not make those arguments and the Supreme Court did not rule on that basis. *We cannot read into the Supreme Court decision a reason not supplied by the decision itself.*

What's an agency member to do when faced with a farm road proposal directly related to the farming operation? Those who believe the proposal before the agency is similar to *Taylor* will rely on that case and require the farmer to get a permit. Those who believe the proposal is similar to *Indian Spring Land Company* will rely on that case and find the proposed construction exempt. And both sides will be right . . . at least until the next Supreme Court decision is issued which we can hope will straighten out whether gravel is gravel.

Endnotes

¹ It was issued July 5, 2016. At the time this article was written there was no official citation for the case...this should be available soon

² *Taylor*, 302 Conn. 60, 62-63 (2011).

³ *Taylor*, 302 Conn. 60, 66 n.8 (2011).

Janet P. Brooks practices law in East Berlin. You can read her blog at: www.ctwetlandslaw.com and access prior training materials and articles at: www.attorneyjanetbrooks.com.



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The following is a recap of 2016 environmental legislation by the CT Forest and Parks Association

The “short session” of the 2016 CT General Assembly seemed like it would never end. The 2016 session opened on February 3rd and concluded at midnight on May 4th. However, three special sessions were required in May and June to finish the State’s business on the budget, bonding, the conveyance act, and other lingering issues.

The budget news summarized below was mostly bad (the notable exception being the good news of CEQ surviving elimination); however, there were some significant, positive policy bills which passed that bear mentioning.

Key Bills Passed

Constitutional Amendment to Better Protect Public Lands (S.J. 36). S.J. 36 passed both chambers on the last day of the regular legislative session. This resolution would ensure a public process before state-owned public lands could be sold, swapped, or given away by the General Assembly. Specifically, the General Assembly could not require a State agency to sell, swap, or give away public lands without 1) a public hearing, and 2) a 2/3rd majority vote on a separate bill dedicated to that specific proposed conveyance of public land. Passage of S.J. 36 was an ENORMOUS first step toward better protecting your state lands, but for the constitutional amendment question to be added to the 2018 ballot, the bill must be passed again in the 2017-18 legislative session. Many legislators were wonderfully supportive to make this happen but Senator Kevin Witkos and Representative Roberta Willis deserve extra special mention!

Public Notice of Planned Tree Removals along Municipal Roads (H.B. 5150). Public Act 16-86 requires: 1) utilities to provide a plan for their proposed tree pruning and removals to each town annually by the end of January (towns then have 14 days to make these plans publicly available); 2) utilities must remove or dispose of debris from their authorized vegetation management; and 3) Municipal tree wardens are authorized to post a group of shrubs proposed for removal rather than individual shrubs.

Representatives Mike D’Agostino and James Albis were critical in negotiating this important bill.

Remove Requirement to Pay Sales Tax at Gates to State Parks (H.B. 5627). Public Act 16-72 removes the 6.35% sales tax that had been added to State Park admissions at the end of the 2015 session.

The 2016 Conveyance Act (SB 504) Special Session Public Act No. 1. Although there weren’t any State Park or Forest properties that were given away this year, it is important to note that there were 7 new sections that appeared in the final version of the Conveyance Act that never had a public hearing. Most seemed relatively benign, but one new section renewed a 30-year lease (for \$1/year) of CT DEEP lands in Ridgefield for athletic fields and authorized the town to install lights on that land.

Cuts to Key Environmental Programs

The bonding and budget revisions at the end of the 2016 session made deep cuts to environmental priorities as well as many other programs across state government as part of approximately \$1 billion in cuts. Following are some of the key programs that were impacted:

Community Investment Act (CIA) – which gives grants for farmland preservation, historic preservation, open space protection, and affordable housing projects – had \$1 million swept into the General Fund which was in addition to \$6 million swept in the 2015 Deficit Mitigation Plan as well as the 50% sweep implemented as part of last year’s biennium budget.

Recreational Trails and Greenways – which gives grants through CT DEEP for trail and greenway projects to municipalities and others – was reduced by \$5 million which eliminated all remaining funding for recreational trails in 2017. CFPA, the CT Greenways Council, and others will be working to get this funding restored.

Open Space and Watershed Land Acquisition (OSWA) – which gives grants through CT DEEP to land trusts, municipalities, and water companies to acquire valuable open space properties – was cut by \$7 million.

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Recreation and Natural Heritage Trust (RNHT) – which acquires land for State Parks, Forests, and Wildlife Management Areas – was cut by \$5.75 million.

Farmland Preservation Program (FPP) – which acquires development rights for farms to keep them in farmland – was cut by \$5 million.

Cuts to Environmental State Agencies

CT Department of Energy & Environmental Protection (CT DEEP) – general fund budget was cut by \$7.5 million, representing a cut of over 10% which is resulting in the closure of three campgrounds, shortened seasons, fewer lifeguards and seasonal employees, reduced hours at park museums and nature centers, and less basic maintenance. In addition, the responsibility for maintaining the Old State House was transferred to CT DEEP with inadequate funding and no staff to do the job. This transfer is equivalent to an additional cut to the overburdened, under-resourced agency. The cut to CT DEEP also resulted in the elimination of funding (\$270,000) that provided critical support for the CT Council on Soil and Water Conservation and the Conservation Districts.

CT Council on Environmental Quality (CEQ) – budget was cut by \$12,000, representing a cut in general fund dollars of 6.5%. How CEQ will absorb this cut is unclear, but the great news is that the CEQ was saved from elimination which had been put forward in earlier budget proposals.

Department of Agriculture (DoA) – budget was cut by \$433,000, representing a cut in general fund dollars of 8%.

CT Agricultural Experiment Station (Ag Station) – budget was cut by over \$1 million, representing a cut in general fund dollars of over 12.5%.

Information on these programs and future updates are available on the website of the Connecticut Forest & Park Association (www.ctwoodlands.org). If you haven't already done so, please consider joining CFPA and getting on their helpful email list of events and advocacy alerts. Budget forecasts suggest difficult years ahead, and it will take many active voices at the Capitol to make a difference. 🍂

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CACIWC Annual Meeting Preliminary Agenda

Key Note Program: Legislative Regulatory Panel to discuss upcoming legislative session, including enactment of a state constitutional amendment permanently protecting state parks and forests, and planning for ecologically resilient communities in response to climate change.

In response to your comments from the 2013-2015 meeting surveys, the CACIWC Annual Meeting Committee has selected a new conference facility that will provide renovated banquet and workshop rooms, easily accessible space for display viewing and networking, and delicious food served and prepared by their regional award winning chef. We look forward to having you join us!

For our 2016 Annual Meeting and Environmental Conference, CACIWC will be hosting a legislative regulatory panel during our conference luncheon. This panel will consist of key legislative and regulatory leaders who will discuss expectations for the upcoming legislative session including the ongoing efforts to enact a state constitutional amendment designed to permanently protect state parks and forests. The panel will discuss how our member commissions can plan for more ecologically resilient communities, as we prepare for short- and long-term changes to Connecticut habitats that may come about from global climate change.

Our newly expanded annual conference will include four workshop tracks with topics on conservation

biology & habitat management, legal and regulatory updates & issues, climate adaptation & water management, and resource conservation, planning & development. Individual workshops will focus on invasive plant and animal species, wetlands case law and regulation, vernal pool biology, conducting natural resource inventories, climate resiliency update, improving stormwater management, promoting local recycling efforts, and promoting cluster housing as a conservation tool.

Our new conference venue will also host a revised layout of new and informative displays in an arrangement that will promote open discussions and networking opportunities among our members and other conference attendees.

Watch for and additional conference news along with a detailed listing of the conference workshops and the 2016 registration form and payment link on our www.caciwc.org website. Please direct any questions on our annual conference to us at:

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Dear Friends,

This Summer issue of 2016 will be my last as Editor of *The Habitat*, a decision I made in 2014 after considerable review and thought. I thank you all for 42 years of continued support for CACIWC and *The Habitat*. Your thoughtful comments and suggestions, and dedication to the conservation and wetland work we do has been my inspiration. And yes, being Editor of *The Habitat* has been a source of pride. Thank you!

My editing journey began in 1970 when, as a new conservation commissioner, I volunteered to assist in researching and developing content for the CT Association of Conservation Commissions' (CACC) newsletter. Four years later, after CACC morphed into CACIWC, *The Habitat* emerged as CACIWC's quarterly newsletter with me as Interim Editor. Over the next 20 years CACIWC struggled to maintain the newsletter. Publication cost and limited volunteer time derailed quarterly publication expectations and newsletter consistency; e.g. only two or three issues per year with number of pages six to 16, while others jumped in as Interim Editors.

In 1994 the Editor position was vacant again, and retirement from chasing biological control of the gypsy moth (They're back!) for the U.S. Forest Service beckoned; it was an opportunity to use an inherited teaching gene from Mom, so I went for it. For the next 22 years, in a tag team approach with Ann Letendre, Associate Editor, we developed and edited content for each issue of *The Habitat*; my tenure as Editor would have lasted maybe two years if Ann had not stayed on as Associate Editor. Ann's eye for detail, rough edges and context has been essential for ensuring each issue is ready for publication.

From 1994 through 2005 publishing and mailing costs (stuffing envelopes and mailing labels included) continued to make quarterly publication difficult. Then in 2006 CACIWC's Board of Directors agreed to a standard 16 page newsletter and contracted with Jeff Mills of JM Communications to bring in ads to

help pay for the publication. For the last 10 years a newsletter content of approximately 70% information/education and 30% related ads has worked; quarterly publications have been mostly on time, pleasing both members and commercial sponsors.

CACIWC and *The Habitat* have been fortunate to have supporters who consistently have answered the call for timely articles with legal solutions for commissions. At the top of the list is Attorney Janet Brooks. Janet's column, "Journey to the Legal Horizon," resurrected a Q & A column entitled, "How are Things at Your End of the Swamp," started in 1978 by Attorney Sam Chambliss. Janet's column has appeared in almost every issue since 1994. When it is not there I hear about it. Others who have never said no (given enough lead time) are Attorney Mark Branse for administrative and land use issues and Darcy Winther, DEEP, for Inland Wetland topics. Until about 5 years ago DEEP (formally DEP) staff could always be counted on to provide articles on leading edge topics they were working on; budget cuts have constrained time available for that kind of support. DEEP needs your support!

And, speaking of supporters, you, our readers, have always stepped up. In survey after survey during *The Habitat's* existence you have shown support for continued publication. That has been rewarding and inspiring. Thank you so much.

Finally, the reason for "stepping away," but not to disappear, is to resurrect my forestry training, spending more time on the critical stewardship side of land conservation on Westbrook's 500 acres of protected Open Space and one island, managed by the Conservation Commission. The town's ability to acquire and protect the majority of these critical watershed lands can be directly linked to the successful advocacy for state land conservation funding by organizations like CACIWC.

Thank You!

Tom ODell 

Managing Blue-green Algae in Ponds and Lakes

From *DEEP Pollution Prevention*, July 2016

Cyanobacteria, also called blue-green algae, are an important part of the natural life cycle of rivers and lakes. They are the base of their ecosystem's food chain and, through photosynthesis, produce oxygen that the other organisms in the lake depend on.

However too much algae can cause problems. Algal blooms have become more frequent as a result of eutrophication, when an excess of nutrients in the lake causes an explosion of algae growth. Blooms can cover large sections of the water's surface, blocking sunlight from bottom dwelling plants. These plants can no longer produce oxygen or food, and as they die and decay actually use up more oxygen from the water. Decomposition of the algae also decreases oxygen levels which can cause die-offs of plants, fish, and other aquatic organisms. Climate change is contributing to the increased frequency of algal blooms as well.

Cyanobacteria have also been known to form Harmful Algal Blooms, or HABs, as certain types can produce toxins that are unsafe in high quantities. Though the National Ocean Service estimates that less than one percent of algal blooms are HABs, it is difficult to determine whether a bloom is harmful just by looking at it.

Frequently, communities and lake associations don't have the resources to determine if an algal bloom is toxic or not. Because of that, many lakes, ponds, and beaches may be closed if an algal bloom has grown big enough to be a possible risk. Once a bloom occurs, there is not much that can be done to easily get rid of it.

Excess nutrients that can cause a bloom find their way into the water from runoff carrying fertilizers, animal waste, and seepage from failing septic systems. The good news is that you can help to prevent algal blooms by maintaining your property in an environmentally-sound way.

One of the major nutrients contributing to algal blooms is phosphorous, often found in commercial fertilizers. In Connecticut, it is against the law to use a fertilizer containing phosphorous unless you are establishing new grass, or a test was done on the soil confirming it lacks phosphorous. As a general rule, don't fertilize your yard if you are expecting a heavy rainfall and leave a buffer zone between the fertilized ground and the water's edge if you live on a stream, river, or lake. Follow the instructions on your fertilizer and don't over-fertilize your garden or lawn — less is more! Lawn clippings left behind after mowing can reduce the need to fertilize your lawn, but can also be washed into storm drains and surface water, so try not to mow your lawn before a rainstorm. Taking care of your septic system and throwing your pet's waste in the trash will also help to reduce nitrogen, another nutrient that contributes to algal blooms.

If you do notice an algal bloom in your area, you should call your local health department to report it. Algal blooms can make the water appear cloudy or thick, like pea soup. They can also form a mat of scum or foam on the water's surface as if someone had spilled paint in it. It is best to avoid entering the water until the proper authorities have investigated the bloom. Don't let your dogs drink from the water, or any nearby connecting streams if you are unsure if the bloom is a HAB. And be sure to pay attention to any warning signs. For more information, visit www.ct.gov/deep/bluegreenalgae.

Guidance for Local Health Departments

The Connecticut Department of Public Health and DEEP, in collaboration with the Connecticut Association of Directors of Health, have produced "guidance for local health officials regarding blue-green algae blooms." This document outlines the rationale for a response and presents a plan for surveillance and intervention designed to protect the public's health at lakes or ponds used for recreation. (www.ct.gov/dph/lib/dph/environmental_health/eoha/pdf/071316_blue_green_algae_2016.pdf) 

invasive, continued from page 1

are solely dependent on one type of native plant for their existence and cannot simply adapt by moving onto a new invader in their community. Mechanical, chemical, and biological control efforts for invasive plants are on the increase and are often focused on a local level, as volunteers participate in managing these invaders in open space parcels and other public properties.

Approximately 85% of the woody species (trees, shrubs, and vines) that are now considered invasive were intentionally introduced as plants for landscapes. Some familiar examples are Japanese barberry, winged euonymus (also known as burning bush), Norway maple, multiflora rose, and autumn olive. Although many of the introductions were well-intentioned for conservation purposes, erosion control, or gardening enjoyment, these non-native plants escaped from a cultivated setting and became naturalized in minimally managed habitats, thriving on their own without human assistance. Forest invaders such as garlic mustard and Japanese stilt grass aggressively overtake wildflowers and other native vegetation, reducing species diversity and making these natural areas so enjoyed by hikers and nature lovers less suitable for wildlife. A walk in the woods is often all that's needed to witness the impact these invaders are making to our natural areas.

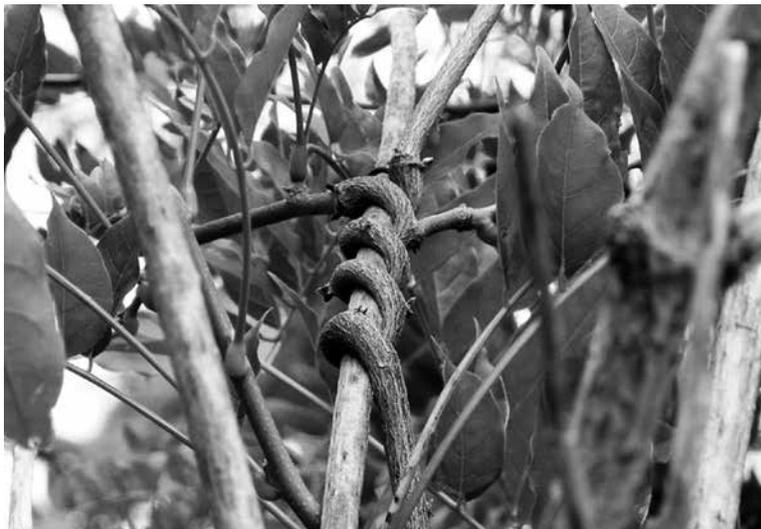


Figure 2. Bittersweet vine wrapping around a tree. (Photo by Donna Ellis)



Figure 3. Oriental Bittersweet vines grow tightly around desirable trees, causing severe injury and competition for sunlight. (Photo by Donna Ellis)

How do we reduce the harmful environmental impacts of woodland invasive plant species? Let's talk about one of the most troublesome woodland invaders, Oriental bittersweet (*Celastrus orbiculatus*),

also known as Asiatic bittersweet. Oriental bittersweet was first confirmed in Connecticut in 1916 and today can be found in all towns statewide. Originally from Eastern Asia, this species was first introduced in the US in the 1860s as an ornamental.

The woody vines of Oriental bittersweet, with reddish-orange

roots begin as small, sometimes unnoticeable seedlings in the forest understory. Within several years,

if their growth is undetected the young vines will develop from a tangled mass growing along the forest floor (Figure 1) to wrap around desirable vegetation: trees and shrubs, or any other vertical structure they encounter (Figures 2 and 3). The alternate leaves of Oriental bittersweet are rounded (orbicular; as described by the genus), with fine teeth or serrations along the edges. Clusters of small greenish flowers are produced on female vines in May, followed by the development of red, succulent fruits (ovaries) enclosed in a yellow covering (the ovary wall) that splits open when fruits mature (Figures 4 and 5). The fruits consist of three

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fleshy arils encasing several seeds each. Oriental bittersweet fruits are fed upon by birds and other wildlife in the fall and winter, and the seeds disperse to new locations with the movement of wildlife.

Is there a native bittersweet? The answer is both “Yes” and “No”. Native American bittersweet (*Celastrus scandens*) was much more abundant in Connecticut years ago, but it has primarily been outcompeted by the aggressive growth of the non-native Oriental bittersweet. Native bittersweet fruits only develop at the ends of the vines and the

ovary walls are more orange in color, in contrast to the fruit clusters of Oriental bittersweet that develop all along the leaf axils, resulting in higher numbers of fruits and seeds being produced. To make matters worse, scientists have reported hybridization of native and non-native bittersweet, further reducing populations of the native species.

How can Oriental bittersweet be successfully controlled? There are several options for management of this invasive, with the greatest successes occurring when control begins early and woodlands are monitored for several years. Learn to recognize what young seedlings look like (Figure 6), and they can be easily hand pulled during the first year or two of growth.

I make a point of walking through the wooded sections of my property several times during the summer and fall and pull up Oriental bittersweet seedlings, which I typically find under conifers and other trees where birds roost. If vines have been growing unde-

tected for many years and you have dense, woody vines wrapped around desirable vegetation, cut a section of the vine (several inches in length) in late summer to early fall, separating the top growth from the crown and roots.

This mechanical control method will stress the vines and force the plants to use up food reserves in the roots to develop more shoots, and the top growth will die and slowly break down. You will need to continue to cut any re-growth that forms from the crown for several years, but if this method is practiced diligently it can be successful.

A chemical control option is the “Cut and Paint” method, which should also be done in late summer to early fall. Make a similar cut in the vine as described above, and within 20 to 30 minutes, carefully apply a concentrated herbicide (triclopyr products are most effective with woody invasives) to the lower cut surface with a paint

brush or other applicator, reading and following all directions on the herbicide label. Avoid making herbicide applications on rainy or windy days, and be sure to avoid herbicide runoff onto the forest floor or onto non-target vegetation. Monitor control sites the following year, and if necessary, repeat the Cut and Paint procedure.

Visit the Connecticut Invasive Plant Working Group (CIPWG)

website (www.cipwg.uconn.edu) for information on invasive plant topics that include identification, management, the Connecticut state list of invasive plants, a photo notebook with a gallery of invasives,

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Figure 4. Fruits of Oriental bittersweet on mature vines. (Photo by Les Mehrhoff)



Figure 5. Oriental bittersweet fruit. (Photo by Les Mehrhoff)



Figure 6. Oriental bittersweet seedling growing through a sidewalk crack. (Photo by Donna Ellis)

Non-invasive alternative plants, legislative updates, and a calendar listing invasive plant management events and other outreach activities. CIPWG is a consortium of individuals, members of environmental organizations, and affiliates of municipal and state agencies whose mission is to promote awareness of invasive plants and their non-invasive alternatives. Formed in 1997 as an ad-hoc group, CIPWG is now in its 20th year of operation. The working group meets several times per year to collaborate and share information on the presence, distribution, ecological impacts, and management of invasive plants affecting Connecticut and the region and to promote uses of native and other non-invasive ornamental alternatives. CIPWG members include federal, state, and town agency staff, non-governmental organizations, researchers, nursery growers, educators, master gardeners, and interested citizens. Since 2002, CIPWG has hosted biennial invasive plant symposia. The eighth symposium will be held on October 11, 2016 at the UConn Student Union in Storrs, CT. Previous symposia have attracted up to 500 attendees. New members are welcomed; visit the website to join the CIPWG list serve.

This article originally appeared in the Eastern Connecticut Forest Landowners Association/Wolf Den Land Trust Newsletter. 🌿




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CACIWC news, continued from page 2

While many people have served on the CACIWC Board of Directors or worked on publication of *The Habitat* during the last four plus decades, no one person has contributed more to its success than Tom ODell. In addition to serving as our President and Executive Director, Tom's long service as Editor has perhaps influenced more CACIWC members during its 42 year run than any other aspect of our education and outreach efforts. It is with great reluctance, but with profound gratitude, that the CACIWC Board of Directors has accepted the resignation of Tom ODell as Editor of *The Habitat*. Starting with the Fall 2016 issue, Tom's duties will be carried out by Associate Editor Ann Letendre, CACIWC Advertising and Development Coordinator Jeff Mills, and a newly expanded Habitat Advisory Committee. While this is Tom's last issue as editor, we know that his many and ongoing contributions to both state and local conservation efforts will continue to influence CACIWC and all of you...thank you and best wishes Tom!

In other news:

1. The CACIWC Board of Directors and its Annual Meeting Committee are very pleased to announce a great new venue and expanded program for our 39th Annual Meeting and Environmental Conference, scheduled for Saturday, November 12, 2016; please save the date! We are excited to announce this year's conference will be hosted by the Sheraton Hartford South Hotel in Rocky Hill. This upgraded facility, with food service provided by its award-winning Chef will provide a fresh new setting for our conference. The CACIWC Annual Meeting Committee was reluctantly forced to raise the registration fee in each category by \$10 to partially cover the costs of organizing this event which have increased each year during the past decade. However, the committee will continue to offer a \$15 discount for commissioner and staff of member commissions in good standing. We have provided an additional description of the conference in this issue of *The Habitat*. Watch for and additional conference news along with a detailed listing of the conference workshops and the 2016 registration form and payment link on our www.caciwc.org website.

2. The CACIWC Board of Directors has decided to maintain the fee structure for our 2016-17 membership dues and expresses its thanks to the commissions who

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have already paid their dues. A copy of the new membership form and additional information has also been placed on our website: www.caciwc.org. Our website also provides a description of additional individual and business membership categories you or your company can use to provide additional support to CACIWC. We will very much appreciate any additional contributions that you can provide to support various CACIWC programs including our Annual Meeting, educational materials, and future issues of *The Habitat*.

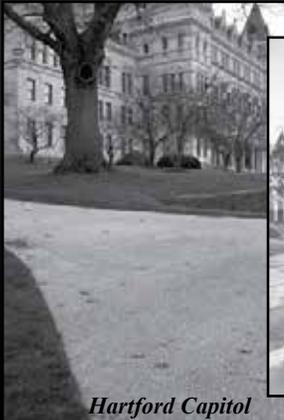
3. Improved membership communication is an important goal of our strategic plan. Our Membership Coordinator & Database Manager Janice Fournier extends her thanks to all of you who provided us with your email address during our 2015 annual meeting. These improved communications will include an expanded listserv and website-based systems. Janice has been in touch with many of you to confirm contact information and your interest in being included in our expanded ListServ. This ListServ will be used to quickly send you important messages on emerging topics of interest including education and training opportunities along with emerging state budget and legislative issues.

4. Although we have received several inquiries, several CACIWC board vacancies remain unfilled (please see the updated list in this issue of *The Habitat* and on www.caciwc.org). Please submit your name to us at board@caciwc.org if you are interested in serving as the New London or Windham County representative, one of the vacant alternate county representatives, or as one of the alternate-at-large representative positions.

The 2016-17 budget period will be a year of many changes and challenges for CACIWC and *The Habitat*. We will continue to strive to bring you a high level publication, annual conference workshops and other education and outreach efforts. Please do not hesitate to contact us via email at board@caciwc.org if you have questions or comments on any of the above items or if you have other questions of your board of directors. We again extend our thanks for your ongoing efforts to protect wetlands and other important habitats within your town and for Tom O'Dell's decades of service to CACIWC!

Alan J. Siniscalchi, President

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Plan and Plant a Pollinator Habitat in a Community Protected Open Space

Public Act No. 16-17, An Act Concerning Pollinator Health, passed by the CT General Assembly, and signed by Governor Malloy, establishes numerous requirements related to pollinator health and habitat. Under the act, a “neonicotinoid” is a pesticide that selectively acts on an organism's nicotinic acetylcholine receptors (i. e. impacts the nervous system).

Requirements under P.A. No. 16-17 include:

- **No person shall apply any neonicotinoid** that is labeled for treating plants to any plant when such plant bears blossoms unless such plant is grown in a greenhouse that is inaccessible to pollinators and such application is consistent with best management strategies for growing annuals, perennials, trees and shrubs that will be safe for pollinators after they are purchased and planted.
- Not later than January 1, 2017, the Commissioner of Agriculture, in collaboration with the Connecticut Agricultural Experiment Station and the Department of Energy and Environmental Protection, **shall develop best practices for minimizing the airborne liberation of neonicotinoid insecticide dust from treated seeds and mitigating the effects of such dust on pollinators.**
- Not later than January 1, 2017, the Connecticut Agricultural Experiment Station **shall compile a citizen’s guide to model pollinator habitat** that shall be made available on the Internet web site of such agency. Such guide shall include, but not be limited to: (1) Clearly stated information and steps to take for the establishment of a succession of flowers, wildflowers, vegetables, weeds, herbs, ornamental plants, cover crops and legume species to attract honey bees and other pollinators, provided such information shall include, but not be limited to, suggested groupings or clumpings of such plantings to establish a long season of continuous bloom for such plantings; and (2) information on how to protect important nesting sites for honey bees and other pollinators.
- Requires model pollinator habitat in any conservation plan CT Department of Agriculture requires as part of its farm preservation programs.
- Requires the Department of Energy and Environmental Protection (DEEP) commissioner to classify certain neonicotinoids as “restricted use” pesticides. 🌿