



Invasive Plants Council

Twelfth Annual Report

December 16, 2014

*Cover: Yellow iris (Iris pseudacorus), an invasive plant.
Photo credit: Logan Senack, UConn*

INVASIVE PLANTS COUNCIL
TWELFTH Annual Report
December 16, 2014

The Honorable Edward Meyer
State of Connecticut Senate
Legislative Office Building, Room 3200
Hartford, CT 06106

The Honorable Linda Gentile
State of Connecticut House of Representatives
Legislative Office Building, Room 2100
Hartford, CT 06106

Dear Senator Meyer, Representative Gentile, and members of the Environment Committee:

As Invasive Plants Council Chairman, I respectfully submit this report for activities conducted during 2014. This Council was established 2003 and operates pursuant to Connecticut General Statutes §22a-381 through §22a-381d, and is responsible for developing programs and materials to educate the public as to the problems associated with invasive plants, developing recommendations for controlling and abating their spread, updating and publishing the invasive plant list, supporting agencies charged with conducting research into the control of invasive plant species, supporting the development of new non-invasive plant varieties, and making recommendations to the General Assembly for the prohibition of any plant determined to be invasive.

The position of Invasive Plant Coordinator is vital to the mission of the Council. The Coordinator conducts critical outreach education and training, manages prevention and control initiatives, and provides the essential administrative support that enables the Council to meet its mandated responsibilities. These activities make it possible for communities and agencies across Connecticut to leverage limited resources and coordinate significant volunteer efforts to address invasive plant problems that threaten the environmental health and use of both public and private lands including lakes, rivers, and forests (see attached *Summary of Activities and Accomplishments* for evidence of impacts associated with Connecticut IPC programs).

The legislature did not appropriate a specified funding line for the Coordinator in FY15 creating uncertainty for continued staffing. In the past, funding was appropriated to the DoAg or DEEP for the specific purpose of supporting essential operating expenses and the salary of the Coordinator at UConn. While a return to previous Invasive Plant Council funding levels (\$500K/yr prior to 2010) is unrealistic, we respectfully request a designated and identifiable line-item appropriation for FY16 totaling \$90,000 per year in support of the key "keep-alive" functions of the Coordinator. This funding is absolutely essential if the State wishes to actively address the complex environmental and public policy issues associated with invasive plants.

In the U.S. total annual costs directly attributed to control of or loss and damage from invasive plants exceeded \$34 billion (Pimentel et al., Ecological Economics 2005), with another \$43.7 billion linked to plant-specific invasive pests and microbes. In Connecticut, invasive plants continue to cause environmental damage, raising evermore requests from land holders and managers for advice and solutions for controlling these problematic, non-native species. Since removal of invasive species from natural areas is so costly, the state is best served by programs that prevent future invasions through education and training, and that direct resources to targeted eradication campaigns. Prevention and early detection along with public education and training have proven critical to the most efficient, timely, and effective responses to emerging invasions and merit increased emphasis.

Over the past 12 years, the DEEP, CAES and DoAg have taken up the charge of responding to invasive plant issues by utilizing the resources and networks that the Council provides. That said, funding the State Coordinator position remains our top priority for FY16. I and other Council members are available to answer questions and provide advice as needed. A PDF version of the full report can be found at cipwg.uconn.edu/ipc-annual-reports/. Feel free to contact me at (860) 486-2925 if questions arise.

Sincerely,
Chairman
Richard McAvoy

Summary of Activities and Accomplishments

The Council, acting through the Invasive Plant Coordinator, had a very productive year in 2014. The following is a summary of the impacts associated with activities that were supported by the Invasive Plants Council, or the Coordinator in conjunction with partner groups and agencies including: Department of Agriculture (DoAg), Department of Energy and Environmental Protection (DEEP), University of Connecticut (UConn) and the College of Agriculture, Health and Natural Resources (CAHNR), The Connecticut Agricultural Experiment Station (CAES), Connecticut Invasive Plant Working Group (CIPWG), Connecticut Nursery & Landscape Association (CNLA), The Connecticut Federation of Lakes, The Nature Conservancy (TNC), local groups and municipalities, and land and lake alliance groups.

- Provided over **73,200** Connecticut business owners and citizens with information about invasive plants through educational outreach at industry trade conferences, public symposia, and community and municipality meetings. Outreach tables included tri-fold poster displays, live plant specimens, handouts, guides, and other resources. See Activities and Accomplishments, pages 42 – 45 for details.
- Provided over **30,000** citizens with invasive plant information via website presence, list serve posting, newsletter messaging, direct mailing, and in response to direct inquiries. See Activities and Accomplishments, page 45 for details.
- Provided or supported conferences and training workshops for **160** Department of Transportation (DOT) workers and over **1,800** Connecticut citizens, who received more than **5,000** hours of training through direct teaching and presentations on invasive plants. See Activities and Accomplishments, pages 45 – 49 for details.
- Supported programs that provided over **700** hours of volunteer and state agency efforts to control and mitigate invasive plants on CT public lands and waters. These programs were led by state and local organizations and land trust associations. See Activities and Accomplishments, page 49 for details.
- Assisted in the review and selection of proposals to be awarded **\$150,000** in DEEP grant funding for aquatic invasive plant management. The selected municipalities contributed over **\$185,000** in matching funds. See Activities and Accomplishments, pages 50 – 51 for details.
- Assisted and supported state agencies and municipalities by providing information about invasive plants and the associated laws, support on grant programs, and research collaboration. See Activities and Accomplishments, page 51 for details.
- Provided administrative support needed for the legislatively-appointed Invasive Plants Council (IPC) in executing the Council's state mandated missions. See Activities and Accomplishments, page 52 for details.
- Assisted in the development of a forum hosted by the Environment Committee and sponsored by Senator Clark Chapin entitled "Aquatic Invasive Presentation and Panel Discussion" (January 28, Legislative Office Building, Hartford). See Activities and Accomplishments, pages 52 – 53 for details.

Attachments:

1. Council Members
2. Minutes of Meetings
3. 2014 Revised Invasive Plant List
4. Activities and Accomplishments
5. University of Connecticut, College of Agriculture, Health and Natural Resources Report
6. Department of Energy and Environmental Protection Invasive Plant Program Report
7. Connecticut Agricultural Experiment Station Report
8. Connecticut Invasive Plant Working Group Report
9. Invasive Plant Atlas of New England Report
10. Department of Agriculture Letter
11. Connecticut Nursery and Landscape Association Letter
12. Appendices

1. Council Members

INVASIVE PLANTS COUNCIL MEMBERSHIP

November 2014

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Mr. Tom McGowan
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Dr. John Silander, Jr.
Principle Investigator, IPANE project
Research Professor, Ecology and
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The Council

The Council consists of nine members representing government, the nursery industry, scientists, and environmental groups. Dr. Richard McAvoy, Head of the Department of Plant Science and Landscape Architecture at the University of Connecticut College of Agriculture, Health and Natural Resources, is serving as the current Chairman of the Council. He assumed the chairmanship of the council from William Hyatt, Chief of the Bureau of Natural Resources at the Department of Energy and Environmental Protection (DEEP), in October 2014. Dave Goodwin, General Manager at Planters' Choice Nursery, the presiding Vice Chairman of the Council, has submitted notice that he is resigning from the Council (Nov. 2014). In accordance with statute Mr. Goodwin was appointed by the minority leader of the House of Representatives as a representative of a company that grows or sells flowers and plants. There was one change in membership during the year as Dr. Ted Andreadis, Director of The Connecticut Agricultural Experiment Station, replaced Dr. Jeff Ward as the CAES representative to the council. A list of all Council members can be found on page 7.

The council experienced one other important change in leadership in 2014 when Mr. Logan Senack, the Connecticut Invasive Plant Coordinator left this position in August and was succeeded by Ms. Nicole Gabelman on October 30, 2014. This position is supported on a durational basis through June of 2015 pending continued funding from the Connecticut legislature.

November 11, 2014

David Goodwin
149 Schroback Road
Plymouth, CT 06782

Dr. Richard McAvoy
Chair Connecticut Invasive Plant Council
Professor and Head Department of Plant Science
and Landscape Architecture
University of Connecticut
Box 4163
1376 Storrs Road
Storrs, CT 06269

Dear Dr. McAvoy,

I recently accepted a new position with a company in Florida and will be relocating to Florida on December 1, 2014. Therefore, I regret to inform you that I will be resigning from the Connecticut Invasive Plant Council and as its' vice chair as of today. I have enjoyed serving on the council and I am grateful that I was a member of the Connecticut Invasive Plant Council since its inception. I wish you and the other members only the best in continuing your good work.

Sincerely

David Goodwin

December 15, 2014

Mr. David Goodwin
149 Schroback Rd
Plymouth, CT 06782

Dear Dave,

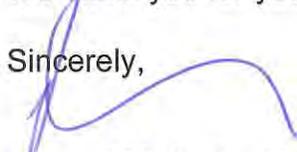
On behalf of the Invasive Plants Council I wish to thank you for the many years of service that you have dedicated to the council since its inception in 2003.

As a representative of a company that grows or sells flowers and plants in Connecticut you brought an important balance to the council through your ability to provide the business perspective to council considerations and actions.

Your appointment to the council by the Minority Leader of the House of Representatives was both timely and informative, and your leadership as Vice Chairman will be missed.

We thank you for your service and wish you continued success in your new position.

Sincerely,



Richard McAvoy, Chairman
Invasive Plants Council

CC. Larry Cafero, State of Connecticut House of Representatives

2. Minutes of Meetings

MINUTES

Invasive Plants Council
Tuesday, Oct. 29, 2013
2 pm, Dept. of Agriculture G8-A
Hartford, CT

Council members present: Bill Hyatt, Paul Larson, Rich McAvoy, Tom McGowan, John Silander, Dave Sutherland, Jeff Ward, Katherine Winslow

Others present: Ted Andreadis, David Boomer, Nancy Murray, Logan Senack, Penni Sharp

1. Hyatt called the meeting to order at 2:04 pm.

2. The minutes for the 9/17/13 meeting were reviewed.

Larson provided a suggested change: in section 9, change last sentence to read “DoAg plans to work on a form for reporting invasives at pet stores”. Silander moved (second: Sutherland) to approve the minutes as corrected. **The Council decided to approve the minutes with the correction.** Larson abstained since he was not present at the last meeting.

3. Annual report cover letter discussion and approval

The group discussed the annual report cover letter. Edits and suggested inclusions and attachments were discussed. Winslow requested the opportunity to review attachments prior to approving the cover letter (*see sect. 4b below for resulting process*). The use of the term “cover letter” to represent the material being provided in the first part of the annual report was discussed. The group discussed various options for arranging and describing the material and Silander proposed calling it an “executive summary”. Senack added that the letter itself, independently of the attachments submitted by the agencies, should fulfill the requirement of reporting annually to the Legislature. The attachments are supplementary additional material. Silander (second: Larson) moved to approve the annual report/executive summary as edited and to authorize the Chair to make changes over the next few weeks with input from the Council. **The Council voted unanimously to approve the annual report/executive summary as edited and to authorize the Chair to make changes over the next few weeks with input from the Council.**

4. Annual report deliverables and deadlines (Hyatt/Senack)

a. Materials from DEEP, CAES, DoAg, UConn, and others

Hyatt noted that all members should consider including brief, summary material from their organizations as attachments in the annual report. In past years, related groups have also submitted relevant information for inclusion in the annual report. The Connecticut Invasive Plant Working Group is likely to submit an attachment as in previous years. Invasive Plant Coordinator accomplishments will also be included.

b. Deadline and production schedule

Senack requested that all incoming materials be submitted to him via email by November 12, 2013 so they can be included in the report. Submissions may still be added through November 15, but there will not be time to edit or format them. The final reports will be submitted mostly electronically this year, but some paper copies will be available.

Tom McGowan arrived at 2:14 pm.

MINUTES

5. Mugwort (*Artemisia vulgaris*) invasive status (Ward/Senack)

Ward and Senack presented information about mugwort seed production to the group. Larson noted that mugwort was one of a handful of plants that are problematic nursery contaminants. This could cause enforcement issues if mugwort was to be prohibited from sale. Ward clarified that he was proposing that the Council change the status of mugwort to invasive but is not recommending that the species be prohibited by statute. McGowan added that there should be discussion over what would qualify as inadvertent spread in the future, including spread as it relates to aquatic invasives and inadvertent sales of contaminants in nursery pots. Silander moved (second: Andreadis) to change the status of mugwort (*Artemisia vulgaris*) from “potentially invasive” to “invasive”. **The Council voted unanimously to change the status of mugwort (*Artemisia vulgaris*) from “potentially invasive” to “invasive”.**

6. Early detection/watch list discussion (Senack)

Senack is developing a list of plants for which more information is desired. This would not be a “pre-invasive” list or a legal or regulatory document. It would be a list of species for which more information would be helpful because current status in Connecticut is unknown, unclear, or not very detailed. Senack will share the list at a future meeting.

7. Yearly update of invasive plant list (Senack)

Senack noted that a few non-substantive typos had been found on the current plant list. Senack also proposed other minor updates such as adding additional synonyms for certain listed species. Larson moved (second: Sutherland) to allow Senack to make the changes as suggested. **The Council voted unanimously to allow Senack to make the changes as suggested.**

8. Update on Coordinator activities (Senack)

a. Reported invasive plant violations

Senack reported that he had received three reports of new invasive plant sale issues:

- i. sales of Oriental bittersweet (*Celastrus orbiculatus*) at a flea market in the state
- ii. sales of Oriental bittersweet (*Celastrus orbiculatus*) in the state via the website craigslist.com
- iii. a discussion proposing cultivation of autumn olive (*Elaeagnus umbellata*). Senack provided this reporter with information about the invasive plant laws, which prohibit cultivation of any prohibited species, including autumn olive.

Senack also reported these instances to DEEP, which will follow up as appropriate.

9. Follow-up on cultivar issues (Hyatt)

Hyatt reminded the group of the history of the cultivar issues in Connecticut. After DEEP’s legal determination, discussed at the last meeting, DEEP brought this topic to the Attorney General’s Office for review. The Attorney General’s Office was not ready to take up this issue at the time, but requested scientific and technical information about cultivars from DEEP to help inform the discussion.

Additionally, DEEP has instances reported by the Coordinator of sales involving cultivars of species that are prohibited from sale by statute. Hyatt noted that DEEP continues to do everything possible to encourage voluntary compliance, and reported that DEEP plans to continue in this manner regardless of any legal determinations made in the future. Hyatt noted that there was a good record of voluntary compliance with DEEP working with the Connecticut

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Nursery and Landscape Association (CNLA). Hyatt and Silander plan to meet in the future to discuss this issue and the development of technical information for the Attorney General's Office.

Larson noted that other states are also working on this issue. A colleague in Ohio reported that Ohio is working on a mechanism by which industry people could submit a cultivar to authorities for specific testing and there is work ongoing in other states. Hyatt noted that the IPC had reviewed a proposal that would establish a path whereby safe cultivars of prohibited species could be approved by regulation. This would allow cultivars to be addressed without frequent changes to the state statutes. Hyatt reported that New York is also investigating how to address cultivars. Silander asked who would pay for the research into individual cultivars. Hyatt suggested that the industry would pay via academics for research. Andreadis stated that cultivars should be evaluated on their own merits, according to the criteria already provided. McAvoy remarked that if the only transmission of a given plant was by seed and a cultivar that made no seed was developed, this could end up a clear cut issue. Otherwise, there would be other factors to consider. Silander commented that some cultivars were also known to revert back to the parent type and this should be considered as well. Senack noted that a group from New York assessed the similarities between the plant lists of NY, MA, and CT, which each use different criteria, and found that the lists had significant overlap of plants that were found to be invasive by all three systems. The group discussed a number of other topics on this issue, including where the burden of proof should lie, methods of calculating the likelihood of spread of a particular plant, and the potential for reciprocity with other states regarding the status of cultivars.

10. The group welcomed Ted Andreadis, the new Director of the Connecticut Agricultural Experiment Station.*

11. Preparations for coordinating inspections with DoAg and DEEP

a. Status

Senack is developing informational handouts detailing the invasive plant laws for inspectors at pet shops and nurseries, and is working with Greg Bugbee (CAES) to plan a training session for pet shop inspectors which will include live plant specimens.

b. Expected timeline

Hyatt recapped the history of the inspection coordination issue between agencies for the upcoming year. Discussions between Hyatt, Senack, and staff from CAES and DoAg in June 2013 indicated that tighter coordination on the scheduling of the inspections may not be possible, as many inspections are unannounced, not scheduled, and fit into inspectors' schedules as time allows. However, it may be possible to coordinate joint inspections during slower times of year. The agencies will increase communication on the issue. The refresher training for pet shop inspectors will likely take place in late winter or early spring.

12. Meeting schedule for remainder of year and discussion

The last Invasive Plants Council meeting in 2013 is scheduled for December 10, 2013.

**Follow-up note (added 11/7/13):* Andreadis plans to attend with Ward for the few next meetings. – LS

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13. New Business

a. Aquatic invasives funding

McGowan reported that he met with Senator Chapin to discuss additional funds to help address aquatic invasives gaining access to lakes via boat launches. In previous years, specific fees from boat registrations had been distributed to municipalities. That program ended in 2009. McGowan detailed a proposal that would direct a portion of these funds to DEEP for boat inspectors at boat launches. Hyatt reported that DEEP provided supplemental information in response to a request from Senator Chapin. DEEP's response to Senator Chapin included a proposal that funds would be used to cover inspectors at boat launches, rapid response to new invasives, and to support a grant program to municipalities for invasive aquatic plant control.

b. Legislative info session

The group discussed the possibility of holding a legislative information session for legislators at a future date.

c. Prioritizing prevention of spread

Sutherland reminded the group that it is easier to prevent invasions, especially in aquatic situations, than it is to control invasive plants once established. Senack added that it is also more cost effective to address problems earlier when invasive plant populations are smaller or not yet present than it is once plants become established. Silander noted that in western states, there is much greater investment in both terrestrial and aquatic invasive plant issues. The group may discuss this issue in the future.

d. Meeting schedule for 2014

Senack will prepare a meeting schedule for 2014 based on the 2013 meeting frequency and will provide it at the next meeting.

e. Election of Chair

Senack reminded the group that the Invasive Plants Council must annually elect a Chair, and the Chair's current term ends on Dec. 31, 2013. A new Chair will need to be elected at the next meeting for the upcoming 2014 calendar year.

f. Advance meeting quorum procedure change

Instead of contacting each member to assemble planned attendance prior to each meeting, Senack asked that members contact him instead if they do not plan on attending a meeting. This is needed to ensure that there will be a quorum at meetings.

14. Adjournment

Larson moved (second: Sutherland) to adjourn the meeting. **The Council decided to adjourn at 3:54 pm.**

The next meeting is scheduled for Tuesday, Dec. 10, 2013, 2-4 pm, in room G8-A at the Department of Agriculture in Hartford, CT.

SPECIAL MEETING

Invasive Plants Council
Tuesday, January 7, 2014
2 pm, Dept. of Agriculture G8-A
Hartford, CT

Council members present: Ted Andreadis, David Goodwin, Bill Hyatt, Paul Larson, Tom McGowan, John Silander, Katherine Winslow

Others present: Ellen Bender, Donna Ellis, Nancy Murray, Logan Senack, Jeff Ward, Brad Weeks

1. Hyatt called the meeting to order at 2:04 pm.

2. The minutes for the 10/29/13 meeting were reviewed.

A typo was noted and corrected: on page 4, section 13 c, change misspelled word to “noted” in the fourth line. **Silander moved (second: Andreadis) to approve the minutes with the correction. The Council decided to approve the minutes with the correction.**

3. Annual report approval and release date

Senack and Hyatt have discussed turning the cover letter into an executive summary in future years. This would make the material more accessible and more readable. The report could be streamlined, shorter, and the main document will be an executive summary with 3-5 bullet points on future issues. Council members expressed support for the idea.

Senack reported on the results of the email vote held by the Council in December to approve the 2013 Invasive Plants Council (IPC) annual report. The vote was unanimous (9-0) in approving the report for release and distribution. Senack delivered copies of the report to the state library. Other copies were emailed to the appropriate offices as the report is now distributed mostly electronically. The report is also available online at www.cipwg.uconn.edu/ipc.

4. Legislative plan for 2014

The group discussed the legislative plan for 2014. McGowan reported that Senator Clark Chapin has reviewed material from the CT Agricultural Experiment Station (CAES) about aquatic invasive plants and has been involved in aquatic invasive issues. The Chairs of the Environment Committee have agreed to host a meeting of the committee on Jan. 28, 2014. Greg Bugbee from CAES will provide information on aquatic invasives. The meeting will take place on Tuesday, Jan 28, 2014, at 1 pm in the Legislative Office Building in Hartford. Hyatt added that Senator Chapin had subsequently contacted DEEP for more information. Larson arrived at 2:13 pm.

Murray reported that DEEP has developed a request for proposals for companies that will work on eradication of nuisance aquatic wildlife. This will standardize the cost of control of aquatic invasives and speed up response by having a list of pre-approved contractors ready. Towns will also be able to use their own funds to hire a contractor on the list.

SPECIAL MEETING

McGowan asked that the Council put together a priority list of actions for aquatic invasives. McGowan moved (second: Silander) to authorize Hyatt to speak on behalf of the IPC at the Jan. 28 meeting. The Council discussed potential priorities for the meeting. Three priorities of the Council on the 28th for aquatic invasives will be: 1. improved boating inspections, 2. rapid response funds, 3. additional funding for research into control methods, vector studies, early detection, new research, etc. The Council decided to approve the motion.

Silander noted that keeping the Coordinator funding is important and should remain the Council's top priority. Goodwin added that a strong focus on direct, specific issues at the meeting would be beneficial. Winslow asked if Senack could assemble material relating to potential funding needs statewide and share it with the IPC. Hyatt suggested Senack prepare a document for a long-term (longer than 1 year) plan for future meetings of the IPC and of invasive plant needs. Senack will begin work on the document.

Hyatt reported that the Council on Environmental Quality (CEQ) held a hearing in November that included comments on bamboo. The CEQ also met on Dec. 18, 2013 and discussed bamboo further. Senack will send out the CEQ meeting minutes to the group. Hyatt has responded to requests from the legislature about why bamboo was not listed as invasive. In his responses, he indicated that the General Assembly would have the authority to list bamboo as a problem plant that was not invasive, or to address it through other means. The most difficult question is how to resolve existing homeowner issues. Senack reported that he continues to monitor bamboo reports and will do field inspections as warranted to investigate cases where natural spread may have occurred.

Ward asked if the state had a noxious weed list, separate from the invasive plant laws, that could be useful for the listing of bamboo. Listing plants that are not thought to meet the criteria for invasiveness somewhere other than on the invasive plant list would prevent the dilution of the invasive plant laws and inclusion of species that do not meet the criteria. Ellis will look for noxious weed seed legislation from Connecticut and will share it with the group.

5. Meeting schedule for 2014

Senack distributed a list of proposed dates for the 2014 Invasive Plants Council meetings. The group discussed the needed frequency of meetings and the process to assemble the annual report. **McGowan moved (second: Silander) to have 5 regular meetings in 2014: February 11, 2014, June 10, 2014, September 9, 2014, October 21, 2014, and December 9, 2014. Tentative additional dates of March 11, 2014 and November 18, 2014 would be left as placeholders in case they are needed. The Council decided to approve the 2014 meeting schedule.** Senack will communicate the schedule to the Secretary of the State's Office.

6. Election of Chair and Vice-Chair

Larson delivered a report from the nominating committee (composed of David Sutherland and Larson). The committee would like to ask Hyatt to serve as chair for another year, but Hyatt is not available to continue as Chair for a full year due to other responsibilities. Instead, the committee recommended that Hyatt serve as Chair on an interim basis through at least June, with David Goodwin as Vice-Chair for the same period. The committee will

SPECIAL MEETING

discuss alternatives prior to the June meeting. *Hyatt left the room at 3:05 pm. McGowan moved (second: Silander) to approve the nominating slate proposed by the nominating committee. The Council decided to approve the motion as submitted. Hyatt entered the room at 3:10 pm.*

7. Coordinator update (Senack)

a. Enforcement issues

Senack provided an update on enforcement issues. Since the October meeting, Senack has received an additional report of bittersweet (*Celastrus orbiculatus*), a listed invasive species prohibited from sale, being sold at a business in Wilton. Senack provided the information to DEEP, which will follow up as necessary.

b. Bittersweet press release

Senack developed a press release reminding people not to purchase or move bittersweet in holiday decorations. The release was sent out by DEEP before Thanksgiving and was covered in a number of state and local newspapers, other publications, and online. Senack received additional reports of invasive bittersweet as a result of this publicity.

c. Towns visited

Senack reported that he visited 22 towns in the past year for invasive plant monitoring, outreach, trainings, and workshops. This number does not include towns visited for annual meetings of statewide organizations or other state events.

d. CT DOT staff training project

Senack reported that he is working with UConn's Technology Transfer Program and with CT DOT to develop training for DOT maintainers on invasive plants. Approximately 160 maintainers will be trained in 5 full-day classes in the spring.

8. Invasive aquatics presentation to Env. Committee (McGowan)

This topic was discussed previously in item 4 (see above).

9. Old Business

a. Other states' invasive plant lists?

The Council discussed whether it would be helpful to hear from other states about the processes and criteria they use to arrive at their invasive plant lists and how those processes differ from the Connecticut process. The Council decided to invite MA and NY staff to a future meeting. Senack will contact the appropriate people in both states to develop this further. If Council members know of other states working on similar processes, they should inform Senack.

b. Council tour/visit of UConn facilities? Meeting at UConn?

The Council decided to hold the June 10, 2014 meeting at UConn, and will also visit UConn facilities including the UConn Research Farm at that time.

SPECIAL MEETING

10. New Business

a. Congressional Invasive Species Caucus opportunities (Hyatt)

Hyatt distributed two handouts and reported that he had presented at a meeting of the Congressional Invasive Species Caucus as Chair of the Invasive Species Committee of the Association of Fish and Wildlife Agencies (AFWA). Hyatt thanked everyone who had provided language for his speaking points on short notice. Hyatt also provided information on multi-state fish and wildlife funds to the Council.

b. CNLA Executive Secretary update?

Brad Weeks of the Kowalski group reported that the Kowalski group is providing interim management services to CNLA as CNLA is conducting a search to fill an executive secretary position.

c. CNLA cultivar news

Weeks reported that CNLA sent a letter to the Attorney General's Office on the cultivar issue. Hyatt reported that he spoke with Kevin Sullivan (CNLA) on this issue as well and distributed copies of the letter from CNLA. Hyatt will continue to work with the industry to resolve the issues voluntarily. Hyatt noted that DEEP talked with Attorney General's Office, which has expressed a desire for more technical information on this issue.

Weeks added that CNLA is hosting an Expo and Symposium on Jan. 14-15, 2014 at Manchester Community College and invited everyone to attend. Dr. Mark Brand and Dr. Jessica Lubell (UConn) will be presenting on native plant alternatives to invasives. Senack and Ellis reported that they will be in attendance with the invasive plant display.

11. Adjournment

Goodwin moved (second: Larson) to adjourn the meeting. The Council decided to adjourn at 3:42 pm.

The next meeting is scheduled for Tuesday, Feb. 11, 2014, 2-4 pm, in room G8-A at the Department of Agriculture in Hartford, CT.

MINUTES

Invasive Plants Council
Tuesday, February 11, 2014
2 pm, Dept. of Agriculture G8-A
Hartford, CT

Council members present: Ted Andreadis, David Goodwin, Bill Hyatt, Rich McAvoy, John Silander, David Sutherland

Others present: Ellen Bender, Bryan Connolly, Donna Ellis, Nancy Murray, Logan Senack

1. Hyatt called the meeting to order at 2:04 pm.

2. The minutes for the 1/7/14 meeting were reviewed.

Goodwin moved (second: Andreadis) to approve the minutes as submitted. **The Council decided to approve the minutes as submitted.**

3. Legislative 2014: thoughts for discussion

Hyatt reported that the Governor's budget does propose eliminating funding at the Department of Agriculture for the Environmental Conservation Funds that support the Invasive Plant Coordinator, and Hyatt's understanding is that the intent is to roll the Coordinator funding into the UConn budget. Sutherland reported that aside from the Coordinator funding, bamboo legislation is pending and he is not aware of other related legislation. There is a possibility that Senator Chapin's office will be discussing a boat registration system for invasives for Connecticut based on Maine's program.

Hyatt noted that funding for the Invasive Plant Coordinator position in the UConn budget needs to be a concern. Hyatt intends to talk to the Office of Policy and Management about where the money is coming from and going to. The group needs more information before it is able to plan further. Hyatt will send out additional news by the end of the week on this topic

4. Recap of Env. Committee hearing on Jan. 28

Hyatt provided a summary of the Environmental Committee hearing about Aquatic Invasive Species on Jan. 28. Senator Chapin developed the hearing and invited a number of people to participate. Greg Bugbee (CAES) presented on information on lakes. Hyatt spoke on priorities for the Invasive Plants Council as well as programs and opportunities for federal involvement and funds on invasives. Eleanor Mariani (DEEP Boating) spoke on boating inspectors, Pete Aarrestad (DEEP Inland Fisheries) spoke on grass carp, and Chuck Lee (DEEP Watershed Management Program) spoke on the lake program. Other speakers included Phyllis Shaffer and Tom McGowan on Candlewood Lake and related topics. The presentations were followed by general questions and discussion and the hearing lasted about 2.5 hours. Approximately a dozen legislators were present.

a. DEEP agency follow-up

Hyatt reported that DEEP will be working on a follow-up for the Environment

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Committee detailing efforts by DEEP and other agencies on managing aquatic invasive species problems. The boating inspector program, the Clean Lakes program, and zebra mussels will also be included. Andreadis will be reaching out to Greg Bugbee for additional information.

5. Presentation from Mass. State Botanist Bryan Connolly

Senack introduced Bryan Connolly, Massachusetts State Botanist, who provided information about the Massachusetts Invasive Plant List. In Massachusetts, the Department of Agricultural Resources regulates invasive plants through noxious weed regulation. All plants are prohibited from sale once included on the regulatory list. Mile-a-minute vine (*Persicaria perfoliata*) was discovered in Massachusetts in 2006 and is now present in 4 counties. Connolly also discussed grey willow (*Salix cinerea*), which the Massachusetts Invasive Plant Advisory Group (MIPAG) has examined for invasiveness, and false indigo (*Amorpha fruticosa*), which he noted was particularly invasive on the lower part of the CT River. MA list has 3 categories on their invasive plant list: Invasive, Likely Invasive, and Potentially Invasive. The category Potentially Invasive is for species not currently known to be naturalized in MA. Connolly noted that cultivars and hybrids of all plants considered invasive are listed as prohibited in MA once a species is listed as invasive, and MIPAG is looking at ways to evaluate sterile cultivars. There is discussion of developing some sort of certification program or per-plant fee on a sterile cultivar that would raise funds to target control in natural areas.

After the presentation, Connolly answered questions from the group. Hyatt thanked Connolly for presenting and providing information to the group.

6. Coordinator update (Senack)

a. Outline of DoAg inspector trainings

Senack is coordinating a training session for the DoAg inspectors responsible for visiting pet shops and inspecting for sales of invasive plants. The workshop will take place during the first week of March and will run approximately 2 hours. Greg Bugbee will bring live plants and will lead a plant identification session.

b. DOT Trainings update

Senack is working with DOT and the UConn Technology Transfer Program to provide invasive plant identification training to about 160 maintainers and other staff at DOT. The trainings will take place over 5 sessions in March and April at the DOT headquarters in Newington and will cover invasive plant topics ranging from species identification to the prevention of accidental spread along roads.

c. Bamboo workshop

Senack presented material about bamboo at a native plant group meeting at Connecticut College on February 1. Topics covered included a discussion of the current law, information about bamboo control, and why bamboo was not listed as invasive by the Invasive Plants Council. There was a high level of interest from the audience and Senack discussed and answered questions for about two hours.

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Hyatt noted that it would be important to record how many hours of training would be provided through activities like the ones just mentioned. Senack will develop a handout detailing the impacts of these activities for the IPC.

7. Old Business

a. Details of June meeting and meeting location

The Council decided to meet in Storrs for the June meeting so they can visit Mark Brand's barberry research plots and other sites. The speakers from New York who are scheduled to present will be invited to attend the meeting in Storrs or to participate by webinar. McAvoy directed Senack to contact Steve Olson (UConn Research Farm) to make the appropriate arrangements for the farm. Sutherland informed the group that he will not be able to attend the June 10 meeting.

8. New Business

a. Follow up from Congressional Invasive Species Caucus (Hyatt)

Hyatt reported that the Association of Fish and Wildlife Agencies is working on follow-up information to increase awareness about aquatic nuisance species as a result of a meeting of the Congressional Invasive Species Caucus. Follow-up letters have been sent by AFWA to both co-chairs of the Invasive Species Caucus. Hyatt also reported that no Connecticut delegation member is a member of the Invasive Species Caucus yet.

9. Adjournment

Sutherland moved to adjourn the meeting at 3:42 pm. **The meeting adjourned at 3:42 pm.**

The next meeting is scheduled for 2 pm, June 10, 2014, at the UConn Plant Science Research and Education Facility, 59 Agronomy Road, Storrs, CT.

SPECIAL MEETING

Invasive Plants Council
Tuesday, June 10, 2014
1 pm, Eagleville Preserve
Mansfield, CT

Council members present: Bill Hyatt, Rich McAvoy, John Silander, Katherine Winslow

Others present: Ellen Bender, Logan Senack, Steve Young

1. **The site walk began at approximately 1:00 pm. No quorum was present and no other business was conducted. The walk concluded at approximately 1:45 pm.** IPC member Dr. John Silander led those present on an invasive plant walk at the Eagleville Preserve in Mansfield, CT.

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Invasive Plants Council
Tuesday, June 10, 2014
2 pm, UConn Plant Science Research and Education Facility
59 Agronomy Road, Storrs-Mansfield, CT

Council members present: Ted Andreadis, Bill Hyatt, Paul Larson, Rich McAvoy, Tom McGowan, John Silander, Katherine Winslow

Others present: Mark Brand, Nelson DeBarros, Donna Ellis, Marilyn Jordan (*by phone for items 1-3*), Jonathan Lehrer, Gerry Moore (*by phone for items 1-3*), Nancy Murray, Logan Senack, Steve Young

- 1. Hyatt called the meeting to order at 2:09 pm.**
- 2. The minutes for the 2/11/14 meeting were reviewed.**
Andreadis moved (second: Silander) to approve the minutes as submitted. **The Council decided to approve the minutes as submitted.** Larson and Winslow abstained since they were not present at the last meeting.
- 3. Presentation from Jonathan Lehrer, Steve Young: NY state update on regulation, listing of species, and cultivars (~40 minutes plus time for questions)**
Lehrer, from the Long Island Invasive Species Management Area Scientific Review Committee (LIISMA-SRC), explained the origins of their invasive plant list, which was developed for Long Island but designed to be applicable to New York State. New York State is currently developing regulations on invasive plants. In addition to the invasiveness ranking system, the New York invasive plant list will take into account a socio-economic assessment which is still being developed at the state level. After both the invasiveness and the socio-economic assessments are taken into account, plants could be unregulated, regulated, or prohibited at the state level. The invasive plant list would be maintained in regulation, not in legislation. Questions for the presenters related to the specific definitions of various terms as used in the protocol and the development and weighting of the sections of the protocol. Lehrer stressed that the LIISMA protocol was designed to be an open, transparent process, with all literature reviews and information sources listed after each question in the species evaluations. Lehrer and the presenters also responded to questions about the need to emphasize the use of verifiable data for the species assessments and other topics.

Lehrer also provided information on the current treatment of cultivars of invasive plants in New York State. The LIISMA group developed draft criteria for assessing cultivars independently of the parent species. The criteria would allow for some cultivars to be exempt from the sales restrictions and other related restrictions if it could be determined that they were not likely to revert to the parent type or establish in natural areas. The draft New York State regulations include some of the cultivar criteria developed by

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LIISMA, but not all criteria were included. Lehrer was asked how New York was addressing running bamboo. He responded that *Phyllostachys aurea* and *P. aureosulcata* were determined to be “not assessable”, i.e. not technically invasive, in NY because the species are only found in places where it has been planted or discarded by people. Lehrer stated that these species have not invaded natural habitats to any significant degree. However, under the NY system running bamboo may still be included on the proposed list of prohibited/invasive species.

Young provided additional information, and Jordan and Moore were also present by phone to answer questions. More information about the New York listing process can be found at www.nyis.info.

4. **Tour of Dr. Mark Brand’s barberry (*Berberis thunbergii*) and *Aronia* experiments**
Dr. Brand (UConn) spoke to the group about the status of his research. He led the group on a tour of the Japanese barberry (*Berberis thunbergii*) and chokeberry (*Aronia* species) planted at the UConn Plant Science Research and Educational Facility. Brand is researching chokeberry (*Aronia* sp.) plants for fruit production and as possible alternative plants for some invasive species. He is investigating Japanese barberry cultivars to determine more about differences in fruit and seed production by the various cultivars. The group toured the plants and discussed current projects with Brand.

5. **Update on legislative session**

- a. **Coordinator funding issues**

Hyatt reported on the current status of the Invasive Plant Coordinator position. Hyatt’s understanding from the Appropriations Committee was that funding for the position was being transferred to UConn directly, not cut. When the implementer bill came out, there was no budget for the position, though Hyatt was told the position would be picked up by the University. Hyatt has been working with the Dean of UConn’s College of Agriculture and Natural Resources (CANR) on this issue. Hyatt reported that the University recognizes that there is an obligation to continue the position and noted that \$20,000 in funding may be available from DEEP to allow the Coordinator to assist with a DEEP grants program going forward.

Silander added that the UConn College of Liberal Arts and Sciences has been asked to cut its budget by 2-5% for the upcoming year. McAvoy reported that CANR is dealing with the same issue. Andreadis noted that this is not a good situation and that there was a clear danger of losing the position. Silander asked if the position would be more securely funded under DEEP. Hyatt was uncertain. The group discussed the idea that clarifying the situation in the near future would be preferable to waiting until the next budget year, or the next legislative session, to resolve the issue.

- b. **Aquatics funding status**

Hyatt reported that as a result of the aquatic invasive species hearing in January, a need for \$1.2 million dollars in funding was proposed by DEEP for aquatic invasives for the next fiscal year. A proposal came out of the Environment

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Committee at \$500,000, which was then cut to \$200,000 before the bill passed. Hyatt reported that DEEP is able to use \$20,000 of this amount to enable the Invasive Plant Coordinator to assist with a DEEP aquatic invasive plant control grants program.

c. **Impacts of new bamboo legislation**

Hyatt distributed copies of the new bamboo legislation, which modifies CGA Sec. 22a-381e. DEEP is considering asking the Attorney General's office for clarification on several points of the new law: whether the law is retroactive, whether DEEP, as an agency, can delegate enforcement authority to municipalities, and whether any bamboo at all can be grown within forty feet of a property line with or without a barrier system. A second proposal, which would have prohibited the sale of running bamboo plants until the Connecticut Agricultural Experiment Station developed safe Best Management Practices for growth and containment, was discussed during the legislative session, but did not result in any legislation.

6. **Species updates**

Andreadis distributed a document providing mugwort and bamboo research updates from CAES.

a. **Mugwort seed germination study results from CAES (Andreadis)**

Andreadis reported that Ward had continued his research into mugwort (*Artemisia vulgaris*) seed viability. In Ward's pilot experiment, seeds from mugwort germinated from each of seven samples collected at various times and locations around the state. Working with Senack, additional samples were collected in the fall of 2013. Ward conducted a germination experiment at CAES. Seeds were dried, vernalized, and placed in petri dishes on moistened blotter paper. There was significant germination of mugwort seedlings with 0-215 germinating seeds per 25 seedheads. Senack reported that Ward had provided an additional preliminary estimate of over 1,300 viable seeds per 6-inch branchlet.

b. **Bamboo research update from CAES (Andreadis)**

Andreadis provided an update on the bamboo control research undertaken by CAES. CAES has been examining bamboo control on three planted sites at CAES facilities (in Griswold, Hamden, and Windsor) and at sites in other areas of the state where bamboo had become dense. At the CAES facilities, Ward has been comparing the growth, spread, winter survival, and control responses of various cultivars. At the other locations, Ward tested the response of bamboo to herbicide treatments. The bamboo stands were cut back to reduce the height of the culms before the foliage was treated twice with glyphosate. The process was extremely effective at all three sites, with 99-100% of the bamboo controlled one year later.

Senack added that one of the contractors who has worked on bamboo control in the New Milford area had recently contacted him to report that he had very good success using imazapyr to control bamboo in at least one well-established, ¼ acre

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stand. Hyatt emphasized the need to treat the entire bamboo stand, not just part of it, for effective control of bamboo.

7. Enforcement issues update from DEEP (Hyatt)

Discussion of this item was postponed to a future meeting.

8. New Council Chair needed (Larson)

Larson reported on the search for a new Council Chair for the IPC. Larson and Sutherland (the Nominating Committee) have spoken and have reached out to various members about serving as Chair. At present, there is no one available for the position. Larson asked that a member interested in serving as Chair contact him or Sutherland prior to the September meeting. Hyatt volunteered to help introduce the new Chair to the needed materials.

9. Coordinator update (Senack)

a. DOT trainings update

Senack reported that he spoke and presented material at several training sessions for DOT maintenance staff in March and April. The trainings went extremely well and received significant positive feedback from the attendees. The training sessions, organized by UConn's CT Technology Transfer Center, reached about 200 DOT maintenance staff and provided approximately 900-1,000 contact hours of training on invasive plant identification, control, best management practices for roadside invasive plant maintenance, and invasive insects. Staff from DOT, DEEP Forestry Division, and CAES also delivered presentations and participated in various sessions. The UConn Technology Transfer Program invited Senack to provide additional trainings to town and municipal staff in various parts of the state this fall. Hyatt noted that these groups are excellent audiences for outreach activities. Senack will follow up to determine if additional trainings can be provided given the current funding situation.

McGowan left the room at 4:16 pm.

b. Future IPC directions document

Senack reported that he is working on developing the document the IPC requested on potential future directions for invasive plant efforts in the state. There will be a significant focus on early detection and responding to new and developing problems as early as possible in the new document.

c. Early Detection list revised

Senack distributed a draft of the revised Early Detection List for CT. The list has 3 main categories:

- i. An Early Detection List of plants that are listed as invasive or potentially invasive in Connecticut, that are present only in low numbers, and that could be priorities for future control efforts.
- ii. A Research List of plants that are present in or near Connecticut and for which more information is desired. Current records are limited on these species and

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more information about distribution and spread is needed. This list is not a regulatory list or a proposed invasive plant list.

- iii. A list of species that have been previously examined by the Invasive Plants Council. This list will provide a reference point for anyone looking for information about prior species discussions of the Invasive Plants Council.

Attendees provided suggested changes and comments and Senack requested that additional feedback be sent by email. The revised document will be redistributed to the group.

d. *Arthraxon rigidum* response

Senack noted that there was a plant on the Early Detection list that was known to be present in only one location in the state. *Arthraxon hispidus* (hairy jointgrass) is only known to occur in a location in Waterford, on state property at Harkness Memorial State Park. Senack noted that it was possible that this plant was present in other locations, since the plants had been present at the site for several years. Further mapping of the population may need to occur prior to further attempts at control, but no other locations in the state had been reported at present. Hyatt noted that the draft contracts for contractors that DEEP was preparing could be useful in hiring a contractor to remove the plants, but that they currently only apply to aquatic species. Hyatt also noted that this plant could be a good candidate for removal and that the wetlands restoration group from DEEP may be able to assist with that effort.

10. New Business

a. Speaking request for IPC Chair at fall CIPWG conference (Ellis)

Ellis invited the Invasive Plants Council to send the new Chairperson or a Council representative to speak at the next CIPWG symposium. The 2014 symposium will be held on October 7, 2014 at the Student Union on the UConn Storrs campus. The event has had high attendance in the past and has traditionally included remarks from the Invasive Plants Council Chair.

b. Senack departure

Hyatt announced that Senack will be leaving the Coordinator position to attend law school this fall. The group congratulated Senack, thanked him for his outstanding service over the past five and a half years, and wished him success in law school.

c. Meeting logistics thanks

On behalf of the Council, Hyatt thanked UConn for hosting this meeting and for providing field tours. Senack added thanks to UConn Facilities for providing the Internet and phone connections for the meeting. Senack also thanked UConn's Research Facility Farm Manager, Steve Olsen, and the farm staff for arranging the meeting space and UConn's Integrated Pest Management Program for providing refreshments.

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11. Adjournment

Larson moved to adjourn the meeting. **The meeting adjourned at 4:25 pm.**

The next meeting is scheduled for 2 pm, September 9, 2014 at the Dept. of Agriculture, 165 Capitol Ave. in Hartford, CT.

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Invasive Plants Council
Tuesday, September 9, 2014
2 pm, Dept. of Agriculture G8-A
Hartford, CT

Council members present: Theodore Andreadis, David Goodwin, William Hyatt, Paul Larson, Richard McAvoy, Katherine Winslow, John Silander, David Sutherland

Others present: Donna Ellis, Nancy Murray

Approval of Minutes

Katherine Winslow moved approval of the minutes for the June 10 Special Meeting. The minutes were approved.

Theodore Andreadis moved approval of the minutes for the regular June 10 meeting; Paul Larson seconded. The minutes were approved.

Update on the Council Coordinator position vacancy

Bill Hyatt explained that \$20,000 of the funding for the new Aquatic Invasives program can be used for administrative purposes. That funding will be used to help pay for the Coordinator position, so that the new hire can spend a significant portion of their time administering grants and other aspects of that new program. DEEP will also direct \$10,000 towards funding the Coordinator position; UConn will contribute \$3,000.

The position is funded through June 2015. Since it is a durational position, UConn will not have to conduct a formal search process.

Aquatics Update

Nancy Murray distributed Voluntary Guidelines from the federal Aquatic Nuisance Species Task Force pertaining to water gardens. John Silander asked what the plans were for publicizing the guidelines. The federal officials probably do not have a plan for intensified distribution or implementation. Nancy also distributed voluntary guidelines for curbing the spread of aquatic invasives.

Update on Aquatic Invasive Species Grant Program

Hyatt reviewed the process by which an initial proposal for \$1.2 million for an aquatic invasives program was reduced to \$200,000, which was ultimately approved. Ten percent can be used for administrative functions; a minimum of 30 – 40% must be used for a municipal grants program for diagnostics or treatment. An RFP for the grants was released July 31, with a deadline for proposals of September 15. There was discussion of the inadequacy of six weeks for towns to put together proposals. DEEP is trying to balance the provision of adequate time for proposal development with concern that money that is not expended may be diverted for other purposes.

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CIPWG Symposium

Donna Elis from UConn reported that there are already 300 attendees signed up for the symposium. Senator Clark Chapin will give remarks.

Old Business

At this point, the council intends to proceed with its October and December meetings, and may have its scheduled November meeting.

New Business

Yellow groove bamboo - *Phyllostachys aureosulcata*

Theresa Groff, a Field Researcher with the Institute of Invasive Bamboo Research presented findings to the council regarding nine instances in which the institute maintains that Yellow Groove bamboo has become naturalized. There are approximately 600 known sites of bamboo in Connecticut, most being intentionally planted.

Kim Pita from Old Saybrook presented pictures of a population of Yellow Groove in her yard that is returning after she spent \$3,000 having the original population removed.

Richard McAvoy and John Silander responded to references by Groff and Pita of Yellow groove being impossible to control by herbicides by maintaining that applied properly, herbicides can eliminate populations.

Groff and Pita would like the council to include Yellow groove bamboo on the state's statutorily-mandated list of invasive plants.

There was extensive discussion of the statutory criteria defining "invasive" species, in Section 22a-381b of the Connecticut General Statutes, with focus on the following criteria: "(2) the plant is naturalized or has the potential to become naturalized or occurring without the aid and benefit of cultivation in an area where the plant is nonindigenous; (3) under average conditions, the plant has the biological potential for rapid and widespread dispersion and establishment in the state or region within the state; (4) under average conditions, the plant has the biological potential for excessive dispersion over habitats of varying sizes that are similar or dissimilar to the site of the plant's introduction into the state; (5) under average conditions, the plant has the biological potential for existing in high numbers outside of habitats that are intensely managed;" particularly item 2 concerning naturalization.

Hyatt pointed out that Logan Senack, the council's former coordinator, had visited six of the nine sites referenced as ones where bamboo had naturalized, and that Senack thought naturalization had occurred at one of those sites, and thought that the populations were associated with plantings at at least four of the sites. Hyatt will distribute Senack's notes on those visits.

Winslow suggested that a committee of the council be set up to assess research and information regarding Yellow groove bamboo. The council agreed. The members of the committee will be Jeff Ward from the Agricultural Experiment Station, Winslow, Silander, and McAvoy. McAvoy will arrange site visits to some of the sites referenced as hosting naturalized populations.

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Pet Trade MOU

Murray described a Memorandum of Understanding recently crafted between the US Fish and Wildlife Service and the pet industry with the intention of identifying and precluding from the trade invasive plants.

Congressional Invasive Plants Caucus

There was discussion of efforts that will be implemented after the November elections to increase the membership in the currently 17-member Congressional Invasive Plants Caucus.

Election of Council officers

Larson moved that McAvoy be elected as Chair of the council. Hyatt seconded the nomination. McAvoy left the room, and was unanimously approved by the members present.

Larson moved that Hyatt be elected as Vice Chair; Andreadis seconded. Hyatt left the room and was unanimously approved.

The next meeting is scheduled for Tuesday, Oct. 21, 2014, 2 pm, in room G8-A at the Department of Agriculture in Hartford, CT.

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Invasive Plants Council
Tuesday, October 21, 2014
2 pm, Department of Agriculture G8-A
165 Capitol Avenue, Hartford, CT

Council members present: Ted Andreadis, Paul Larson, Rich McAvoy, David Sutherland, Katherine Winslow

A quorum was not present.

Others present: Ellen Bender, Donna Ellis, Nicole Gabelman, Nancy Murray

1. McAvoy informally called the meeting to order at 2:15 pm.

2. Update of Coordinator Position

The position of Invasive Plant Coordinator will be filled by Nicole Gabelman. Her anticipated start date is October 31, 2014. A top priority will be assembling the IPC annual report before the November 18 meeting. Another priority will be arranging bamboo site visits with the bamboo committee and other interested council members before the December 9 meeting. Aquatic Invasive Species will also take precedence over other Coordinator tasks since the majority of the funding for the position comes from the new Department of Energy & Environmental Protection (DEEP) Aquatic Invasives program.

3. Update on Aquatic Invasive Species Grant Program

Murray explained that with a shortened proposal period DEEP received fewer proposals than expected. The 17 proposals that were received will be ranked and evaluated at DEEP.

4. Annual Report

McAvoy presented a draft copy of the cover letter for the annual report. There was some discussion and changes were made. The Coordinator will be responsible for compiling the various sections and collecting accomplishment reports from contributors. The CT Agricultural Experiment Station (CAES) submitted an accomplishment report from Jeff Ward. A report on the activities of the previous Coordinator, Logan Senack, may need to be collected using the minutes from previous meetings.

5. CIPWG Symposium

Ellis, CT Invasive Plant Working Group (CIPWG) Co-Chair, reported that the very successful CIPWG Invasive Plant Symposium sold out with 500 attendees. It was held on October 7, 2014 in the University of Connecticut (UConn) Student Union.

6. Bamboo Site Assessments

The council sub-committee charged with assessing the potential for bamboo to spread to new sites by stream flow should make site visits before the December 9 meeting. John Volin, UConn Dept. of Natural Resources and the Environment, should be invited to join the sub-committee on these visits. Winslow requested that the site information and data for each of the nine bamboo sites be compiled. There is a need to ramp up review and response on this subject. Sutherland

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pointed out that more discussion is needed to establish when evidence of natural dispersion surpasses a threshold to warrant classifying running bamboo as invasive as per the statutes. Andreadis suggested that we monitor each of the sites and see what happens over time. McAvoy pointed out the need to establish a baseline and then monitor downstream overtime to document that new stands are spreading to natural areas. There was some discussion on whether New York decided not to list bamboo, even from a socio-economic standpoint, after evaluating the species for invasiveness. Winslow suggested that a representative from The Nature Conservancy and a representative from DEEP be added to the bamboo sub-committee. Nobody was added at this time. Murray questioned Larson on the role that bamboo plays in the nursery industry. He replied that he knows of some people in the trade who specialize in bamboo sales but most offer a few items. Sutherland commented that it may be best to leave it to the municipalities to list as a residential nuisance species but not an ecological threat. If possible, a statement on bamboo should be included in the annual report.

7. Adjournment

The meeting ended at 3:28 pm.

The next meeting is scheduled for 2 pm, November 18th 2014 at the Department of Agriculture, 165 Capitol Avenue in Hartford, CT.

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Invasive Plants Council
Tuesday, November 18, 2014
2 pm, Department of Agriculture, Commissioner's Conference Room 161
165 Capitol Avenue, Hartford, CT

Council members present: William Hyatt, Paul Larson, Rich McAvoy, Tom McGowan, John Silander, Jr., David Sutherland, Katherine Winslow

Others present: Donna Ellis, Nicole Gabelman, Nancy Murray, Kevin Sullivan, Bradford Weeks

1. McAvoy called the meeting to order at 2:05 pm.

2. Approval of Meeting Minutes

The meeting minutes from September 9 were reviewed. Larson pointed out an error in paragraph eight on the second page that read 'or' instead of the word 'of'. It was also suggested that the words 'running bamboo' be removed from the third paragraph on the second page. The minutes from October 21 were discussed. It was decided that since there was no quorum at this meeting the minutes would not be considered official but could still be included in the annual report. It was suggested that 'diagnostic feasibility studies' be removed from the second paragraph on the first page. **Larson moved (second: Hyatt) to approve the minutes as amended. The motion carried.**

3. Update of Invasive Plant Council Personnel

a. Invasive Plant Coordinator

The position of Invasive Plant Coordinator was filled by Nicole Gabelman on October 31, 2014. The position is funded through June 30, 2015. The Council identified short-term priorities for the Coordinator as assembling the IPC annual report and arranging site visits for bamboo assessment. Tasks related to Aquatic Invasive Species will be a priority for the Coordinator since the majority of the funding for the position comes from the new Department of Energy & Environmental Protection (DEEP) Aquatic Invasives program.

b. Invasive Plants Council member David Goodwin

Dave Goodwin, Council Vice Chair, resigned from the Council by letter on November 11 to accept a new position in Florida. He was a member of the Council since its inception and wished the Council the best of luck in their continuing efforts. He served as the representative from a company that grows or sells flowers or plants and was appointed by the Minority Leader of the House of Representatives. The designation of a new member to represent this Council seat was discussed. Larson explained that the Connecticut Nursery and Landscape Association (CNLA) board would recommend a replacement to the Minority Leader in the House of Representatives, with the intention of filling that vacancy early next year. In the meantime CNLA president Kevin Sullivan agreed to stand in as a nonvoting member.

4. Approval of Connecticut Invasive & Potentially Invasive Plant List

Two small changes were previously made to the list and required Council approval. The first change was correcting the spelling of 'Ghandi' to 'Gandhi' for the author of the scientific name

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Cynanchum louiseae. The second change was eliminating the parentheses around the name Willd., the author of the scientific name *Nelumbo lutea*. **Hyatt moved to approve the Invasive Plant List. The motion was unanimously approved.**

5. Annual Report

a. Cover letter from Chairperson

McAvoy presented a draft copy of the cover letter for the annual report. This included changes that were discussed on October 21. Hyatt suggested editing the lead sentence of the third paragraph to read ‘The legislature did not appropriate a specified funding line for the Coordinator in FY15 creating uncertainty for continued staffing’. There was some discussion and changes were made. Silander proposed that the cost of dealing with invasive species be incorporated into the letter as it is a multibillion dollar problem across the country. Murray added that the funding for Aquatic Nuisance Species (ANS) decreases every year and it is important to bring attention to the cost of the problem. Larson recommended adding the word ‘supporting’ to the first paragraph before ‘the development of new non-invasive plant varieties’. McGowan pointed out that ‘annually publish and periodically update a list’ sounds more like secretarial tasks and our language should reflect our efforts which extend to making recommendations about what plants to ban. McAvoy will work to include this point in his letter.

b. Accomplishment Report Summary

McAvoy and Gabelman presented a draft copy of the summary of accomplishments. This report was laid out in a new bulleted format in order to highlight the direct impact of activities supported by the Invasive Plants Council. The use of Google Analytics to gather website user information was discussed. Using a general sentence like ‘Citizens received invasive plant information through 1,000’s of website viewings’ was proposed if gathering this data proved too difficult. McGowan requested the addition of the CT Federation of Lakes to the associated groups mentioned in the opening paragraph. Including the average cost of invasive plant control to the bullet point summarizing the hours of control labor was discussed. It was suggested that Steve Manning of Invasive Plant Control, Inc. be contacted to supply a range for the cost/hour charged by a commercial company. It was also recommended that the aquatic invasive species grants be mentioned in the accomplishment summary since these grants motivated municipalities to contribute enough funds to more than double the amount supplied by the grant. The use of an appendix for the detailed expansion of the bullet points listed in the accomplishment summary was examined.

c. Accomplishment Reports from contributors

The CAES is the only group to have submitted an accomplishment report thus far. Hyatt reported that he plans to submit the contribution from DEEP on Dec. 1.

6. CT Nursery and Landscape Association (CNLA) Report

Sullivan, CNLA President, reported that the CNLA Board is currently undergoing a strategic evaluation and new hires have been made to the CNLA Executive Office. Sullivan distributed this information to Gabelman who will email the new contact information to the members of the Council. Sullivan commented that they will continue to support the Council and its mission. With regard to the open seat left by Goodwin’s resignation the CNLA Board will make a recommendation. He believes they should be able to find a permanent replacement for the seat by February.

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7. Bamboo Site Assessments

The Council sub-committee charged with assessing the potential for bamboo to spread to new sites by stream flow will make site visits on Thursday, December 4. It was suggested that Hyatt invite Nelson DeBarros as a representative from DEEP to join in the bamboo site visits. There was some discussion about what we are trying to assess and how we can go about doing this. McAvoy referred to Andreadis' suggestion that monitoring candidate sites over time will allow us to assess possible movement. If possible, the four or five sites to be visited will be focused in the eastern half of the state.

8. Update on Grants to Municipalities

Murray reported that of the 17 proposals that were submitted for the aquatic invasive plant control grant to municipalities, 12 were approved to receive the \$150,000. The next priority will be putting together the contracts so that the money can be allocated as soon as possible. A document summarizing the 12 municipalities, their aquatic invasive plant projects, amount of grant funding awarded, and their matching funds was distributed. The range of plants being targeted and the geographic distribution of the corresponding bodies of water were discussed. Many of the plans targeted milfoil (*Myriophyllum heterophyllum*; *Myriophyllum spicatum*) and fanwort (*Cabomba caroliniana*) in lakes; there are also a couple of projects using grass carp (*Ctenopharyngodon idella*) as a biocontrol agent. Ellis asked if the grant money had to be spent by June 30. Hyatt responded that the priority is allocating the funds as soon as possible during the current fiscal year and there may be some figuring out in terms of the duration. Murray suggested we add information on the grants to municipalities to the annual report.

9. Old Business/New Business

a. 2015 Meeting Schedule

The Council set the 2015 meeting schedule as follows: February 10, June 9, September 8, October 13, and December 8. January 13 and November 10 were identified as tentative dates should additional meetings be needed.

b. Communication plan with Legislature

Senator Clark Chapin, State Representative Craig Miner, and State Representative Roberta Willis were discussed as representatives who have expressed interest in invasive plant issues. Invasive aquatic plants in lakes, economic concerns, and the discussion of bamboo are topics that have especially attracted the most attention. Sutherland suggested that the grass roots interests of local groups and land trusts represent important consideration for the legislature.

10. Adjournment

McGowan moved to adjourn the meeting. The meeting ended at 4:05 pm.

The next meeting is scheduled for 2 pm, December 9th 2014 at the Department of Agriculture, 165 Capitol Avenue in Hartford, CT.

3. 2014 Revised Invasive Plants List

CONNECTICUT INVASIVE PLANT LIST November 2014

Connecticut Invasive Plants Council

Ordered by Scientific Name

Statement to accompany list -- January 2004: This is a list of species that have been determined by floristic analysis to be invasive or potentially invasive in the state of Connecticut, in accordance with PA 03-136. The Invasive Plants Council will generate a second list recommending restrictions on some of these plants. In developing the second list and particular restrictions, the Council will recognize the need to balance the detrimental effects of invasive plants with the agricultural and horticultural value of some of these plants, while still protecting the state's minimally managed habitats.

In May 2004, Public Act 04-203 restricted a subset of the January 2004 list making it illegal to move, sell, purchase, transplant, cultivate or distribute prohibited plants. Effective July 1, 2009, Public Act 09-52 removed the prohibition on *Pistia stratiotes*.

@ column indicates growth form or habitat: A = Aquatic & Wetland; G = Grass & Grass-like; H = Herbaceous; S = Shrub; T = Tree; V = Woody Vine

Explanation of symbols after Common Name:

(P) indicates Potentially Invasive (all other plants listed are considered Invasive in Connecticut)

* denotes that the species, although shown by scientific evaluation to be invasive, has cultivars that have not been evaluated for invasive characteristics. Further research may determine whether or not individual cultivars are potentially invasive. Cultivars are commercially available selections of a plant species that have been bred or selected for predictable, desirable attributes of horticultural value such as form (dwarf or weeping forms), foliage (variegated or colorful leaves), or flowering attributes (enhanced flower color or size).

"PROHIBITED BY STATUTE?" column indicates prohibited status: Y= prohibited from importation, movement, sale, purchase, transplanting, cultivation and distribution under CT Gen. Stat. §22a-381d; N/A= not prohibited

^ indicates species that are not currently known to be naturalized in Connecticut but would likely become invasive here if they are found to persist in the state without cultivation

The taxonomic names used by the Connecticut Invasive Plants Council on the Invasive Plant List are consistent with the names used by the United States Department of Agriculture PLANTS database, accessible online at www.plants.usda.gov. The Council also maintains a list of scientific name synonyms for reference purposes.

COMMON NAME	@	SCIENTIFIC NAME	SYNONYMS	PROHIBITED BY STATUTE?
Amur maple (P)	T	<i>Acer ginnala</i> Maxim.		N/A
Norway maple*	T	<i>Acer platanoides</i> L.		N/A
Sycamore maple (P)	T	<i>Acer pseudoplatanus</i> L.		Y
Goutweed	H	<i>Aegopodium podagraria</i> L.	Bishop's weed	Y
Tree of heaven	T	<i>Ailanthus altissima</i> (Mill.) Swingle		Y
Garlic mustard	H	<i>Alliaria petiolata</i> (M. Bieb.) Cavara & Grande		Y
False indigo (P)	S	<i>Amorpha fruticosa</i> L.		Y
Porcelainberry*	V	<i>Ampelopsis brevipedunculata</i> (Maxim.) Trautv.	Amur peppervine	N/A
Mugwort	H	<i>Artemisia vulgaris</i> L.	Common wormwood	N/A
Hairy jointgrass (P)	G	<i>Arthraxon hispidus</i> (Thunb.) Makino	Small carpggrass	Y
Common kochia (P)	H	<i>Bassia scoparia</i> (L.) A.J. Scott	<i>Kochia scoparia</i> ; Fireweed; Summer cypress	Y
Japanese barberry*	S	<i>Berberis thunbergii</i> DC.		N/A
Common barberry	S	<i>Berberis vulgaris</i> L.		Y
Drooping brome-grass (P)	G	<i>Bromus tectorum</i> L.	Cheatgrass	Y
Flowering rush (P)	A	<i>Butomus umbellatus</i> L.		Y
Fanwort	A	<i>Cabomba caroliniana</i> A. Gray	Carolina fanwort	Y
Pond water-starwort (P)	A	<i>Callitriche stagnalis</i> Scop.		Y
Narrowleaf bittercress	H	<i>Cardamine impatiens</i> L.		Y
Japanese sedge^ (P)	G	<i>Carex kobomugi</i> Ohwi		Y
Oriental bittersweet	V	<i>Celastrus orbiculatus</i> Thunb.	Asiatic bittersweet	Y
Spotted knapweed	H	<i>Centaurea stoebe</i> L.	<i>Centaurea biebersteinii</i> ; <i>Centaurea maculosa</i>	Y
Canada thistle (P)	H	<i>Cirsium arvense</i> (L.) Scop.		Y
Black swallow-wort	H	<i>Cynanchum louiseae</i> Kartesz & Gandhi	<i>Cynanchum nigrum</i> ; <i>Vincetoxicum nigrum</i>	Y
Pale swallow-wort	H	<i>Cynanchum rossicum</i> (Kleoe.) Borhidi	<i>Vincetoxicum rossicum</i>	Y
Jimsonweed (P)	H	<i>Datura stramonium</i> L.		Y
Brazilian water-weed (P)	A	<i>Egeria densa</i> Planchon	Anacharis; Egeria	Y
Common water-hyacinth^ (P)	A	<i>Eichhornia crassipes</i> (Mart.) Solms		N/A
Russian olive (P)	S	<i>Elaeagnus angustifolia</i> L.		Y
Autumn olive	S	<i>Elaeagnus umbellata</i> Thunb.		Y
Crested late-summer mint (P)	H	<i>Elsholtzia ciliata</i> (Thunb.) Hylander	Elsholtzia	Y
Winged euonymus*	S	<i>Euonymus alatus</i> (Thunb.) Sieb.	Burning bush	N/A
Cypress spurge (P)	H	<i>Euphorbia cyparissias</i> L.		Y
Leafy spurge	H	<i>Euphorbia esula</i> L.		Y
Glossy buckthorn	S	<i>Frangula alnus</i> Mill.	<i>Rhamnus frangula</i> ; European buckthorn	N/A
Slender snake cotton	H	<i>Froelichia gracilis</i> (Hook.) Moq.	Cottonweed	Y
Ground ivy (P)	H	<i>Glechoma hederacea</i> L.	Gill-over-the-ground; Run-away robin	Y
Reed mannagrass^ (P)	G	<i>Glyceria maxima</i> (Hartm.) Holmb.	Tall mannagrass	Y
Giant hogweed (P)	H	<i>Heracleum mantegazzianum</i> (Sommier & Levier)		Y

Dame's rocket	H	<i>Hesperis matronalis</i> L.		Y
Japanese hops (P)	H	<i>Humulus japonicus</i> Sieb. & Zucc.	Japanese hop	Y
Hydrilla	A	<i>Hydrilla verticillata</i> (L.f.) Royle	Water thyme	Y
Ornamental jewelweed (P)	H	<i>Impatiens glandulifera</i> Royle	Tall impatiens	Y
Yellow iris	A	<i>Iris pseudacorus</i> L.	Yellow flag iris; Pale yellow iris	Y
Perennial pepperweed	H	<i>Lepidium latifolium</i> L.	Tall pepperwort	Y
Border privet (P)	S	<i>Ligustrum obtusifolium</i> Sieb. & Zucc.		Y
California privet (P)	S	<i>Ligustrum ovalifolium</i> Hassk.		N/A
European privet (P)	S	<i>Ligustrum vulgare</i> L.		N/A
Japanese honeysuckle*	V	<i>Lonicera japonica</i> Thunb.		Y
Amur honeysuckle	S	<i>Lonicera maackii</i> (Rupr.) Herder		Y
Morrow's honeysuckle	S	<i>Lonicera morrowii</i> A. Gray		Y
Tatarian honeysuckle (P)	S	<i>Lonicera tatarica</i> L.		Y
Belle honeysuckle	S	<i>Lonicera x bella</i> Zabel	Bell's honeysuckle (<i>misapplied</i>)	Y
Dwarf honeysuckle^ (P)	S	<i>Lonicera xylostium</i> L.	European fly-honeysuckle	Y
Ragged robin (P)	H	<i>Lychnis flos-cuculi</i> L.		Y
Moneywort* (P)	H	<i>Lysimachia nummularia</i> L.	Creeping jenny	N/A
Garden loosestrife* (P)	H	<i>Lysimachia vulgaris</i> L.	Garden yellow loosestrife	Y
Purple loosestrife	A	<i>Lythrum salicaria</i> L.		Y
European waterclover (P)	A	<i>Marsilea quadrifolia</i> L.	Water shamrock	Y
Japanese stilt grass	G	<i>Microstegium vimineum</i> (Trin.) A. Camus		Y
Eulalia* (P)	G	<i>Miscanthus sinensis</i> Andersson	Chinese or Japanese silvergrass	N/A
Forget-me-not	A	<i>Myosotis scorpioides</i> L.	True forget-me-not; Water scorpion-grass	Y
Parrotfeather (P)	A	<i>Myriophyllum aquaticum</i> (Vell.) Verdc.		Y
Variable-leaf watermilfoil	A	<i>Myriophyllum heterophyllum</i> Michx.		Y
Eurasian watermilfoil	A	<i>Myriophyllum spicatum</i> L.		Y
Brittle water-nymph (P)	A	<i>Najas minor</i> All.	Eutrophic water-nymph	Y
Onerow yellowcress (P)	A	<i>Nasturtium microphyllum</i> Boenn. ex. Rchb.	<i>Rorippa microphylla</i>	Y
Watercress (P)	A	<i>Nasturtium officinale</i> W.T. Aiton	<i>Rorippa nasturtium-aquaticum</i>	Y
American water lotus (P)	A	<i>Nelumbo lutea</i> Willd.	American water lotus	Y
Yellow floating heart (P)	A	<i>Nymphoides peltata</i> (S.G. Gmel.) Kuntze		Y
Scotch thistle (P)	H	<i>Onopordum acanthium</i> L.		Y
Star-of-Bethlehem (P)	H	<i>Ornithogalum umbellatum</i> L.		N/A
Princess tree (P)	T	<i>Paulownia tomentosa</i> (Thunb.) Siebold & Zucc. ex Steud.	Empress-tree	Y
Reed canary grass	G	<i>Phalaris arundinacea</i> L.		N/A
Common reed	G	<i>Phragmites australis</i> (Cav.) Trin. ex Steud.	Phragmites	Y
Water lettuce^ (P)	A	<i>Pistia stratiotes</i> L.		N/A
Canada bluegrass (P)	G	<i>Poa compressa</i> L.		Y
Bristled knotweed	H	<i>Polygonum caespitosum</i> Blume	<i>Persicaria longiseta</i> ; Oriental lady's thumb	Y
Japanese knotweed	H	<i>Polygonum cuspidatum</i> Siebold & Zucc.	<i>Fallopia japonica</i>	Y
Mile-a-minute vine	H	<i>Polygonum perfoliatum</i> L.	<i>Persicaria perfoliata</i>	Y
Giant knotweed (P)	H	<i>Polygonum sachalinense</i> F. Schmidt ex Maxim.	<i>Fallopia sachalinense</i>	Y
White poplar (P)	T	<i>Populus alba</i> L.		Y
Crispy-leaved pondweed	A	<i>Potamogeton crispus</i> L.	Curly pondweed or Curly-leaved pondweed	Y
Kudzu (P)	V	<i>Pueraria montana</i> (Lour.) Merr.	<i>Pueraria lobata</i>	Y
Fig buttercup	H	<i>Ranunculus ficaria</i> L.	Lesser celandine; <i>Ficaria verna</i>	Y
Common buckthorn	S	<i>Rhamnus cathartica</i> L.		Y
Black locust*	T	<i>Robinia pseudoacacia</i> L.		N/A
Multiflora rose	S	<i>Rosa multiflora</i> Thunb.		Y
Rugosa rose* (P)	S	<i>Rosa rugosa</i> Thunb.*	Beach, Salt spray, Japanese, or Ramanas Rose	N/A
		*Note: This plant is especially aggressive in coastal areas		
Wineberry	S	<i>Rubus phoenicolasius</i> Maxim.		Y
Sheep sorrel (P)	H	<i>Rumex acetosella</i> L.		Y
Giant salvinia^ (P)	A	<i>Salvinia molesta</i> Mitchell		Y
Tansy ragwort^ (P)	H	<i>Senecio jacobaea</i> L.	Stinking Willie	Y
Cup plant (P)	H	<i>Silphium perfoliatum</i> L.		Y
Bittersweet nightshade (P)	H	<i>Solanum dulcamara</i> L.	Climbing nightshade	Y
Water chestnut	A	<i>Trapa natans</i> L.		Y
Coltsfoot	H	<i>Tussilago farfara</i> L.		Y
Garden heliotrope (P)	H	<i>Valeriana officinalis</i> L.	Garden Valerian	Y

4. Activities and Accomplishments

Activities and Accomplishments

The Council, acting through the Invasive Plant Coordinator, had a very productive year in 2014. The following is a detailed list of activities and accomplishments supported by the Invasive Plants Council, or the Coordinator in conjunction with partner groups and agencies including: Department of Agriculture (DoAg), Department of Energy and Environmental Protection (DEEP), University of Connecticut (UConn) and the College of Agriculture, Health and Natural Resources (CAHNR), The Connecticut Agricultural Experiment Station (CAES), Connecticut Invasive Plant Working Group (CIPWG), Connecticut Nursery & Landscape Association (CNLA), The Connecticut Federation of Lakes, The Nature Conservancy (TNC), local groups and municipalities, and land and lake alliance groups.

1. Provided outreach at industry conferences, public symposia, and community meetings

- Provided over **73,200** Connecticut business owners and citizens with information about invasive plants through educational outreach at industry trade conferences, public symposia, and community and municipality meetings. Outreach tables included tri-fold poster displays, live plant specimens, handouts, guides, and other resources.
 - a. A staffed outreach table exhibited information on invasive plants at the 33rd annual CT Flower and Garden Show presented by the Federated Garden Clubs of CT (February 20 – 23, Hartford, CT). Volunteers helped to staff the show which was attended by **37,000** people. An announcement for this event can be found in Appendix A on pages 86 – 87.
 - b. An informational invasive plant outreach table was exhibited at the New England Grows Great Ideas Pavilion (February 5 – 7, Boston, MA). This event was attended by **15,000** people. A schedule for this event can be found in Appendix B on pages 88 – 93.
 - c. An informational invasive plant outreach table was exhibited at the Lebanon Fair (August 8 – 10, Lebanon, CT). This fair was attended by over **8,000** people. A schedule for this event can be found in Appendix C on pages 94 – 96.
 - d. A staffed outreach table exhibited information on invasive plants at the UConn Cornucopia Fest presented by UConn – CAHNR (September 21, Storrs, CT). Interested attendees also participated in an Invasive Plant Challenge Quiz. This event was attended by over **5,000** people. A schedule for this event can be found in Appendix D on pages 97 – 98.
 - e. A staffed outreach table exhibited information on invasive plants at Hamden’s 8th Annual Earth Day Celebration (April 12, Hamden, CT). This event was attended by over **4,000** people. An announcement for this event can be found in Appendix E on pages 99 – 100.

- f. The Coordinator staffed an outreach table exhibiting information on invasive plants at the 104th Plant Science Day presented by the CAES (August 6, Hamden, CT). This event was attended by over **1,100** people. A flyer for this event can be found in Appendix F on pages 101 – 102.
- g. The Coordinator staffed an outreach table exhibiting information on invasive plants at the 2014 Winter Symposium and Expo presented by the Connecticut Nursery and Landscape Association (January 14 & 15, Manchester, CT). This trade show was attended by **500** nursery and landscape professionals. A brochure for this event can be found in Appendix G on pages 103 – 104.
- h. The Coordinator and volunteers staffed an outreach table exhibiting information on invasive plants at the 7th biennial Invasive Plant Symposium presented by CIPWG (October 7, Storrs, CT). This educational conference was attended by **500** educators, researchers and engaged citizens. A program for this event can be found in Appendix H on pages 105 – 106.
- i. The Coordinator staffed an outreach table exhibiting information on invasive plants at the 2014 Summer Field Day presented by the Connecticut Nursery and Landscape Association (July 16, North Branford, CT). This trade show was attended by over **400** nursery and landscape professionals. A brochure for this event can be found in Appendix I on pages 107 – 108.
- j. An informational invasive plant outreach table was exhibited at the 2014 UConn Garden Conference (March 20, Storrs, CT). This conference was attended by approximately **270** people. A postcard for this event can be found in Appendix J on pages 109 – 110.
- k. An information invasive plant outreach table was exhibited at the 2014 UConn Perennial Plant Conference (March 21, Storrs, CT). This conference was attended by approximately **270** people. A postcard for this event can be found in Appendix K on pages 111 – 112.
- l. The Coordinator staffed an outreach table exhibiting information on invasive plants at the 37th Annual Meeting and Environmental Conference presented by the Connecticut Association of Conservation and Inland Wetlands Commissions (November 15, Wallingford, CT). This conference was attended by over **250** environmental professionals and engaged citizens. A program for this event can be found in Appendix L on pages 113 – 115.
- m. An informational invasive plant outreach table was exhibited at the 8th annual CT Conference on Natural Resources presented by UConn (March 17, Storrs, CT). This multidisciplinary conference brought together natural resource and environmental management. It was attended by **200** environmental professionals and engaged

- citizens. An announcement for this event can be found in Appendix M on pages 116 – 117.
- n. An informational invasive plant display was exhibited and questions about invasive plants were answered during the UConn Extension Legislative Reception (April 24, Hartford, CT). This event was attended by approximately **150** people.
 - o. An informational invasive plant outreach table was exhibited at the Turf and Landscape Conference presented by the CT Grounds Keepers Association (January 22, Cromwell, CT). This conference was attended by **150** ground keeper and landscape professionals. A flyer for this event can be found in Appendix N on pages 118 – 119.
 - p. An informational invasive plant display was exhibited at the 2014 Forest Health Monitoring Workshop held at Ford Trumbull State Park (March 4, New London, CT). This workshop was attended by over **60** participants.
 - q. An informational invasive plant display was exhibited at a Responsible Land Management Workshop held in Hartford, CT. This workshop was attended by approximately **60** participants.
 - r. An informational invasive plant outreach table was exhibited at a meeting for the Redding Garden Club (March 10, Redding, CT). This meeting was attended by **52** people.
 - s. An informational invasive plant outreach table was exhibited at Ag Day at the Capitol (March 19, Hartford, CT). This event was attended by over **50** organizations and state and federal agencies celebrating agriculture in Connecticut. An announcement for this event can be found in Appendix O on page 120.
 - t. Invasive plant outreach materials were provided to high school students attending the UConn Early College Learning Experience 2014 Summer Camp (Storrs, CT). This program was attended by **44** students.
 - u. Invasive plant outreach materials were provided to attendees of the K-8 School Grounds Ornamental Plant Management Workshop (Madison, CT). This workshop was attended by **42** school grounds and landscape professionals.
 - v. The Coordinator exhibited an informational invasive plant display in Southbury Town Hall during an Invasive Plants Forum hosted by the Southbury Inland Wetlands Commission (May 27, Southbury, CT). This forum was attended by approximately **30** people.

- w. Invasive plant outreach materials were provided during a meeting for the CT Christmas Tree Growers Association (June 19, Newtown, CT). This meeting was attended by approximately **30** members.
- x. Invasive plant outreach materials were provided during a meeting for the Easton Garden Club (March 12, Easton, CT). This meeting was attended by approximately **25** members.
- y. An invasive plant outreach table was exhibited at the Beckish Senior Center during an invasive plant talk sponsored by the Columbia Conservation and Agriculture Commission (May 15, Columbia, CT). This talk was attended by **19** people.
- z. An invasive plant outreach table was exhibited at the Babcock Library during an invasive plant talk sponsored by the library (June 13, Ashford, CT). This talk was attended by approximately **12** people.

2. Provided resources for invasive plant inquiries

- Provided over **30,000** citizens with invasive plant information via website presence, list serve posting, newsletter messaging, direct mailing, and in response to direct inquiries.
 - a. The CIPWG website (cipwg.uconn.edu) provided invasive plant information to over **28,171** viewers. A Google Analytics Audience Report can be found in Appendix P on page 121.
 - b. In 2014, Donna Ellis, UConn Dept. of Plant Science and Landscape Architecture and CIPWG Co-chair responded to **820** invasive plant inquiries via phone, email, and personal communication.
 - c. Invasive plant news and events were distributed to approximately **760** members of the CIPWG list serve.
 - d. Current news and invasive plant information was delivered to over **140** recipients of an e-newsletter distributed seven times by the Coordinator.
 - e. Between June 2014 and August 2014, the Coordinator responded to **78** inquiries regarding invasive plants.
 - f. In 2014, Rose Hiskes, Diagnostician and Horticulturist at The Connecticut Agricultural Experiment Station responded to **75** inquiries regarding invasive plants.

3. Provided or supported conferences and training workshops on invasive plants

- Provided or supported conferences and training workshops for **160** Department of Transportation (DOT) workers and over **1,800** Connecticut citizens, who received more than **5,000** hours of training through direct teaching and presentations on invasive plants.

- a. The 7th biennial Invasive Plant Symposium was developed in coordination with CIPWG (October 7, Storrs, CT). This event attracted a sold-out crowd and featured national, regional, and local experts as well as citizen volunteers sharing practical solutions for managing invasive plants, promoting non-invasive plants and improving wildlife habitat. Training was provided through hand-on species identification tables, posters and exhibits, discussion panels, and presentations. Each of the **500** attendees received over **5** hours of training; the equivalent of **2,500** hours of training was provided. A program for this event can be found in Appendix H on pages 105 – 106.
- b. Five full-day sessions were developed in collaboration with UConn’s Technology Transfer Program, DOT, DEEP Forestry Division, and CAES to train 160 state-wide DOT maintainers on invasive plant identification, control, and best management practices to reduce accidental spread (March & April, Newington, CT). The workshops included hands-on species identification, control discussions, plant identification tools, and a special presentation on Emerald Ash Borer and Asian Longhorned Beetle. Each of the **160** attendees received **8** contact hours of training; the equivalent of **1,280** hours of training was provided.
- c. Information on invasive plant identification and control was provided during presentations to each of the three Ornamental and Turf Short Courses presented by UConn Extension, DEEP, and East Haven Landscape Products. These courses took place in East Haven, West Hartford, and North Haven during the winter and fall. Each of the **60** participants received **3** hours of training; the equivalent of **180** hours of training was provided. An announcement for this event can be found in Appendix Q on page 122.
- d. A technical demonstration and talk on common garden weeds, including the invasive plant mugwort, was delivered at the 104th Plant Science Day presented by the CAES (August 6, Hamden, CT). Around 200 people attended each of the two sessions for this talk. Each of the approximately **400** attendees of the talk received $\frac{1}{3}$ hour of training; the equivalent of **133** hours of training was provided. A flyer for this event can be found in Appendix F on pages 101 – 102.
- e. A presentation entitled “Management of Invasive Aquatic Plants” was delivered at the 37th Annual Meeting and Environmental Conference presented by the Connecticut Association of Conservation and Inland Wetlands Commissions (November 15, Wallingford, CT). Each of the **75** attendees at this talk received **1** hour of training; the equivalent of **75** hours of training was provided. A program for this event can be found in Appendix L on pages 113 – 115.
- f. Provided invasive aquatic plant information to a panel discussing the condition of Lake Beseck after drawdown and damn repairs. The panel met at Middlefield Community College and included CT DEEP Commissioner Klee, State Senator Bartolomeo, State Representative Altobello, and First Selectman Brayshaw. Each of the **75** attendees received approximately **1** hour of training; the equivalent of **75** hours of training was provided.

- g. An Invasive Aquatic Plant seminar was delivered to an Environmental Science class at Three Rivers Community College (February 19, Norwich). Each of the **50** students received **1.5** hours of training; the equivalent of **75** hours of training was provided.
- h. An Invasive Aquatic Plant Workshop was presented at the Middlefield Community Center (April 22, Middlefield, CT). Each of the **45** attendees received **1.5** hours of training; the equivalent of **67.5** hours of training was provided.
- i. A PowerPoint presentation followed by a question and answer session on invasive plant concerns was delivered by the Coordinator at an Invasive Plants Forum hosted by the Southbury Inland Wetlands Commission (May 27, Southbury, CT). Each of the approximately **30** attendees received **2** hours of training; the equivalent of **60** hours of training was provided. The slides for this presentation can be found in Appendix R on pages 123 – 134.
- j. A PowerPoint presentation on running bamboo followed by a general question and answer session was delivered by the Coordinator to the Wild Ones Mountain Laurel CT Chapter (February 1, New London, CT). Wild Ones: Native Plants, Natural Landscape is a not-for-profit organization promoting environmentally sound landscaping practices using native plants. The presentation covered the characteristics that make a plant invasive, evaluating potentially invasive plants from a legal perspective and management tips for troublesome species. Each of the approximately **20** attendees received **3** hours of training; the equivalent of **60** hours of training was provided.
- k. A PowerPoint presentation on invasive plants was delivered at the 2014 Forest Health Monitoring Workshop held at Fort Trumbull State Park (March 4, New London, CT). Each of the **60** attendees received **1** hour of training; the equivalent of **60** hours of training was provided.
- l. An informational presentation in invasive plants was delivered during a meeting for the Redding Garden Club (March 10, Redding, CT). Each of the **52** attendees received **1** hour of training; the equivalent of **52** hours of training was provided.
- m. An Invasive Aquatic Plant Workshop was delivered to the Lake Hayward Association and other interested parties (June 21, East Haddam). Each of the **35** attendees received **1.5** hours of training; the equivalent of **52.5** hours of training was provided.
- n. A presentation on the CAES Invasive Aquatic Plant Program research on controlling variable-leaf watermilfoil was delivered at the 23rd annual meeting for the Bashan Lake Association (July 26, East Haddam). Each of the approximately **100** attendees received $\frac{1}{2}$ hour of training; the equivalent of **50** hours of training was provided.
- o. An outdoor training session on invasive plant identification and management was conducted during the UConn Early College Learning Experience 2014 Summer Camp

- (Storrs, CT). Each of the **44** student participants received **1** hour of training; the equivalent of **44** hours of training was provided.
- p. An outdoor training session on invasive plant identification and management was conducted at the K-8 School Grounds Ornamental Plant Management Workshop (Madison, CT). Each of the **42** participants received **1** hour of training; the equivalent of **42** hours of training was provided.
 - q. A course on aquatic plants was presented to the Federated Garden Clubs of CT at the Kellogg Environmental Center (October 15, Bethany, CT). Each of the **30** attendees received **1** hour of training; the equivalent of **30** hours of training was provided.
 - r. A presentation on invasive plant management and alternatives was given during New England Grows (February 5-7, Boston, MA). Each of the **50** people who attended this talk received $\frac{1}{2}$ hour of training; the equivalent of **25** hours of training was provided. A schedule for the breakout sessions can be found in Appendix S on pages 135 – 140.
 - s. A presentation on invasive plant identification and management followed by a question and answer session was delivered during a meeting for the Easton Garden Club (March 12, Easton, CT). Each of the **25** attendees received **1** hour of training; the equivalent of **25** hours of training was provided.
 - t. A presentation entitled “CAES Invasive Aquatic Plant Program Research to Control Brazilian Waterweed in Fence Rock Lake” was delivered at Guilford Community Center at a meeting for the Fence Rock Lake Association (May 13, Guilford, CT). Each of the **25** attendees received **1** hour of training; the equivalent of **25** hours of training was provided.
 - u. A talk entitled “Connecticut’s Invasive Aquatic Plant Problem – Searching for Solutions” was delivered at the Whitney Center to Experiment Station Associates (March 26, Hamden, CT). Each of the **50** attendees received $\frac{1}{2}$ hour of training; the equivalent of **25** hours of training was provided.
 - v. A training session was developed in collaboration with CAES to train DoAg inspectors responsible for visiting pet shops and inspecting possible sales of invasive plants (March 5, Hartford, CT). Each of the **12** attendees received **2** hours of training; the equivalent of **24** hours of training was provided.
 - w. A talk entitled “The Battle of Candlewood Lake: Can the Invaders be Stopped?” was delivered at the 8th annual CT Conference on Natural Resources presented by UConn (March 17, Storrs, CT). Each of the **40** attendees at this talk received $\frac{1}{2}$ hour of training; the equivalent of **20** hours of training was provided.
 - x. An informational presentation on invasive plants was delivered at Beckish Senior Center during a talk hosted by the Columbia Conservation and Agriculture

Commission (May 15, Columbia, CT). Each of the **19** attendees received **1** hour of training; the equivalent of **19** hours of training was provided.

- y. An informational presentation on invasive plants was delivered at a talk sponsored by the Babcock Library (June 13, Ashford, CT). Each of the **12** attendees received **1** hour of training; the equivalent of **12** hours of training was provided.
- z. A talk on plant biology and management options for invasive plants targeted by Christmas Tree Growers was delivered at a meeting for the Christmas Tree Growers Association (June 19, Newtown, CT). Each of the **30** members in attendance received $\frac{1}{4}$ hour of training; the equivalent of **7.5** hours of training was provided.

4. Supported efforts to control and mitigate invasive plants in Connecticut

- Supported programs that provided over **700** hours of volunteer and state agency efforts to control and mitigate invasive plants on CT public lands and waters. These programs were led by state and local organizations and land trust associations.
 - a. The CAES, in collaboration with UConn headed the biological control program for Mile-a-minute vine (*Persicaria perfoliata*). Over **480** hours were spent scouting with volunteers, responding to inquiries, participating in interviews, maintaining the weevils before releases, and coordinating release and monitoring activities.
 - b. Glastonbury Partners in Planting (GPIP) sponsored a “Battling Bittersweet Work Day” at Riverfront Park (October 25, Glastonbury, CT). Each of the **45** volunteers worked for **3** hours each to mitigate Oriental bittersweet (*Celastrus orbiculatus*); the equivalent of **135** hours of labor was provided. Information from the GPIP website on this event can be found in Appendix T on pages 141 – 142.
 - c. GPIP sponsored a “Save a Tree Work Day” at Ferry Landing Park (June, Glastonbury, CT). Each of the **15** volunteers worked for **3** hours each to mitigate Oriental bittersweet (*Celastrus orbiculatus*); the equivalent of **45** hours of labor was provided. Information from GPIP website on this event can be found in Appendix U on pages 143 – 144.
 - d. The Roxbury Land Trust sponsored a “Trail Workday” with the Washington Montessori School at Battle Swamp Preserve (November 14, Roxbury, CT). Each of the **14** students and staff worked for **3** hours each to mitigate Japanese barberry (*Berberis thunbergii*); the equivalent of **42** hours of labor was provided.
 - e. The Pine Grove Beautification Committee sponsored a series of workdays to eradicate Japanese knotweed (*Polygonum cuspidatum*) from the bank of the Niantic River (Niantic, CT). An unknown number of volunteers worked for **6** hours each over the four sessions.

5. Assisted with grant funding for aquatic invasive plant management

- Assisted in the review and selection of proposals to be awarded the **\$150,000** in DEEP grant funding for aquatic invasive plant management. The selected municipalities contributed over **\$185,000** in matching funds.
 - a. Reviewed proposals for over **\$290,000** in funding requests from municipalities.
 - b. Evaluated proposals and determined how to allocate the **\$150,000** in grant funding.
 - c. Assisted with the development of contracts for the following 12 programs receiving funding for aquatic invasive plant management:
 - i. The Candlewood Lake Authority was awarded **\$50,000**, with matching funds of **\$59,491**, in order to stock triploid grass carp in Candlewood Lake for the control of Eurasian watermilfoil.
 - ii. The Town of Morris was awarded **\$25,000**, with matching funds of **\$50,000**, for the eradication of fanwort in Bantam Lake Watershed.
 - iii. The Town of Winchester was awarded **\$15,000**, with matching funds of **\$15,000**, for the control of Eurasian watermilfoil and variable-leaf watermilfoil in Highland Lake.
 - iv. The Towns of Coventry and Mansfield were awarded **\$14,000**, with matching funds of **\$14,000**, for the management of fanwort in Eagleville Lake.
 - v. The Town of New Fairfield was awarded **\$9,150**, with matching funds of **\$9,250**, for a study on the efficacy and impact of grass carp for the control of Eurasian watermilfoil in Ball Pond.
 - vi. The Town of East Haddam was awarded **\$9,050**, with matching funds of **\$9,050**, for invasive aquatic plant mitigation in Lake Hayward.
 - vii. The Town of East Haddam was awarded **\$6,000**, with matching funds of **\$6,750**, for a pilot project to test the effectiveness of herbicides to control fanwort and variable-leaf watermilfoil in Moodus Reservoir.
 - viii. The Town of North Stonington was awarded **\$5,750**, with matching funds of **\$5,750**, for the control of variable-leaf watermilfoil and fanwort in Lake Billings.
 - ix. The Town of Union was awarded **\$5,000**, with matching funds of **\$5,000**, for the restoration of Lower Mashapaug Pond and preservation

of Mashapaug Lake and Quinebaug Headwaters by controlling and managing variable-leaf watermilfoil.

- x. The Town of Preston was awarded **\$4,400**, with matching funds of **\$4,800**, for the control of variable-leaf watermilfoil in Amos Lake.
- xi. The Town of Goshen was awarded **\$4,000**, with matching funds of **\$4,000**, to conduct a diagnostic study of aquatic plant life in Dog Pond, Tyler Lake, and Westside Pond.
- xii. The Town of North Stonington was awarded **\$2,650**, with matching funds of **\$2,650**, for the control of variable-leaf watermilfoil in Wyassup Lake.

6. Assisted state agencies with invasive plant issues

- Assisted and supported state agencies and municipalities by providing information about invasive plants and the associated laws, support on grant programs, and research collaboration.
 - a. Provided information and reports as needed to staff at DEEP, CAES, UConn – CAHNR and DoAg regarding inquiries or questions on invasive plants, the invasive plant laws, plant identification, and other related topics.
 - b. Collaborated with the CAES to conduct research into mugwort (*Artemisia vulgaris*) seed growth and germination to assess invasive status. Information on this research can be found in the CAES report.
 - c. Assisted DEEP with grants to municipalities for aquatic invasive plant management. DEEP received more than \$290,000 in funding requests when only \$150,000 was available.
 - d. Participated in National Science Foundation grant funded working group meeting entitled, “Interactive Effects of Economics, Public Policy, Land Use Change, and Invasive Plants in Long Island Sound Watersheds”. The multidisciplinary team of scientists working on the Invasive Plant Atlas of New England (IPANE) project were awarded the grant and organized the working group. The overall objective of this project is to investigate interactions among public and economic policy, land use changes, and invasive plant distributions in Long Island Sound Watersheds. The results will be used to direct invasive species prevention and management efforts. Information on this project can be found in the IPANE report.
 - e. Received and directed reports of invasive plant sales and other potential legal issues to the appropriate agencies.

7. Provided administrative support to the Invasive Plants Council

- Provided administrative support needed for the legislatively-appointed Invasive Plants Council (IPC) in executing the Council's state mandated missions.
 - a. Prepared agendas; took, distributed, and posted minutes for IPC meetings.
 - b. Responded to information requests/tasks from the Council.
 - c. Updated the Invasive and Potentially Invasive Plant Early Detection List. These plants are known to be invasive or potentially invasive in CT but are known to be present only in relatively low numbers at limited locations. These species should be targeted for control and eradication efforts in the state when resources are available. This list can be found in Appendix V on page 145.
 - d. Created an independent Research List of plants requiring more information to assess invasive status. Current records are limited for these plants and more information about these plants and their occurrence in the state is desired. The list can be found in Appendix W on pages 146 – 147.
 - e. Coordinated with industry associations, environmental interest groups, state and municipal agencies on issues related to public education, identification and management of invasive plants.
 - f. Compiled the 2014 IPC Annual Report.

8. Assisted in the development of a forum hosted by the Environment Committee

- Assisted in the development of a forum hosted by the Environment Committee and sponsored by Senator Clark Chapin entitled "Aquatic Invasive Presentation and Panel Discussion" (January 28, Legislative Office Building, Hartford).
 - a. The forum provided an opportunity for information exchange and discussion of aquatic invasive species issues.
 - b. Participants included representatives from the IPC, CAES, UConn, DEEP, CT Federation of Lakes, Candlewood Lake Authority, Lake Waramaug Task Force, Inc., and various members of the legislature.
 - c. The Council presented on the following aquatic invasive plant needs:
 - i. The need to increase boat inspections at access ramps.
 - ii. The need for state agency capacity to rapidly respond to newly discovered invasions.
 - iii. The need for additional information on control methods and vectors.

- d. There was broad consensus among those present that aquatic invasive species are a widespread problem in Connecticut and that the resources currently being deployed, while significant, are insufficient to manage the current infestations or prevent additional invasions.

5. University of Connecticut, College of Agriculture, Health and Natural Resources Report

University of Connecticut
College of Agriculture, Health and Natural Resources
Department of Plant Science and Landscape Architecture
2014 Invasive Plants Council Update

Report from Yi Li, Department of Plant Science and Landscape Architecture, University of Connecticut:

Development of Sterile, Non-Invasive Burning Bush Varieties

We have developed triploid burning bush (*Euonymus alatus* 'Compactus') plants using endosperm tissue culture techniques. Two of many triploid sexually propagated plants planted years ago under field conditions produced a small number of flowers but all flowers were dropped at the mature stage. More flowers will be produced from these progenies in 2015 and 2016. We expect that the final confirmation of the sterility, non-invasiveness of these triploid burning bush plant lines will be completed in 2016 or 2017. We should start to release non-invasive triploid burning bush varieties to the ornamental industry in 2016.

We have also bred a fruitless mutant burning bush plant through mutation breeding techniques. Our preliminary field evaluation confirmed that sexually propagated progenies of the mutant plant produced normal flowers but no fruits. Additional confirmations for the non-invasiveness of the asexually propagated mutant progenies will be in 2015, 2016 and/or 2017. We expect to release this non-invasive mutant of burning bush in 2017.

Report from Mark Brand, Department of Plant Science and Landscape Architecture, University of Connecticut:

In 2014, we continued to evaluate polyploid barberries developed in my laboratory. An additional year of data about fruit production, seed production and horticultural performance were collected. Previous trends of extremely low fecundity for our selected polyploids continued. Softwood cuttings of six superior near sterile genotypes were rooted at the University of Connecticut. Additionally, cuttings of one select genotype were distributed to six commercial nursery producers for rooting evaluation. Three genotypes with excellent sterility and desirable ornamental qualities have been identified for intensive propagation efforts in 2015. Dialogue was initiated with regulatory bodies in states where barberry is banned to develop cultivar exemptions for sterile barberries.

6. Department of Energy and
Environmental Protection
Invasive Plant Program Report

Connecticut Department of Energy and Environmental Protection Invasive Plant Work: 2014 year-end report

2014 CT DEEP Water Chestnut Removal Efforts

Beginning in 2005, Inland Fisheries Division (IFD) staff have surveyed (often in collaboration with other DEEP staff) the main stem CT River and associated coves from Hartford to Haddam for the highly invasive water chestnut (*Trapa natans*). Cynthia Boettner, US Fish & Wildlife Service (USFWS), coordinates and leads water chestnut control activities from Hartford north into Massachusetts including major infestations on the Hockanum River and several other sites in the Hartford area. With more limited staff resources this year, volunteers took over surveying and much of the harvesting at several of the USFWS sites.

This year on the Connecticut River, staff focused on the lower portions of the river. Since 2011, the Tidewater Institute (with coordination from USFWS) has surveyed portions of the lower river, locating and when manageable, removing plants from the Eustasia Island area and several small patches in Salmon River Cove and other sites. In 2013, in response to a report from an angler, IFD staff located and removed two “pick-up truck loads” of plants from the CT River near Andrews Marina/Goodspeed Bridge in Tylerville (Haddam). This year, during two work parties, IFD staff and volunteers surveyed and removed stands of water chestnut from a number of sites along the lower river, including Selden Cove (first reported this year, a large stand was found and removed), Eustasia Island (after several previous years of removal, no plants were found in 2014), Tylerville (the second year of harvesting at this site with scattered small beds removed, but well less than in 2013), and Salmon River Cove (harvested for several previous years, only a limited number of plants found and removed) with several truckloads hauled away for disposal.

In western Connecticut, IFD staff surveyed and removed plants at Mudge Pond (removing a 50-gallon tub of plants) and Lake Lillinonah, where water chestnut was found in the northern stretch of the lake from the confluence of the Still River up to the Bleachery Dam, and approximately two miles south of the Still River (all plants found were removed from approximately 30 locations). Additionally, Lake Kenosia was surveyed for the first time in 2014, and extensive beds of water chestnut beyond IFD resources to harvest were found. There is no plan in place at this time for removal of the Lake Kenosia infestation.

2014 DEEP Forestry Division Invasive Plant Control Efforts

A total of 356 acres of invasive plants were controlled by certified forest practitioners. Of that, 20 acres of control was completed by the DEEP Forestry Division staff and 336 by practitioners regulated by the Division. The total number of control acres for 2014 was considerably greater than was done the previous year (118 acres in 2013).

2014 DEEP Boating Division Invasive Plant Efforts

The DEEP Boating Division hired 18 Boating Education Assistants (BEAs) in 2014. Thirty thousand dollars (\$30,000) was made available to help fund these positions through SB 446, which provided a one-time appropriation to DEEP for efforts to combat aquatic invasive species. The BEAs' time was spent visiting state boat launches throughout the state and educating boaters on clean and safe boating techniques, with an emphasis on ways boaters can help prevent the spread of aquatic invasive species. The BEA visited lakes, ponds, and coastal waters in western CT, and many boaters have reported that they learned how to "Clean, Drain, Dry" equipment to prevent the spread of invasive plants and animals. The statewide BEA Program collected 8,733 Clean Boater Pledges and conducted 2,883 AIS vessel inspections and 3,122 Vessel Safety Checks between May 23, 2014 and October 2, 2014. There has been fluctuation in the number of BEAs over the years, but it can be seen below just how successful the program is when boaters are actively participating in preventing the spread of AIS.

In 2011, the first year that actual AIS boat inspections were conducted, 1,260 vessel inspections were performed. In 2012, 1,691 inspections were performed and in 2013, 1,563 inspections were performed. Of those launching in 2013, 91% of those inspected stated they inspected and removed any weeds from their boat prior to launching. Also in 2013, 91% of the people said they disposed of their bait properly. That's a 54% increase from the year 2011. In 2011, 62% indicated they washed their boats prior to launching; in 2012, 76% indicated they washed their boat prior to launching and in 2013, 79% washed their boats prior to launching. While 84% indicated they drained their boat prior to launching in 2011; 93% indicated they did in 2012, and 78% indicated they did in 2013. In 2011, 40 inspected boats arrived at launches with weeds (3.1% of boats); in 2012, 5 inspected boats arrived at launches with weeds (0.3% of boats); and in 2013, 8 inspected boats arrived at launches with weeds (0.5% of boats).

It is evident that boaters are becoming aware of the existing AIS laws. In 2011, 8.9% of boaters did not know about the laws; in 2012, 9.3% were not aware of the laws, and in 2013, 0.4% said that they were not aware of the laws. In 2014, BEAs discussed the importance of preventing the spread of AIS with more boaters and performed the same AIS inspection; however, the AIS inspection form was identified as overly cumbersome and was only used by a few BEAs. Due to this feedback, the data collected in past years was not collected during 2014 inspections. The form will be corrected for the 2015 boating season.

2014 Wildlife Division Invasive Plant Management Efforts

State-land Projects

Proj. #	Site	Town	Program	Treatment	Acres	Completed	Invasives Targeted	MGT Intent
1	Quinnipiac River SP	North Haven	PR	Spray/manual	12	July	mile-a-minute, autumn olive, multiflora rose & bitternut	Cedar/forest understory
2	Housatonic River WMA	Kent	PR	Spray fields & forest regeneration	71	August	bush honeysuckle, wormwood, barberry, autumn olive	Old fields/forest regeneration
3	Roraback WMA	Harwinton	PR	Spray fields & forest regeneration	51	August	autumn olive, barberry & multiflora rose	Forest understory & old fields
4	West Rock SP	Hamden	PR	Spray/manual	12	July	autumn olive & multiflora rose	Cedar/forest understory
5	Naugatuck SF	Naugatuck	PR	Spray fields	14	July	barberry & autumn olive	Old fields
6	Camp Columbia	Morris	PR	Spray fields & forest regeneration	15	August	autumn olive, barberry & multiflora rose	Forest regeneration
7	Mead River FCA	Winsted	PR	Spray fields	19	July	autumn olive, barberry & multiflora rose	Meadow/old field
8	Goshen WMA	Goshen	PR	Spray fields	133	August	autumn olive, barberry & multiflora rose, willows	Grassland
9	Goshen WMA	Goshen	PR	Mow fields	133	Jan	autumn olive, barberry & multiflora rose, willows	Grassland
10	Mattatuck SF	Terryville	PR	Spray forest understory	5.1	August	barberry	Forest regeneration
11	Tunxis SF	Hartland	PR	Spray fields	6	August	autumn olive, barberry & multiflora rose	Old fields
12	Tunxis SF	Hartland	WHIP	Mow fields	6	March	autumn olive, barberry & multiflora rose	Old fields
13	Tunxis SF	Hartland	WHIP	Mow	25	Feb	autumn olive, barberry & multiflora rose	Old fields
14	Suffield WMA	Suffield	PR	Mow fields	113	Jan	autumn olive, barberry & multiflora rose	Grassland
15	Suffield WMA	Suffield	PR	Spray fields	113	September	autumn olive, barberry & multiflora rose	Grassland
16	FFTA	East Windsor	PR	Mow fields	150	August	autumn olive & multiflora rose	Old field
17	FFTA	East Windsor	PR	Spray fields	30	July	multiflora rose and bitternut	Old field
18	Belding WMA	Vernon	PR	Mow	16	July	barberry & multiflora rose	Grasslands
19	Barn Is. WMA	Stonington	PR	Spray grasslands	28	July	autumn olive, barberry & multiflora rose	Grasslands
20	Nod Brook	Avon	PR	Mow	35	June	autumn olive, barberry & multiflora rose	Grasslands
21	Minto SP	Torrington	PR	Mow grasslands	10	Jan	autumn olive, barberry & multiflora rose	Grasslands
22	Charles Island NAP	Milford	PR/Tax check-off	Mow/mulch invasive shrubs	13	September	bittersweet, autumn olive, barberry & multiflora rose	Rookery restoration
23	Charles Island NAP	Milford	PR/SEP	Spray	13	September	bittersweet, autumn olive, barberry & multiflora rose	Rookery restoration
24	Cromwell Meadow s WMA	Cromwell	PR	Mow fields	30	Jan	autumn olive, barberry & multiflora rose	Old field
25	Robbin Swamp WMA	Falls Village	PR	Mow fields	12	March	autumn olive, barberry & multiflora rose	Old field
26	Centennial SF	Easton	WHIP	Mow fields	47	September	multiflora rose, barberry, poison ivy	Grassland
27	Bear Hill WMA	Bozrah	PR	Spray fields & forest regeneration	42	September	autumn olive, barberry & multiflora rose	Old fields & forest understory
28	Aircraft Rd	Middlefield	PR	Manual & spray	19	July	barberry & multiflora rose	Grasslands
29	Nathan Hale SF	Coventry	PR	Mow/manual removal	6	August	autumn olive, barberry & multiflora rose	Old fields
30	Barn Island WMA	Stonington	PR	Spray fields	35	August	autumn olive, barberry & multiflora rose	Fields/grasslands
31	Pachaug SF	Sterling	PR	Spray fields	42	September	autumn olive	Old fields
32	Zenko Pond WMA	Salem	PR	Spray fields	13	July	autumn olive, barberry & multiflora rose	Old fields

Total state land acres treated 1,269.1

Private Landowner Cooperative Projects

Proj. #	Site	Town	Program	Treatment	Acres	Completed	Invasives Targeted	MGT Intent
1	Magnuson	Lebanon	WLFW	Spray forest understory	17	September	bush honeysuckle, barberry, multiflora rose, bittersweet	Forest regeneration
2	Woodbury/Southbury Club	Woodbury	WLFW	Spray forest understory	28	August	bush honeysuckle, barberry, multiflora rose, bittersweet	Forest regeneration & fields
3	White Memorial	Litchfield	WLFW	Spray forest understory & fields	44	August	bush honeysuckle, barberry, multiflora rose, bittersweet	Forest regeneration & fields
4	Avalonia Peck Callahan	Stonington	WLFW	Spray forest understory	28	August	bush honeysuckle, barberry, multiflora rose, bittersweet	Forest regeneration
5	Shinkiewicz	Canterbury	LIP	Spray field	3	July	multiflora rose, autumn olive	Reverting field
6	Groton Long Point Assoc	Groton	LIP	Spray tidal marsh	1	September	Common reed	Tidal marsh

Total private land acres treated 121

- ** PR- federal Aid Pittman Robertson Wildlife Funds
- ** WHIP- NRCS Wildlife Habitat Incentives Program funds
- ** WLFW - NRCS Working Lands For Wildlife Funds
- ** LIP- Landowner Incentives Program funds

**2014 Wetland Habitat and Mosquito Management (WHAMM) Program Invasive Plant Control Efforts
(herbicide applications to treat a variety of invasive plants but mostly phragmites)**

	Acres	Date of Spraying	Product Gallons Triclopyr	Product Gallons Imazapyr	Product Gallons Glyphosat
Taylorstown, Westport	1	7/30		30	
Barn Island Dike 2 & 3, Stonington	4	9/22		100	
Lance Magnuson, Lebanon Wood lot/Phrag	3	9/24-10/3			80
Skiff Mountain	1	10/2			10
Farm River SP, Mansfield Landing, East Haven	2	10/14			50
Lake Bolton dams, Bolton	1	10/3			25
Charles Island, Milford	5	9/2-9/3		130	
Little Pond, Thompson	1	9/9		40	
Pawcatuck River WMA Stonington	10	8/21 8/26		125	
Long Beach West, Stratford	1	8/27		0	
Wadsworth Falls, Middletown	1	9/29			50
Shinkiewicz, Canterbury LIP	3	7/8	75		
Pilfershire Marsh, Eastford CT DS	3	8/18		100	
Ross marsh, Killingly CT DS	17	8/7- 8/12		370	
Nehantic SF, East Lyme CT DS	21	8/20		475	
Assekonk Swamp, N. Stonington CT DS	12	9/22		300	
Dock & Dine Marsh, Old Saybrook	3	9/23		15	
Marine HQ, Old Lyme	2	10/10			70
Kelsey Place Madison	1	9/8		10	
Dodge Paddock, Stonington	1	8/6		2	
West River, Guilford LIP	1	7/30		5	
Van Winkle Grant - Great Island, Old Lyme	18	10/6			430
Ripley, Litchfield	8	9/8			200
Davis Pond, Niantic	2	10/3			60
Skiersky Airport DOT, Stratford	2	8/26		350	50
Goodwin SF, Hampton	1	8/25		0	
Knox Preserve, Stonington	1	8/6		6	
Edgewood Park, New Haven	1	9/22			35
Hutchinson, Groton	1	9/17		10	
Housatonic River -Vendors	200	7/1-9/15		5000	
Laurel Marsh, Manchester NCCD	8	9/10			200
Town of Lebanon, Small pond at Rt87 DPW	1	8/5		20	
Flathery Field Trial Area - Wildlife	6	8/15-8/25		150	
Kent Wyantenock SF, DOT 3&4, Wildlife #1	2	9/9			35
Joshua Creek, Lyme LIP	1	10/9			15
Davis Farm/Roy, Stonington	1	9/22		25	
Little River, New Haven	8	10/14, 15			200
Silver Sands SP, Milford	80	9/30		2000	
Harkness SP Phrag - Verkades, Waterford	7	9/17-10/20		130	
Columbia Yellow Floating Heart - Nancy Murr	1	8/5			
Ayers Point WMA, OS NRCS -	8	9/22-9/23			190
Ragged Rock WMA, OS NRCS	16	9/18-9/22			375
LIP - South Cove, Old Saybrook	14	9/15-9/18			350
Sluice Creek, Guilford Condo	1	9/18		40	
West River, New Haven	6	9/23-10/20			150
Tuttle Point, Guilford	2	9/29			50
Roseland Lake, Woodstock	5	9/9-9/10		120	
Hammonasett SP, Madison - ongoing	5	9/18-9/29			125
Rocky Neck SP, East Lyme	2	10/20			50
DOT Project Branford Rte 95	4	9/29			100

506
Acres

75
Gallons
mix (final vol)

9553
gallons

2900
Gallons

2014 Products used and control

Glyphosate 5.4 (Alligare) EPA 81927-8	2.5%	73 Gallons
Imazapyr 4 SL (Vegetation Manager) EPA	1.5%	143 Gallons
Alligare 90 (Surfactant) SN 001A-072307	0.5%	62.265 Gallons
Ecotriclopyr 3 SL (triclopyr) EPA 110405	1.0%	0.75 Gallons
Sonar AS (Fluridone) EPA 67690-4		1 Quart

IMM is Integrated Mosquito Management a vendor on contract for Herbiciding

Connecticut ANS Management Plan

Annual Report to the U.S. Fish and Wildlife Service for Fiscal Year 2014

Summary of Aquatic Nuisance Species Federal Funds:

2012 Research on the Non-native Light Bulb Tunicate: CT Sea-Grant, Nancy Balcom
Final report has been submitted to Regional Office.

2013 Carbon dioxide research on control of zebra mussels: Western CT State University
An extension for this project was approved until September 30, 2015.
We continue to pursue access to the site and resolving liability issues.

2014 Funds will be used to hire one additional Boating Education Assistant who will educate anglers and boaters with a focus on high risk lakes. We expect that funds will be allocated in 2015.

State of Connecticut Grants to Municipalities

The Connecticut General Assembly allocated \$200,000 to the Department of Energy and Environmental Protection (DEEP) in Fiscal Year 2014 to establish an aquatic invasive species grant program to be administered by the DEEP. \$150K will be awarded as grants to municipalities, \$30K is being used to provide funding for Boating Education Assistants to inspect for invasive species at boat launches, and \$20K is being used to administer the grants program and to provide coordinator support for the Invasive Plant Council. The DEEP Bureau of Natural Resources and Boating Division will administer the municipal grants and boat inspection efforts.

Education/Outreach

CT DEEP ANS Program provided the local Cabala's Sporting Store with educational handouts that include "Clean, Drain, Dry" hand outs and the Aquatic Invasive Factsheet.

CT DEEP ANS Program provided a display for the Boating Show

Distributed water garden fact sheet at the University of Connecticut Invasive Plant Symposium.

Control and Management

Yellow floating heart (*Nymphoides peltata*) was first reported in 2008 in a private pond in Connecticut. CT DEEP has conducted seven years of chemical control. Progress is slow, but we are seeing improvement.

State of Connecticut

A Report to the Aquatic Nuisance Species Task Force for
State Fiscal Year **2014**

FY 2012 Funds \$25,473

1 Summary

***Clavalina ledadiformis*, a non-native tunicate: Research project has been completed.** This project was to conduct a risk assessment of *Clavalina ledadiformis*

2 Major Accomplishments

The Final report has been forwarded to the USFWS Regional Office.

3 Program Expenditures

DEEP has closed out the fully executed Project Agreement with the University of Connecticut.

4 Programmatic Needs

Environmental Analyst 1 at 78,197 annually, including salary, fringe and benefits and \$30,000 for budget \$98,197 to conduct EDRR. At this time, **DEEP currently has no funds available for Early Detection and Rapid Response.**

Implement Early Detection and Rapid Response Program (including cost of contractors to conduct control invasive species) \$150,000

Federal Agency ANS Estimated Expenditures

Prevention	\$ 0
Detection & Monitoring	\$ 20,000
Early Detection	\$ 0
Control & Management	\$ 5,473
Rapid Response	\$ 0
Restoration	\$ 0
Education	\$ 0

FY 2013 Funds \$23,644

1 Summary

Federal ANS funds will be used to monitor the numbers of zebra mussel veligers entering the Housatonic River during the period of the year when zebra mussels veligers are active and detectable. CT DEEP will use ANS funds to cover the cost of

veliger surveys associated with the application of in-situ carbon dioxide adjacent to Laurel Brook in Lee Massachussets. Research to be conducted by the US Bureau of Reclamation and Western CT State University.

2 Major Accomplishments

2013 ANS Funds were formally received on August 16, 2013 and a Project Agreement has been drafted so we can continue work in 2015. We are continuing to work to obtain land owner permission to allow the research. We were granted a 12 month extension that expires on September 30 2015.

3 Program Expenditures

DEEP prepared a Project Agreement with Western Connecticut State University allocating \$23,644 of ANS funds to monitor zebra mussels entering the Housatonic River in Connecticut. CT DEEP is currently working on getting land owner permission and on addressing the liability concerns of both the property owner and the carbon dioxide supplier. Work is expected to continue in 2015 when veligers are present. To date \$700 has been paid out.

4 Programmatic Needs

Environmental Analyst 1 at \$78,197 annually, including salary, fringe and benefits.

Implement Early Detection and Rapid Response Program (including cost of contractors to conduct control invasive species) \$125,000

Federal Agency ANS Estimated Expenditures

Prevention	\$ 0
Detection & Monitoring	\$ 23,644
Early Detection	\$ 0
Control & Management	\$ 0
Rapid Response	\$ 0
Restoration	\$ 0
Education	\$ 0

7. The Connecticut Agricultural Experiment Station Report

Jeffrey Ward, Chief Scientist-Dept. Forestry & Horticulture, The Connecticut Agricultural Experiment Station. Email: jeffrey.ward@ct.gov Phone (203) 974-8495

Mugwort (*Artemisia vulgaris*) research

2013 – As previously reported to the CT Invasive Plant Council (CT-IPC), the ability of mugwort to produce viable seed in Connecticut was confirmed when seedlings germinated from all seven geographically and temporally distinct samples (Fig. 1).

2014 – In a collaborative study with Logan Senack (University of Connecticut), mugwort branchlets were collected weekly at two locations (Mansfield, Hamden) between September 3 and November 14, 2013. Six branchlets were collected at least location for each date (N=102)

Sampled were air-dried in a greenhouse to constant weight. From each branchlet sample, 100 random seedheads were selected and weighed to determine average weight per seedhead (0.0017g).

Branchlet samples of approximately 20 cm length were weighed after removing stems (but did include some dried leaves). Mean weight of 20 cm branchlet length was 0.95g indicating an average of approximately 560 seedheads per 20 cm. Discounting 50% for included leaf weight yields approximately 280 seedheads per 20 cm.

After several months vernalization, 25 randomly selected seedheads were placed on moist blotter paper in petri dishes with lids. Mugwort seedlings began to germinate after three days and the study continued twenty-six days after which no new seedlings were observed. At 3-6 day intervals, new sprouts were removed and counted from each sample. Blotter paper was kept moist.

Number of germinants per 25 seedheads ranged from 0 to 215 (2.54±0.2 SEM per seedhead). Number of

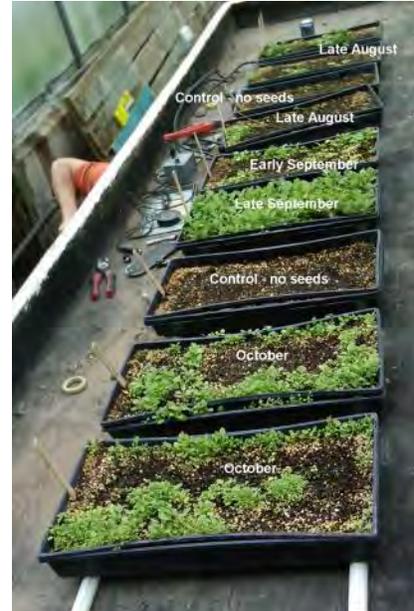


Figure 1. Mugwort seedlings in May 2013 that germinated from samples collected in 2012.

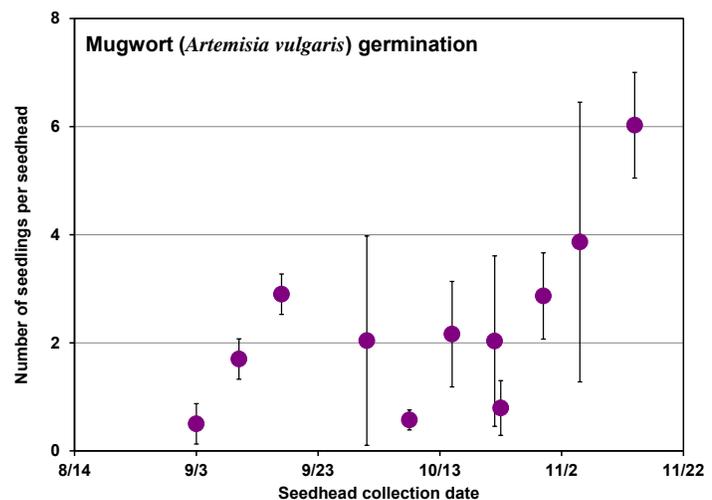


Figure 2. Mean (SD) of seeds germinating per seedhead from samples collected in 2013.

germinated seeds increased from early to mid-September and then remained fairly constant through late October before increasing in November (Fig. 2).

Running bamboo (*Phyllostachys* spp.) research

Plantings - As previously reported to CT-IPC, We began an experiment in 2012 on our three experimental farms to examine the rate of spread and effectiveness of control options for selected *Phyllostachys* cultivars in Connecticut: *Phyllostachys aurea*, *P. aureosulcata*, and *P. aureosulcata spectabilis*. We are comparing the growth (height and number of culms or canes) and rate of spread (distance from original planting) of each species when not controlled with the options of: mowing/knocking off new culms when they first emerge, and containing the rhizomes with heavy plastic lines.

All plantings survived winter of 2012-2013 with minimal winter damage. There was some winter damage (culm mortality) during the winter of 2013-2014 for all three cultivars with *P. aurea* completely dying to the ground (though new culms were emerging by June 6, 2014). Most planting have expanded 2-8 feet from original planting. Measurement of old culm mortality and new culm height/spread will be completed in July 2014.

Herbicide trials – In 2012, we began an experiment at three locations to examine whether cutting followed by herbicide sprays would control dense, established bamboo stands (Table 1). All clones were cut to reduce height of culms, reduce leaf density, and weaken starch reserves in roots. Target foliage was sprayed until wet using glyphosate (Glyphomax Plus (5oz/gallon, 2.0% solution, 0.5 – 4.0 kg ae ha⁻¹), Dow AgroSciences, LLC, Indianapolis, IN). Sites were visited on June 6, 2014 to locate surviving and/or new culms.

	Merritt Parkway	Nonnewaug HS	Old Fairgrounds Rd
	Easton	Woodbury	Woodbury
Original height	> 6 m	4-6 m	4-5 m
Date cut	6/6/2013	9/6/2012	11/29/2012
Pre-spray height	1-4m	1-3 m	1-3m
1 st spray	9/5/2013	8/31/2013	8/31/2013
2 nd spray	9/19/2013	9/13/2013	9/13/2012
Effectiveness	99-100%	99-100%	100%

At Old Fairground Road, all old culms were dead and no new culms had emerged. At Nonnewaug HS, all old culms were dead and a single new culm ~20 cm tall had emerged. At Merritt where a 0.1 ha (0.25 ac) stand was treated , several culms remained green on the basal 1 m and there was a single new stunted culm cluster. The Merritt plot suggests that running bamboo can effectively treated by cutting and applying herbicide in a single

growing season. However, we do not know if a single herbicide treatment would be sufficient. Before and after photos of the study areas are on the following pages.

Old Fairgrounds Road, Woodbury



Cutting culms at Old Fairgrounds plot (credit: Michael Duffy, CT Post)



Before (l) and after (r) of bamboo stand at Old Fairgrounds Road in Woodbury, CT.



Nonnewaug High School, Woodbury

All photos taken of approximately the same area.

Nonnewaug - pre-treatment



Nonnewaug - new culms prior to first herbicide treatment.



Nonnewaug - summer after herbicide. Note all green plants are herbaceous, most are native.

Merritt Parkway, north of southbound lane, Easton



View of bamboo grove before and after cutting along Merritt Parkway.



Applying herbicide to culms that emerged after cutting.



View of treated area in June 2014. Picture on right was taken from approximately the same location as the two photos at top.

8. Connecticut Invasive Plant Working Group Report

Connecticut Invasive Plant Working Group (CIPWG) 2014 Annual Report

The Connecticut Invasive Plant Working Group (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 17th year of operation. The working group meets 1 to 2 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 or non-invasive ornamental alternatives. The working group includes federal, state, and town agency staff, non-governmental organizations (NGOs), researchers, nursery growers, educators, master gardeners, community members, and interested citizens. Donna Ellis (UConn Department of Plant Science & Landscape Architecture) and Penni Sharp (Connecticut Botanical Society) serve as Co-Chairs.

Since 2002, CIPWG has hosted biennial invasive plant symposia. The seventh biennial symposium was presented on October 7, 2014 at UConn in Storrs, CT. The theme of the all-day conference was *Invasive Plants 2014: Where Are We Now?* As occurred in 2012, this year's conference also sold out, with 500 registered attendees. The symposium featured national, regional, and local experts as well as citizen volunteers sharing practical solutions for managing invasive plants, promoting non-invasive plants, and improving wildlife habitat. Nationally-recognized speaker Dr. Sarah Reichard, Orin and Althea Soest Professor of Urban Horticulture and Director, Botanic Gardens, University of Washington delivered the Keynote address, "Five-year Target: A down-to-earth vision bridging policy, research and management". Michael O'Neill, Associate Dean and Associate Director, UConn Extension welcomed the symposium attendees. Clark Chapin, Connecticut State Senator, provided opening remarks, and William Hyatt, Natural Resources Bureau Chief, Connecticut Department of Energy and Environmental Protection, gave an update on the Connecticut Invasive Plants Council. Kathleen Nelson (Mad Gardeners; CIPWG) was the recipient of the Leslie J. Mehrhoff Award. David Gumbart from the Connecticut Chapter of The Nature Conservancy delivered closing remarks. Concurrent afternoon sessions included tips for successful invasive plant management projects; alternative plants for improving gardens and other areas as wildlife habitat; priorities and partnering for invasive plant management; aquatic invasive plant updates; Early Detection – curbing the spread; and species-specific invasive plant identification, management, and alternative plants. Research posters, an invasive plant identification area, and other educational exhibits were featured throughout the day.

CIPWG's news and events list serve has approximately 760 members. The CIPWG website moved to a newer server at UConn recently and is now accessible at www.cipwg.uconn.edu. The website provides information on invasive plant topics that include identification, management, the Connecticut list of invasive plants, photos of invasive plants, invasive alternatives, resources, legislative updates, and much more. The CIPWG list serve also resides on a UConn server. Online reporting forms for mile-a-minute weed (*Persicaria perfoliata*), giant hogweed (*Heracleum mantegazzianum*), and purple loosestrife (*Lythrum salicaria*) allow website visitors to provide distribution information on these species. CIPWG provides links to the Early Detection and Distribution Mapping System (EDDMapS; www.eddmaps.org) to accept additional reports of other invasive plants. New features continue to be added to expand the CIPWG website, including a

scrolling photo gallery of Connecticut invasive plants, early detection information, an event calendar, and new links to invasive plant fact sheets and management information. The design and layout of the site were also upgraded recently.

The Connecticut Invasive Plant Working Group maintains the following subcommittees:

- Education and Outreach (educational outreach about invasive species and their alternatives)
- Management (develop and disseminate information on invasive plant control options)
- Native Alternatives (explore and promote use of native plant species as alternatives to invasives)

CIPWG maintains a list of speakers who are available to give presentations on many aspects of invasive plants, including identification, control, and non-invasive alternatives. These speakers and other CIPWG members presented many lectures, workshops, demonstrations, and guided field walks during 2014. Two CIPWG exhibits recently developed that feature terrestrial plants and aquatic species continue to be displayed at many public events.

Other CIPWG member activities:

The CIPWG exhibits were displayed, invasive plant talks were presented, and/or invasive plant educational materials were provided at the following local, statewide, and regional events during 2014:

- Ag Day at the Capitol
- Babcock Library (Ashford) sponsored talk (12 attendees)
- CIPWG general meeting, East Hartford (40 attendees)
- Columbia Conservation and Agriculture Committee sponsored talk (19 attendees)
- Connecticut Agricultural Experiment Station Plant Science Day, Hamden (1,000 attendees)
- Connecticut Association of Conservation and Inland Wetlands Commissions Annual Meeting, Wallingford (250 attendees)
- Connecticut Christmas Tree Growers Association meeting (30 attendees)
- Connecticut Conference on Natural Resources, Storrs (200 attendees)
- Connecticut Department of Energy and Environmental Protection Headquarters, Hartford
- Connecticut Flower and Garden Show, Hartford (37,000 attendees)
- Connecticut Grounds Keepers Association Turf and Landscape Conference (150 attendees)
- Connecticut Nursery and Landscape Association Summer Field Day, North Branford (400 attendees)
- Connecticut Nursery and Landscape Association Winter Symposium and Expo, Manchester (500 attendees)
- Connecticut Wild Ones Program, New London (20 attendees)
- Early College Learning Experience 2014 Summer Camp at UConn (44 students)
- Easton Garden Club (25 attendees)
- Forest Health Monitoring Workshop, New London (60 attendees)
- Hamden Earth Day Celebration (4,000 attendees)
- K-8 School Grounds Ornamental Plant Management Workshop, Newtown (150 attendees)
- Lebanon Fair (8,000 attendees)
- New England Grows Great Ideas Pavilion, Boston, MA (15,000 attendees)

- Ornamental and Turf Short Course; 3 locations in East Haven, North Haven, and West Hartford (70 attendees)
- Redding Garden Club (52 attendees)
- Responsible Land Management Workshop, Hartford (60 attendees)
- UConn Cornucopia Fest, Storrs (5,000 attendees)
- UConn Extension Legislative Reception (150 attendees)
- UConn Garden Conference, Storrs (270 attendees)
- UConn Perennial Plant Conference, Storrs (270 attendees)

Submitted by Donna Ellis (UConn Department of Plant Science and Landscape Architecture; CIPWG Co-chair), with contributions from Nicole Gabelman, Rose Hiskes, Todd Mervosh, Charlotte Pyle, and Logan Senack

3 December 2014

9. Invasive Plant Atlas of New England Report



INVASIVE PLANT ATLAS OF NEW ENGLAND

December 2014

IPANE, the Invasive Plant Atlas of New England, is a program dedicated to the creation of a comprehensive web-accessible database of invasive and potentially invasive plants in New England. The database is designed to facilitate education and research that will lead to a greater understanding of invasive plant ecology and support informed conservation management. An important focus of the project is the early detection of, and rapid response to new invasions.

The IPANE project has teamed up with [EDDMapS.org](http://www.eddmaps.org) to provide sustainable, web-accessible IPANE data and information on invasive plant species across New England as well as the continuing ability to add new data to the IPANE databases now, and sustainably in the future. EDDMapS is a national web-based mapping system for documenting invasive species distribution across the U.S. It was launched in 2005 by the Center for Invasive Species and Ecosystem Health at the University of Georgia, and has become the primary website in the U.S. to access information about invasive plant species and provide data on the occurrence of invasive plant species across the U.S. IPANE information and data is accessed via: <http://www.eddmaps.org/ipane/>

The IPANE project was part of a team that recently received a two year, \$250,000 grant from NSF entitled “*Interactive Effects of Economics, Public Policy, Land Use Change, and Invasive Plants in Long Island Sound Watersheds*”. The overall objective of this research is to investigate interactions among public and economic policies, land use changes, and invasive plant distributions in Long Island Sound Watersheds (LISW), with particular focus on Connecticut. This research is anticipated to provide a common tool to forecast land use change and invasive species spread using a scenario approach and to quantify spatiotemporal uncertainty of future interactions among human activities, policy choices, land use changes, and species invasion processes at multiple spatial scales. The team of researchers will develop a set of possible economic and policy scenarios driving land use change and invasive species management, develop a new land use change model, improve methodology for modeling invasive species distributions, and complete multi-jurisdiction policy comparisons on projected invasive species abundances. A key contribution will be the ability to evaluate alternative policy options and their impacts at local, state and regional scales. The results can be used to direct invasive species prevention and management efforts. Using an integrated approach, this two-year exploratory project assembles a multidisciplinary team of UCONN faculty researchers including geographers (Dr. Zhang and Dr. Li), ecologists (Dr. Silander and Dr. Allen), a political scientist with policy expertise (Dr. Boyer), and a natural resource economist (Dr. Segerson). The project has convened a working group of some 29 stakeholders and professionals to identify public, economic, and invasive species policies that help to shape land use changes and distributions of invasive species across Connecticut and surrounding regions.

John A Silander, Jr.
Principle Investigator, IPANE project
Research Professor, Ecology and Evolutionary Biology
University of Connecticut

A short summary of our project

The Long Island Sound Watersheds (LISW) landscape has gone through dramatic changes over the past two centuries. For example, up to 90% forests were cleared for farming by the mid-1800s. As farms were abandoned, much of the land has reverted back to mixed hardwood forest. Over the past fifty years, the region has undergone significant land use changes as housing and industrial development has encroached upon formerly rural and forested lands. Invasive alien species present challenging economic and ecological conflicts in the context of land use change: many were introduced via the horticultural trade and some remain economically important to the green industry, yet they are ecologically problematic and are promoted by some types of land use change.

Interactions among human activities, invasive plants, and the future land use changes, as well as the impact of various local, state, or regional policy choices, have not yet been quantified. The many factors that influence the interactions between people, policy, and invasions do not act independently, but form a web of interactions and feedbacks that act on multiple temporal and spatial scales. An approach that is able to incorporate such complexity using multidisciplinary knowledge and skills is needed to address these issues. We have developed a framework (Figure 1) that will rely on economic, policy, landscape, and biological data in addition to expert knowledge. Comparative analyses of land use policy across jurisdictions, coupled with quantitative simulation of multiple management scenarios, should provide novel insight into how land use and invasive plant policies interact.

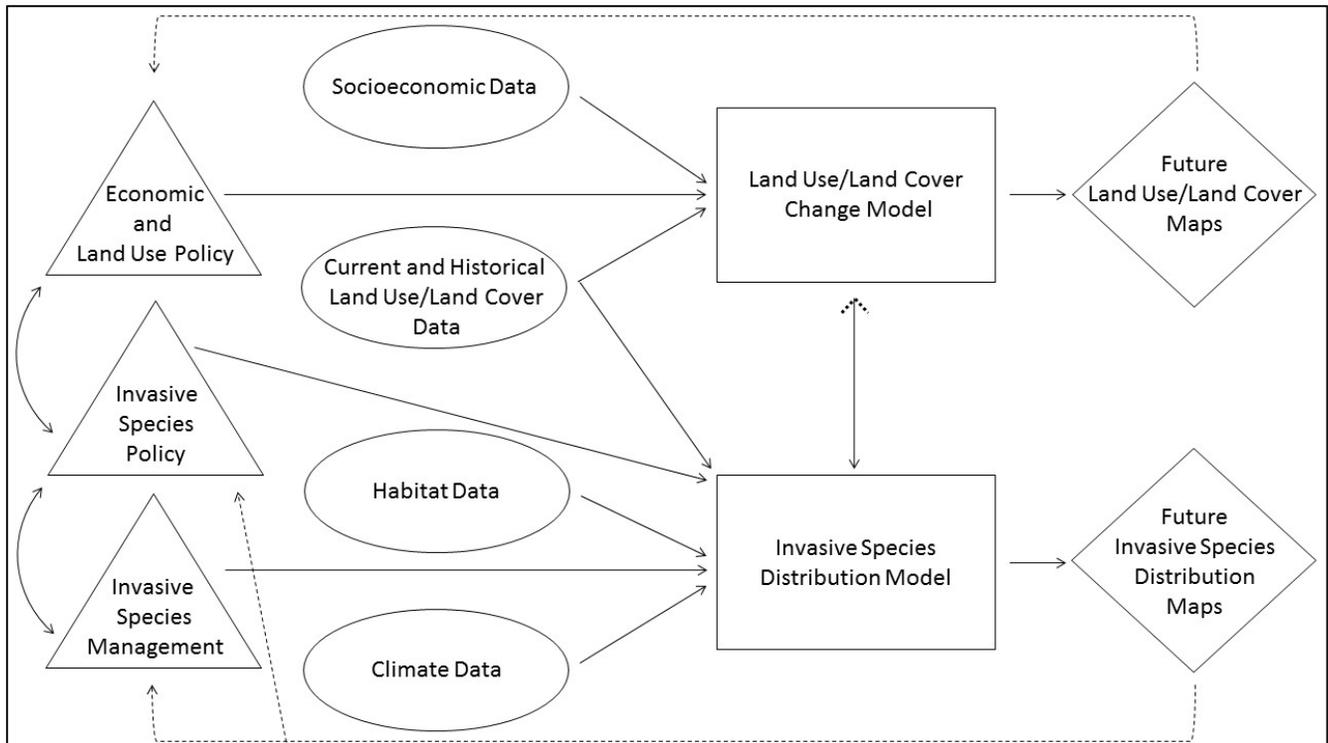


Figure 1: Modeling overview. Ovals are existing data, rectangles are quantitative models, diamonds are resulting products, and triangles are scenarios based on data and expert input. Arrows indicate flow of information, with dashed lines representing interactions not explicitly included in our current modeling.

The overall objective of this research is to investigate interactions among public and economic policy, land use changes, and invasive plant distributions in Long Island Sound Watersheds (LISW). Our focal study species represent different growth forms and stages of invasion in LISW (Table 1). We expect this research will provide a common tool to forecast land use change and invasive species spread using a scenario approach and quantify spatiotemporal uncertainty of future interactions among human activities, policy choices, land use changes, and species invasion processes at multiple spatial scales. The study will be geographically tiered, with some broad comprehensive analyses carried out for the region as a whole and other more focused analyses conducted for towns that span the policy and invasion spectrum.

Table 1: Study species and basic characteristics

Scientific Name	Common Name	Invasive Listing	Growth Form
<i>Alliaria petiolata</i>	garlic mustard	CT, NH, MA, VT	herbaceous
<i>Berberis thunbergii</i>	Japanese barberry	NH, MA, VT	shrub
<i>Celastrus orbiculatus</i>	Oriental bittersweet	CT, NH, MA, VT	woody vine
<i>Euonymus alatus</i>	burning bush	NH, MA, VT	shrub
<i>Phyllostachys aureosulcata</i>	yellow-groove bamboo	None	shrub-like grass

To achieve these goals, we will develop a set of possible economic and policy scenarios driving land use change and invasive species management, develop a new land use change model, improve methodology for modeling invasive species distributions, and complete multi-jurisdiction policy comparisons on projected invasive species abundances.

Updates and more information can be found on the project website:

<http://gis.geog.uconn.edu/NSFCNHproject/index.html>

Our goals for the working group meeting

The overall goal of this working group meeting of stakeholders is to identify public, economic, and invasive species policies that help to shape land use changes and distributions of invasive species.

Specifically, we hope to:

- 1) include additional expertise and points of view on land use policy, invasive plant policy, and invasive plant management for guiding development of the proposed land use change model and invasive species distribution models.
- 2) expand our understanding and inventory of land use and invasive species policies across levels of government (Table 2).
- 3) gain perspective on the economic drivers and trade-offs that relate to invasive species introduction, spread, management, and associated costs.
- 4) identify key drivers of land use change for developing future scenarios in the region.
- 5) collect information and data to help create the set of policy scenarios that drive the land use change and invasive species management analysis.
- 6) explore other potentially important drivers such as population density, housing density, income, road density, and elevation that have helped us to explain patterns of contemporary land use and forest fragmentation at intermediate spatial resolution.

Agenda

11:00am—11:30am Participant Arrival

11:30am—12:00pm Introduction & Welcome (Facilitator: Professor Mark Boyer)

12:00pm—1:00pm Lunch

1:00pm—4:00pm Group Discussion

Our three main themes with some example questions:

What are the drivers of land use change and plant invasions?

- What are the main drivers of land use change and how might those drivers change in the future?
- What are economic, social, and other factors affecting new introductions of our targeted species, including information about the demand for and marketing of these species?

What are the trade-offs with invasive (or potentially invasive) species?

- What is the demand for and marketing of our targeted study species?
- What are the costs of removing invasive or potentially invasive plants from the marketplace?

What can we do about invasive species?

- What are the major public, economic, and management policies that are effective at influencing land use change and controlling invasive plants?
- At what level of government should these policies be implemented?
- How should different levels of policy be changed to lead to the sustainable development in this region?
- What are the potential tradeoffs in setting policies at the local vs. state, regional, or federal levels for effective management of land use and invasive plants?

4:00pm—4:15pm Summary & Conclusion

List of Participants

<i>Name</i>	<i>Affiliation</i>	<i>Sector/Expertise</i>
Matt Aiello-Lammens	UConn, Postdoctoral Researcher	Ecologist, invasion biology
Jenica Allen	UMass Amherst, Postdoctoral Researcher and UConn, Assistant Research Scientist	Ecologist, conservation and invasion biology
Chet Arnold	CLEAR, Co-Director	State land use regulations and land demand
Nancy Balcom	Connecticut Sea Grant, Associate Director	State and local environmental policy and management
Juliana Barrett	Connecticut Sea Grant, Associate Extension Educator	State and local ecological impacts of land use
Amanda Bertino	UMass Amherst, Undergraduate research assistant	Environmental conservation, invasives management
Cynthia Boettner	Silvio O. Conte National Fish & Wildlife Refuge, Invasive Plant Control Coordinator	Regional invasives policy and management
Mark Boyer	UConn, Professor	Political Science, environmental policy
Tianjie Chen	UConn, Graduate research assistant	Economics
Mike Dietz	CT NEMO, Director	State land use regulations and land demand
Donna Ellis	State Extension Educator, CIPWG Co-chair	State invasives policy and management
Nicole Gabelman	Connecticut Invasive Plant Council, Coordinator	State and local invasives management and policy
Shougeng Hu	UConn, Visiting Professor	Land Use change and evaluation
Qinglin Hu	UConn, Graduate research assistant	Geography, land use change
Bill Hyatt	CT DEEP, Natural Resources Bureau Chief	State environmental policy and management
Bruce Hyde	CLEAR, Land Use Educator (& former municipal planner)	State and local land use regulations
Paul Larson	Sprucedale Gardens, Owner	State horticultural industry
Weidong Li	UConn, Research Professor	Geography, land use change
Christopher Martin	CT DEEP, State Forester	State forest management and planning
Chris Polatin	Polatin Ecological Services, Inc., Habitat Restoration Specialist	Regional invasives management contractor
Charlotte Pyle	USDA-NRCS, Landscape Ecologist	Regional invasives policy and management
Gina Ramos	BLM, Invasive Species Coordinator	National and regional (western) invasive plant policy
Kathy Segerson	UConn, Professor	Economics, natural resource economics
John Silander	UConn, Research Professor	Ecology, conservation and invasion biology
David Sutherland	Nature Conservancy, CT Chapter, Director of Government Relations	State environmental policy
Natalie Vieira	UConn, Undergraduate research assistant	Political Science
Weixing Zhang	UConn, Graduate research assistant	Geography, land use change
Chuanrong Zhang	UConn, Associate Professor	Geography, land use change
Haitao Zhang	UConn, Visiting Associate Professor	Land use change and evaluation

10. Department of Agriculture Letter



STATE OF CONNECTICUT

DEPARTMENT OF AGRICULTURE

Office of Steven K. Reviczky
Commissioner



December 10, 2014

Mr. Richard McAvoy, Chairman, Invasive Plants Council
c/o University of Connecticut, Dept. of Plant Science and Landscape Architecture
Box 4163, 1376 Storrs Road
Storrs, CT 06269-4163

Dear Chairman McAvoy:

Thank you for the opportunity to provide input to the Invasive Plants Council (IPC) 2014 Annual Report. DoAg continued to host and attend IPC meetings this year.

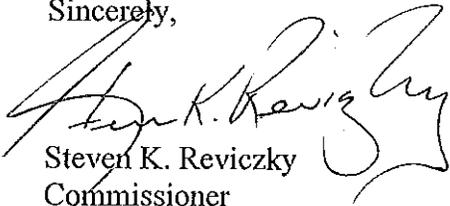
DoAg Regulation & Inspection staff attended a training session on invasive aquatic plant species by CT Agricultural Experiment Station and IPC Coordinator Logan Senack on March 5, 2014. The training helps agents know what to look out for when inspecting licensed pet facilities.

DoAg's website features a link to the IPC website under *Associated Agencies & Organizations, Collaborative Initiatives*. The website also features DoAg programs, such as the Farmland Restoration Program, the weekly *Connecticut Weekly Agricultural Report*, and a link to the U.S. Department of Agriculture for various conservation cost-share programs.

To date, the Farmland Restoration Program, launched at the Governor's initiative, has received 121 applications to reclaim an estimated 1,230 acres. Total combined estimated grant cost is \$1,670,585. Many of these restoration projects involve the removal of hedgerows containing invasive plants. Current restoration plans are developed for each project.

At the request of the DEEP, DoAg performed a series of inspections of pet shops to prevent the sale of invasive plants. Agency staff informed the owner of the pet shops when a violation was found, and a follow up visit was conducted to ensure compliance.

Sincerely,


Steven K. Reviczky
Commissioner

cc: Nicole Gabelman, CT Invasive Plant Coordinator

165 Capitol Avenue, Hartford, CT 06106
Phone: 860-713-2501 Fax: 860-713-2514
An Equal Opportunity Employer

11. Connecticut Nursery and Landscape Association Letter



P.O. Box 30
One Regency Drive
Bloomfield, CT 06002
800-562-0610
Fax: 860-286-0787
Email: Info@CNLA.biz
www.cnla.biz

December 15, 2014

The Connecticut Nursery and Landscape Association (CNLA) has had a long standing role of participation on the Connecticut Invasive Plants Council, beginning with the Council's inception and implementation in 2003. The national nursery/greenhouse industry recognizes the Connecticut Invasive Plants Council for its early leadership on invasive plant issues as well as for the science-based approach the Council brings to invasive plant management. Not only is the CNLA proudly represented by two active members to the Council, but as a Board we recognize the continued importance of this research-based forum for publically discussing invasive plant issues.

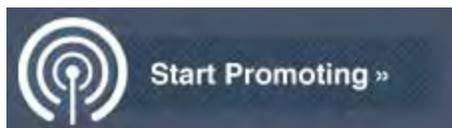
We continue to be very concerned about the appropriate and necessary level of funding that is needed for the Invasive Plants Council to remain viable, specifically funding to maintain the minimum keep-alive functions of the Coordinator position. The industry is most concerned that by withholding this limited funding, the State will miss an opportunity to utilize the Invasive Plants Council to its fullest capacity, negating the far reaching and documented impacts Council activities provide to Connecticut citizens. It is of the highest importance that the Council continues to function in its role as a nationally recognized leader in invasive plant management.

Sincerely,

Kevin Sullivan, President

12. Appendices

Appendix A



33rd Annual Connecticut Flower & Garden Show

DATES

02/20/2014 until 02/23/2014



SHOW HOURS

Thursday, February 20 10:00 AM – 7:00 PM

Friday, February 21 10:00 AM – 8:00 PM

Saturday, February 22 10:00 AM – 8:00 PM

Sunday, February 23 10:00 AM – 5:00 PM

***Box Office closes 1 hour prior to published closing times. ***

TICKETS

Adults	\$16.00	
Children 5-12 years old	\$4.00	
Seniors (62 & Older)	\$14.00	Thursday & Friday Only
Children Under 5	FREE	

(Ticket Prices Include Admission Tax)

***Cash only is accepted at the box office.** An ATM machine is located in the Convention Center. Group tickets are available for parties of 15 or more. Please contact kristie@northeastexpos.com or 860-844-8461.

Appendix A

This event is open to the general public. For more information about tickets, please [click here](#).

DESCRIPTION

Come and explore the 33rd Annual Connecticut Flower & Garden Show. The Convention Center will be transformed into a breathtaking event for floral and garden enthusiasts. Explore over 300 booths overflowing with fresh flowers, plants, herbs, bulbs, seeds, gardening books, garden equipment and much more. Visit the Federated Garden Clubs of Connecticut design & horticulture competition based on the theme “Backyard Paradise.” Attend over 80 hours of seminars and demonstrations. All seminars are included with your general admission ticket.

For more information about the event, please visit www.ctflowershow.com.

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[Planner Services](#)

[Demographics](#)

[Media Kit](#)

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[Events](#)

Appendix B

- [Call for Speakers](#)

[Expo & More!](#)

- [EXPO Overview](#)
- [Floorplan and Exhibitor Search](#)
- [Sprint Sessions on the Expo Floor](#)
- [Learning Opportunities](#)
- [Network & Exhibitor Meetings](#)
- [Network Central](#)
- [Dining options](#)
- [Sponsors](#)

[Register](#)

- [Attendee Registration Overview](#)
- Attendee Registration (*available fall 2014*)
- [FAQs](#)
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[Plan Your Visit](#)

- [Hotel Reservations](#)
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- [Directions](#)

Event Archives: 2014: Education Program

Program at a Glance

New England Grows is an authorized provider of CEUs and professional development credits for many green industry accreditation programs and associations nationwide. Please note that schedule and session titles are subject to change. Check back often for regular updates.

Wednesday, February 5

7:00 a.m. - 5:00
p.m.

Registration Open

8:30 a.m. - 2:30
p.m.

Garden Center Success! at New England Grows



"Garden Center 3.0" featuring Keynote Speakers:

- [Alison Kenney Paul](#), Vice Chairman and U.S. Retail & Distribution Leader at

Appendix B

Deloitte, LLP, Chicago, IL

- [Anna Ball](#), CEO, Ball Horticultural Co., Inc., West Chicago, IL
- facilitated by [Jon Hockman](#), The d3 Group, Washington, DC

9:00 a.m. -
10:00 a.m.

[Accurately Predict & Diagnose Turf Problems](#)

[Pamela Sherratt](#), Turfgrass Specialist, The Ohio State University, Columbus, OH

CEU
NE NJ NOFA PA

[Naturalistic Water Feature Design](#)

[Rich Bartel](#), Certified Master Water Feature Specialist, Executive Director, Ponds for Peace, East Ridge, TN

CEU
LA LD NOFA

[The Power of Plants: Eden Project & Beyond](#)

[Jane Knight](#), MPhil MLA CMLI, Landscape Architect, Eden Project, Cornwall, UK

CEU
ISA LA LD
NOFA

[Tree Preservation and Risk Assessment: How They Work Together](#)

[Philip van Wassenaer](#), Principal Consulting Arborist, Urban Forest Innovations, Ontario, Canada

CEU
CTSP ISA NOFA

10:00 a.m. -
5:00 p.m.

Exposition Open

11:00 a.m. -
12:00 N

[What a Warming World Means for Pest Outbreaks](#) » *HANDOUT*

[Michael Raupp, Ph.D.](#), Professor, University of Maryland, College Park, MD



CEU
ISA NE NJ NOFA PA

11:00 a.m. -
12:30 p.m.

[New England Landscape Dynamics: A Long View](#)

[William Cullina](#), Executive Director, Coastal Maine Botanical Gardens, Boothbay, ME

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Appendix B

2:00 p.m. -

3:00 p.m.

[How Landscapes Can Help Save the Bees](#) »

[HANDOUT](#)

[Kelly Gill](#), Pollinator Conservation Specialist, The Xerces Society for Invertebrate Conservation, Columbus, NJ



CEU
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[Replacing the Green Desert: Meadowsclaping & Native Plant Alternatives](#)

[Kim Eierman](#), Founder, EcoBeneficial!, Bronxville, NY

CEU
LA LD NOFA

[Great Conifers for New England](#)

[Deanna Curtis](#), Curator of Woody Plants, The New York Botanical Garden, Bronx, NY

CEU
ISA NOFA

[Systems for Success: Achieve Efficiency and Profitability in your Nursery & Landscape Business](#)

[John Hughes](#), Owner, Hughes Nursery & Landscaping, Cedar Rapids, IA

5:00 p.m.

Exposition Closes

Thursday, February 6

7:00 a.m. -

5:00 p.m.

Registration Open

8:00 a.m. -

5:00 p.m.

Exposition Open

Appendix B

9:00 a.m. - 10:00 a.m.	<p>Successfully Managing Rose Downy Mildew & Other Rose Diseases » HANDOUT 1 » HANDOUT 2 Mark Windham, Ph.D., Professor, University of Tennessee, Knoxville, TN</p>	<table border="1"> <tr> <td>CEU</td> <td>CEU</td> </tr> <tr> <td>NOFA</td> <td>NE NJ PA</td> </tr> </table>	CEU	CEU	NOFA	NE NJ PA
CEU	CEU					
NOFA	NE NJ PA					
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	<p>Back to the Future: The Garden at Hidcote Glyn Jones, Garden & Countryside Manager, Hidcote Manor Garden, Chipping Campden, Gloucestershire, UK</p>	<table border="1"> <tr> <td>CEU</td> </tr> <tr> <td>LA LD</td> </tr> </table>	CEU	LA LD		
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	<p>View from the Top: Understanding Forests Around the World from a Canopy Perspective Nalini Nadkarni, Ph.D., Professor of Biology, University of Utah, Salt Lake City, UT</p>	<table border="1"> <tr> <td>CEU</td> </tr> <tr> <td>ISA NOFA</td> </tr> </table>	CEU	ISA NOFA		
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	<p>E-newsletters that Work » HANDOUT Michael Katz, Founder, Blue Penguin Development, Inc., Hopkinton, MA</p>	<table border="1"> <tr> <td>CEU</td> </tr> <tr> <td>NOFA</td> </tr> </table>	CEU	NOFA		
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NOFA						
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11:00 a.m. - 12N	<p>What's Ahead in Insect Pest Management Richard Casagrande, Ph.D., Professor of Entomology, University of Rhode Island, Kingston, RI</p>	<table border="1"> <tr> <td>CEU</td> </tr> <tr> <td>ISA NE NJ NOFA PA</td> </tr> </table>	CEU	ISA NE NJ NOFA PA		
CEU						
ISA NE NJ NOFA PA						
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11:00 a.m. - 12:30 p.m.	<p>Aesthetic Edibles: Mixing Beauty with Utility » HANDOUT Christina Salwitz, Owner, The Personal Garden Coach, Renton, WA</p>	<table border="1"> <tr> <td>CEU</td> </tr> <tr> <td>LA LD NOFA</td> </tr> </table>	CEU	LA LD NOFA		
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LA LD NOFA						
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2:00 p.m. - 3:00 p.m.	<p>Beneficials & Pesticides: Working Together Suzanne Wainwright-Evans, Buglady Consulting, Slatington, PA</p>	<table border="1"> <tr> <td>CEU</td> </tr> <tr> <td>ISA NE NJ PA</td> </tr> </table>	CEU	ISA NE NJ PA		
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ISA NE NJ PA						
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	<p>Simple Rules for Pruning Fruit Trees » HANDOUT Wes Autio, Professor and Director of the Stockbridge School of Agriculture, University of Massachusetts, Amherst, MA</p>	<table border="1"> <tr> <td>CEU</td> </tr> <tr> <td>ISA NOFA</td> </tr> </table>	CEU	ISA NOFA		
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ISA NOFA						
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	<p>30 Years of New Plant Introductions: Separating the Wheat from the Chaff Dale Hendricks, Owner, Green Light Plants, LLC, Landenberg, PA</p>	<table border="1"> <tr> <td>CEU</td> </tr> <tr> <td>LA LD NOFA</td> </tr> </table>	CEU	LA LD NOFA		
CEU						
LA LD NOFA						
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Appendix B

[Living Soil: A Way Forward](#) » [HANDOUT](#)

[Dr. Elaine Ingham](#), President, Soil Foodweb, Inc., Senior Consultant, Soil Life Consultants, Corvallis, OR

CEU
ISA NOFA

5:00 p.m.

Exposition Closes

Friday, February 7

7:00 a.m. - 3:00
p.m.

Registration Open

8:00 a.m. - 3:00
p.m.

Exposition Open

9:00 a.m. -
10:00 a.m.

[Woody Plant Diseases: What's Next](#)

[Gary Moorman](#), Professor of Plant Pathology, The Pennsylvania State University, University Park, PA



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[Celebrating the Layered Garden](#)

[David Culp](#), Sales & New Plant Research, Sunny Border Nurseries, Downingtown, PA

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LA LD NOFA

[Taking Guesswork Out of Running a Successful Landscape Company](#) » [HANDOUT](#)

[Mark Bradley](#), President, TBG Landscape, Landscape Management Network, Brooklin Ontario Canada

CEU
NOFA

[The Role of Deer & Invasive Species in Shaping Forest Ecosystems](#)

[Bernd Blossey, Ph.D.](#), Associate Professor, Cornell University, Ithaca, NY

CEU
ISA NE NJ NOFA PA

11:00 a.m. -
12:00 N

[Plant Health Care: The Latest Disease Management Strategies](#)

[Sharon Douglas, Ph.D.](#), Plant Pathologist, The



CEU

Appendix B

Connecticut Agricultural Experiment Station,
New Haven, CT



ISA NE NJ NOFA PA

11:00 a.m. -
12:30 p.m.

[Gardens of the Jazz Age](#) » [HANDOUT](#)
[Jenny Rose Carey](#), Director, Ambler Arboretum, Temple
University, Ambler, PA

CEU
LA LD NOFA

2:00 p.m. -
3:00 p.m.

[Ecological Pest Management in Turf](#)
[Mary Owen](#), Extension Turf Specialist & Turf
Program Coordinator, University of Massachusetts,
Amherst, MA



CEU
NE NJ NOFA PA

[Permaculture 101: Creating Landscapes Full of Food & Beauty](#)
[Ethan Roland Solaviev](#), MS, Principal, Lead Designer,
Applesed Permaculture, Stone Ridge, NY

CEU
ISA LA LD NOFA

[Embrace the Vertical: Creating Greenwalls](#) » [HANDOUT](#)

[McRae Anderson](#), Principal Designer and President, McCaren
Designs, Inc., St. Paul, MN

CEU
LA LD NOFA

**["Treetilization": A Shared Benefits Approach to Preventing Tree & Power
Line Conflicts](#)** » [HANDOUT](#)

[Will Porter](#), Director of Consulting, CN Utility Consulting,
Sebastopol, CA

CEU
CTSP ISA

3:00 p.m.

Conference & Exposition Closes

Continuing Education Key

CTSP

NE

Appendix C

Phone: (860) 642-6012 // Address: 122 Mack Road, Lebanon, CT 06249

Join us from **August 7-9, 2015!**

[Visitors](#) | [Entertainment](#) | [Exhibitors](#) | [Vendors](#) | [Rentals](#)

VISITORS

[About the Fair](#)

[Admission & Hours](#)

[Daily Schedule 2014](#)

[Directions](#)

[Map of Fairgrounds](#)

[Tickets](#)

[Fair Administration](#)

[FAQ](#)

[About the Lebanon Lions Club](#)

[Home](#) > [Visitors](#) > Daily Schedule 2014

Daily Schedule 2014

Acts & schedule subject to change without notice

Friday, August 8, 2014

6pm	Opening Ceremony	Center Stage
6-8pm	Bella the Clown	on the Fairgrounds throughout the night
6pm-11pm	Pony Pull (3 classes)	Animal Pull Ring
6:15-7:30pm	DJ Pat Birrell	Center Stage
6:30-7:30pm	Kent Axell Magic	Upper Stage
6:30-11pm	Redneck Truck Pull	Mechanical Pull Ring
7:30-9pm	Miss Lebanon Fair Pageant	Center Stage
9-11pm	Jessica Prouty Band	Center Stage
All Night	Battery "B" First R.I. Light Artillery	Upper Area
All Night	Robertson Antique Horse-Drawn Carriages Display	Arts & Crafts Area
All Night	Connecticut Blacksmith Guild	Arts & Crafts Area
All Night	Sickline Chainsaw Carving	Arts & Crafts Area
All Night	Bergeron Art	Exhibition Building
All Night	Sugar Maple Farms	Exhibition Building

Saturday, August 9, 2014

All Day	Battery "B" First R.I. Light Artillery	Upper Area
All Day	Robertson Antique Horse-Drawn Carriages Display	Arts & Crafts Area
All Day	Sickline Chainsaw Carving	Arts & Crafts Area
All Day	Bergeron Art	Exhibition Building
All Day	Sugar Maple Farms	Exhibition Building
9am	Poultry & Rabbit Judging	Animal Barn
9-10am	Pig Scramble Registration	Mechanical Pull Arena
8:30am	Dairy Show	Show Ring
10-11am	Pig Scramble	Mechanical Pull Arena
10am-2pm	Sheep Breed Judging	Animal Barn
10am-3pm	Yankee Fiber Friends	Arts & Crafts Area
10am-6pm	Oxen Pull	Animal Pull Ring
11am-12pm	Little Miss Lebanon Fair Pageant	Center Stage

Appendix C

11am-1pm	Trained Steers	Mechanical Pull Arena
12-1pm	Kids' Games and Adult Games	Center Stage
12-1pm	Fun with Rhythms	Upper Stage
12-4pm	Bella the Clown	on the Fairgrounds throughout the day
1-2pm	Kent Axell Magic	Upper Stage
1-4pm	Run for Cover (Cover Band)	Center Stage
1-5pm	Horseshoe Tournament	Horseshoe Area
2-3pm	Turtle Dance Music	Upper Stage
2-5pm	Sheep Showmanship Show	Animal Barn
3-4pm	Kent Axell Magic	Upper Stage
4-6pm	King Cake Band (Blues Band)	Center Stage
6-7pm	Luis Pabon Dancers	Center Stage
6-8pm	Broken "B" Rodeo	Mechanical Pull Arena
6:30-10pm	Horse Pull (2 classes together)	Animal Pull Ring
7-9pm	Katie Perkins Band	Center Stage
9-11pm	Monthei Brothers Band	Center Stage

Sunday, August 10, 2014

All Day	Battery "B" First R.I. Light Artillery	Upper Area
All Day	Robertson Antique Horse-Drawn Carriages Display	Arts & Crafts Area
All Day	Sickline Chainsaw Carving	Lower Level by Main Entrance
All Day	Bergeron Art	Exhibition Building
All Day	Sugar Maple Farms	Exhibition Building
8:30am	Beef Show	Show Ring
9-10am	Pig Scramble Registration	Mechanical Pull Arena
9am-1pm	Goat Judging	Animal Barn
9am-4pm	Horse Show	Horse Ring
9am-4pm	Four Seasons Model T Club	Upper Level
10-11am	Pig Scramble	Mechanical Pull Arena
10am-3pm	Yankee Fiber Friends	Arts & Crafts Area
11am-12:45pm	Old Fiddler's Club of R.I.	Center Stage
11am-1pm	Sheep Obstacle Course	Animal Barn
11am-4pm	Doodlebug Pull	Animal Pull Ring
12-1pm	Silly Sing-a-Long	Upper Stage
12-4pm	Bella the Clown	on the Fairgrounds throughout the day
1-2pm	Kent Axell Magic	Upper Stage
1-3pm	BSides Band	Center Stage
1-5pm	Lebanon Farmer's Market	Lower Level by Main Entrance
1-5pm	Horseshoe Tournament	Horseshoe Area

Appendix C

2-3pm	Bending Gravity	Upper Stage
3-4pm	Curious Creatures	Upper Stage
3-6pm	The King Pins	Center Stage
4-5pm	Kent Axell Magic	Upper Stage
4-9pm	Demolition Derby	Mechanical Pull Arena
6-9pm	Branded (Country Band)	Center Stage

UPDATES & ANNOUNCEMENTS

[SEE ALL](#)

[Thank you for another great year](#)

Posted by [webmaster](#) on August 10, 2014

Thank you to all who came out for the Lebanon Country Fair this year. The weather couldn't have been better! Hope you see on August 7-9, 2015!

[Demolition Derby is underway](#)

Posted by [webmaster](#) on August 10, 2014

Don't miss the action in the mechanical pull area!

[Horseshoes](#)

Posted by [webmaster](#) on August 10, 2014

Catch the competition in the horseshoe pit

WHERE TO FIND US

122 MACK ROAD, LEBANON, CONNECTICUT

Most Lebanon Country Fair-goers enjoy the country ride to the Fairgrounds, located on Mack Road in Lebanon, Connecticut. Mack Road is accessible by either Route 87 or Route 207.

[GET DIRECTIONS](#)

FACEBOOK FEED

Lebanon Lions, thank you for a terrific fair this year. Great Weather and you all worked so hard. Our community is fortunate that you are all so generous with your time. Thank y...

about at 5:27 on August 11, 2014 — [View on Facebook](#)

[View photo](#)

about at 5:27 on August 10, 2014

Sorry I couldn't make it for the band, Mickey!!! All in all a great time!!!

about at 5:27 on August 10, 2014 — [View on Facebook](#)

Appendix D

UCONN UNIVERSITY OF CONNECTICUT

College of Agriculture, Health and Natural Resources

UConn College of Agriculture and Natural Resources Academic Programs Cooperative Extension System Storrs Agricultural Experiment Station



Cornucopiafest 2014

Sunday, September 21

[All Day Exhibits](#)
[Scheduled Activities and Events](#)
[Alumni Auction and Sale](#)
[Family Pictures](#)
[Directions](#)
[Exhibits Map](#)
[Home](#)

Scheduled activities and events

And, click here for a list of all-day exhibits and activities in the Ratcliffe Arena and on the lawn areas outside the Young, White and Jones buildings.

What	When	Where
UCANRAA Alumni Sale	11:00	Alumni Sale and Auction Tent W.B. Young Building quad (Where's the W.B. Young Building?)
NEW! Cornucopia 5K, sponsored by UConn's chapter of the Student American Physical Therapy Association Pumpkin painting too!	Registration/check-in opens at 11:00, run begins at 12:00.	Intersection of Route 195 and North Eagleville Road. Click here to register.
Live onsite broadcast by WILI 14 AM and I-98 FM	11:00 – 2:00	North entrance to the W.B. Young Building
Dairy Bar ice cream sales	11:00 – 6:00	Dairy Bar, George White Building (Pre-scooped cups of vanilla, chocolate and pumpkin, along with award-winning UConn Creamery cheese, available at the UConn Creamery ice cream stand in the Young Building quad) (Where's the George White Building?)
Lunch! Lizzie's Curbside Cuisine Corn chowder, burgers, veggie burgers, hot dogs, pulled pork, hummus wraps, chicken salad wraps. Coffee and hot chocolate too.	Starting at 11:00	North entrance to the W.B. Young Building
Meet the UConn Morgans	11:00 – 11:30	Arthur L. Lorentzon Stables/"Horse Barn" (Where are the Arthur L. Lorentzon Stables?)
Hayrides	11:15 – 3:30	Starts at the Roy E. Jones Building entrance (Where's the Roy E. Jones Building?)
Lunch! The Connecticut Poultry Association will offer a BBQ: 1/2 grilled chicken, coleslaw, potato salad, roll, butter & drink for \$10.00	About 11:30 until it's gone!	Ratcliffe Hicks Arena parking lot
Tour the state-of-the-art, large-scale UConn Compost Facility.	Meet at 11:45 Bus will depart at 12:00. Visitors will return between 1:15 and 1:30	Meet at 11:45 at the Ornamental and Crop Plants sign inside the Ratcliffe Hicks Arena . Visitors will take a bus to the compost facility and return by bus after the tour.
NEW! Cornucopia 5K, sponsored by UConn's chapter of the Student American Physical Therapy Association Pumpkin painting too!	Run begins at 12:00	Intersection of Route 195 and North Eagleville Road. Click here to register.

Appendix D

Riverside Reptiles: Explore the wonderful world of reptiles and amphibians! Learn about their natural history and the importance of their conservation. You'll meet some local scaly friends along with some from faraway lands.	12:00 – 1:00	The Environment, Land use and Wildlife tents
Guided hike in the UConn Forest Approximately 2 hours, guided by faculty members from the Department of Natural Resources and the Environment	Meet at 12:15 Bus will depart at 12:30 Hikers will return about 2:30	Meet at 12:15 at the Environment, Land Use and Wildlife sign, at the north end of the W.B Young parking lot. Hikers will take a short bus ride to the forest entry and will be picked up at the end of the hike.
UCANRAA Auction	1:00	Alumni Sale and Auction Tent W.B. Young Building quad
UConn Morgan Drill Team demonstration	1:00 – 1:15	Horsebarn Hill Arena (Where's the Horsebarn Hill Arena?)
UConn Police K-9 demonstration Officer Paul Osella and Hagar	1:30	Baseball field adjacent to Young Building parking lot
Cornucopia Cup polo match, played by members of the UConn men's and women's polo teams	2:00	Horsebarn Hill Arena (Where's the Horsebarn Hill Arena?) You can walk or catch a hayride to get to the polo match, but hayrides will end before the match ends). Please note that Horsebarn Hill will be closed to vehicular traffic from 10:45 a.m. until 4:00 p.m.
Drawing for Cornucopia Challenge prizes and the Emotion Darter kayak (You need not be present to win)	4:00	Communications Tent

College of Agriculture and Natural Resources
Office of Communications
1376 Storrs Road, Unit 4035
Storrs, Connecticut 06269

Appendix E

3/12/2014 - Hamden's 2014 Earth Day Celebration will be Saturday, April 12th

HAMDEN's Earth Day Celebration

April 12th, 2014 from 10am – 3pm

Hamden Middle School, 2623 Dixwell Avenue

FREE ADMISSION GIVEAWAYS GALORE FREE ACTIVITIES

SAVE THE DATE

Hamden's 2014 Earth Day Celebration will be held on Saturday, April 12th from 10am - 3pm at the Hamden Middle School located at 2623 Dixwell Avenue in Hamden. This year's family oriented free celebration will feature more than 60 exhibitors promoting earth friendly services, products and organizations, food, music, free activities including face painting, woodworking projects, suncatchers, planting and collaging, frog thumbprints, a scavenger hunt (complete it and win a prize), a coloring contest, a book mark craft, making wind chimes and forest creatures out of recyclables, creative reuse paper and fabric from scrap, and other fun and games. Don't miss a pre-event bird walk at 8am (for details call Florence McBride at 203-288-6777), C.J. May's magic show at 11am, Orchid Awards at noon, Trash to Tunes Performance at 1:00pm. Also on site all day is Circle K's petting zoo, hands-on reptiles by Hamden High School, the CT Child Identification Program by Brothers of Cosmopolitan & Day Spring Lodges, and video and book reading of Don Madden's Wartville Wizard put on by CT Humanities. Free raffle for a children's bike and helmet (\$300 Value) donated by D'Aniello's Amity Bike. Bring cell phones, ink cartridges, eyeglasses and batteries for recycling. Bring your expired, unused, and/or unwanted medication for free, confidential and safe disposal. Principal Sponsors are Walmart, Covanta Energy for a

Appendix E

Clean World, Dexsil, New England Conservation Commission, and Home Depot of Hamden. For more information, contact Pamela Roach at Proach@Hamden.com or 203-287-7021.

Click [HERE](#) to visit the Earth Day page

[Archives](#)

Plant Science Day

Wednesday, August 6, 2014

10:00 a.m. – 4:00 p.m.

Free Admission

**The Connecticut Agricultural Experiment Station
Lockwood Farm • 890 Evergreen Avenue, Hamden, CT
New Haven: (203) 974-8500 • Toll-free statewide: (877) 855-2237
www.ct.gov/caes • www.ct.gov/caes/psd14**

**THE SAMUEL W. JOHNSON LECTURE • PRESENTATIONS
ON RESEARCH • BARN EXHIBITS • PESTICIDE CREDITS
FIELD EXPERIMENTS • TECHNICAL DEMONSTRATIONS
CENTURY FARM AWARD • PASSPORT FOR CHILDREN**



THE HONORABLE DANIEL P. MALLOY

*Governor, State of Connecticut
President, CAES Board of Control*

MAIN TENT 11:50 a.m. – 12:10 p.m.

THE SAMUEL W. JOHNSON MEMORIAL LECTURE

DR. MIKE HOFFMANN

***Climate Change and Agriculture:
No Longer Business as Usual***

**Director, Cornell University Agricultural Experiment Station
Associate Dean, College of Agriculture and Life Sciences
Professor, Department of Entomology
Cornell University, Ithaca, NY**



MAIN TENT 10:45 a.m. – 11:20 a.m.

RAIN OR SHINE!
 No pets please, service animals only.
Free Admission

Main Tent Talks

10:00 a.m. – 10:15 a.m.

Dr. Theodore G. Andreadis, Director
 The Connecticut Agricultural Experiment Station
 Morning Greeting and Opening Remarks

10:15 a.m. - 10:45 a.m.

Dr. Jeffrey S. Ward, Station Forester and Chief Scientist
 Department of Forestry and Horticulture
 Managing the Roadside Forest:
 Balancing Aesthetics with Utility Reliability

10:45 a.m. – 11:20 a.m.

The Samuel W. Johnson Memorial Lecture
 Dr. Mike Hoffmann
 Director, Cornell University Agricultural Experiment Station
 Associate Dean, College of Agriculture and Life Sciences
 Professor, Department of Entomology
 Cornell University, Ithaca, NY
 Climate Change and Agriculture: No Longer Business as Usual

11:20 a.m. – 11:40 a.m.

Century Farm Award
 Holdridge Farm Nursery

11:40 a.m. – 11:50 a.m.

Experiment Station Associates
 Mr. Will Rowlands, President, Experiment Station Associates

11:50 a.m.- 12:10 p.m.

The Honorable Dannel P. Malloy, Governor, State of Connecticut
 President, CAES Board of Control

1:30 p.m. – 2:00 p.m.

Dr. Wade H. Elmer, Plant Pathologist,
 Department of Plant Pathology and Ecology
 Nanoparticles in Agriculture

2:00 p.m. – 2:30 p.m.

Dr. Kimberly A. Stoner, Entomologist, Department of Entomology
 Honey Bees and Bumble Bees – Their Problems, And What You
 Can Do to Help



Technical Demonstrations (Plot 15)

10:15 a.m. – 10:35 a.m. & 2:45 p.m – 3:10 p.m.

Dr. Abigail A. Maynard, Horticulturist,
 Department of Forestry and Horticulture
 Compost: How to Make and Use in Your Garden

11:20 a.m. – 11:40 a.m. & 3:10 p.m. - 3:30 p.m.

Dr. Todd L. Mervosh, Weed Scientist, Valley Laboratory
 Common Garden Weeds

Tours

Pesticide Credit Tour

12:15 p.m. – 1:15 p.m.

For those requesting pesticide credits, attendees must sign up before 10 a.m. at the registration table.

Tour of Native Woody Shrubs (Plot 42)

1:00 p.m. – 1:30 p.m.

Learn about using native shrubs for naturalistic landscapes without the use of pesticides or fertilizers.

Bird and Butterfly Garden

Butterfly Identification Walk (Plot 43)

On the hour, 11:00 a.m. – 2:00 p.m.

We ask that children be supervised by an adult or employee in the bird and butterfly garden.

Bus Tour

Every half hour, 10:00 a.m. – 3:30 p.m.

Air conditioned bus tour around the farm, narrated by Dr. Neil McHale and Dr. Richard Peterson. You can be dropped off at any plot and picked up the next time around if requested.

Barn Exhibits (Barn B)

Food Safety Surveillance and Research

Oral Bio-accessibility of Polycyclic Aromatic Hydrocarbons (PAHs) in Fuel Soot Accessed by a Simulated Gastrointestinal Digestion Model

Maternal Lineages of Honey Bees in Connecticut

2013 Emergence of Periodical Cicadas

The New Crops Program – Creating Opportunities for Connecticut's Farmers

Environmental Impact on Winegrape Production in Connecticut

Other Highlights

Answers to Your Questions - Plot 17

Staff members answer your questions on identification of insects, plant disorders, soils and their management, and other problems of gardens and growers.

Kids' Korner - Plot 26

Come to the Kids' Korner plot to pick up your child's passport and a goody bag.

Self-Guided Activity for Children, including Girl Scouts - Plot 25

Girl scouts and older children should come to this station to pick up an activity that is better suited to them than the passport. Once completed and turned in they will receive a CAES badge. Girl Scouts who complete the activity can use it to complete steps towards their Naturalist Legacy badge. Younger children who have completed their passports should come here to receive their badges as well.



Winter SYMPOSIUM & Expo
 JANUARY 14-15, 2014 • MANCHESTER COMMUNITY COLLEGE



We're Giving Away Two iPads
 ...one each day at the end of the show. Simply be there to win.

- Large trade show both days
- 14 hours pesticide credits
- Over 20 seminars
- Close-by, affordable for all your staff

Where Successful Professionals Recharge



JANUARY 14 & 15, 2014 • AT MANCHESTER COMMUNITY COLLEGE

Discount/group rate at the Manchester Courtyard Marriott, January 14 and 15 for CNLA-CGGA Winter Symposium & Expo Attendees -

Courtyard Hartford Manchester
 225 Slater Street
 Manchester, Connecticut 06042

Phone: 1-860-533-8484

Meet with our keynote speakers!

Dinner with Anna Ball
 January 14th, 6:00 pm
 \$60.00 per person,
 Cw's Chops 'n' Catch Restaurant
 15 person maximum

Dinner with Dwight Hughes
 January 15th, 5:00 pm cash bar
 6:00 pm dinner
 \$60.00 per person
 Cw's Chops 'n' Catch Restaurant

Call or email the CNLA office to make reservations
 800-562-0610
 ConnNrsry@aol.com

Connecticut Nursery & Landscape Association OR Connecticut Greenhouse Growers Association
 P.O. Box 414, Botsford CT 06404
 800-562-0610 • Fax 203-261-5429
 E-mail: ConnGreen@aol.com

Tuesday, January 14



Labor Laws Every Owner and Manager Should Know
 9:00-10:00 am
 Labor Attorney Bob Noonan shares his insight on labor laws that many green industry businesses can easily overlook.



Lean Green
 9:00-10:00 am
 Gary Cortes will discuss how to improve your profits by reducing cost utilizing Lean Flow techniques. Learn what progressive growers are doing to improve productivity, quality, reduce shrink, and optimize floor space.



Results of Japanese Barberry/Euonymus and Alternatives Testing
 10:00 am-12:00 pm
 Dr. Mark Brand will share his results of his trials on assorted Japanese Barberry and Euonymus alata cultivars, and Dr. Jessica Lubbell will share her research findings on adaptability of native alternatives.



IDM/White Rust Update
 10:00-11:00 am
 Learn more about these two important diseases. Disease occurrence, susceptible hosts, identification and diagnosis, and factors involved in disease spread will be discussed by Dr. Nora Catlin



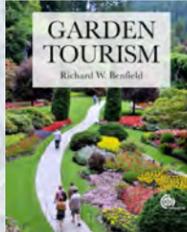
CGGA Annual Meeting & Elections
 11:00 am - Noon



Emerald Ash Borer and Friends: Beetles to Watch Out for in 2014
 1:00-2:00 pm
 Dr. Claire Rutledge will give an update on the Emerald Ash Borer in Connecticut including information about management and long-term prospects. In addition, Asian Longhorned Beetle, Red-Headed Flea Beetle and Oriental Beetle will be discussed.



Connecticut Nurserymen's Foundation Annual Meeting
 1:00 pm - 2:00 pm



Garden Tourism
 2:00-3:00 pm
 Gardening is the dominant contemporary leisure activity today and garden visiting one of the most popular tourism activities. This session by Dr. Richard Benfield will look at the dimensions of gardening and garden tourism around the world for lessons nurseries and nurserymen can use in getting their fair share of garden tourism.



Winter SYMPOSIUM & Expo
 JANUARY 14-15, 2014 • MANCHESTER COMMUNITY COLLEGE



Profitable Nursery Practices
 2:00-3:00 pm
 Dwight Hughes will show his expertise in the mechanization of growing specimen trees and shrubs. All elements of his system are mechanical with very little labor input, including planting, cultivating, spraying, digging, burlapping and handling.



Update on Key Diseases for 2014
 3:00-4:00 pm
 Each year, nursery and landscape professionals are challenged by new or re-emerging diseases that impact plants they grow or maintain. This presentation by Dr. Sharon Douglas will highlight recent progress with understanding and managing boxwood blight as well as other important key diseases of plants in production and landscape settings.



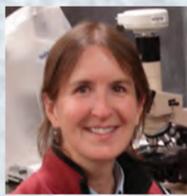
Update on Key Diseases for 2014
 3:00-4:00 pm
 Dr. Vijay Choppakatta from BioSafe Systems will offer his insight into sustainable chemistries to provide results leading to strong, healthy plants in the arena of pest management solutions.



CNLA Annual Meeting CANP Graduation Ceremony
 4:00-5:00 pm



Wednesday, January 15



Woody Plant Health Diagnosis

9:00-10:00 am

Accurate diagnosis of disease and other plant problems is critical to successful treatment and prevention. This talk given by Joan Allen will give you tips on figuring out the most likely causes of various symptoms, from the leaves to the roots.



Favorite Perennials

10:00-11:00 am

Anna Ball will discuss her favorite perennials and how they are best used in a landscape.



Landscape Efficiency

10:00-12:00 pm

Mr. Hughes will show how innovations of equipment can drastically cut labor costs with installation of plants, borders and mulches when compared to similar crew operations.

Natives and Permaculture

11:00-12:00 pm

Dale Henricks - The increasing popularity of permaculture design brings with it new thinking and energies. These present new opportunities for horticulturists. Many native plant folks are disturbed and threatened by the rapid pace of ecosystem change and the rapid rise of aggressive non native plants. These 2 movements have a huge amount in common and share largely the same goals, let's learn from each other!



The Rest of the Story: Soil, Carbon, Gardening and Agriculture

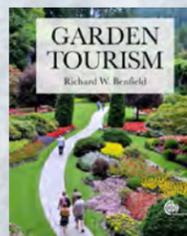
2:00-3:00 pm

Dale will lead us through some challenging and exciting new science. It turns out that a LOT of the carbon/climate action is in and with the soil and how we farm and garden matter a lot. Learn about the role of mycorrhizal fungi, the "liquid carbon pathway", biochar and the central role of living systems in our early habitat.

PR/Charity to Leverage our Businesses

2:00-3:00 pm

Nursery/Landscape leaders Barry Burton from BF Burton, Shayne Newman from YardApes and Ryan Van Wilgen from Van Wilgen's Garden Center share their insight on how they select projects and donations to improve their public image and remain consistent with the company image.



Results of Garden Trail Analysis

3:00-4:00 pm

In 2012 CT Nursery and Landscape Association undertook a series of focus groups to ascertain client perceptions of the industry. In Fall 2013 CCSU Marketing students undertook on site surveys to ascertain market characteristics of Nursery visitors. This session by Dr. Richard Benfield will present the results of that student survey and indicate the implications of their findings.



Plant Deficiencies

3:00-4:00 pm

Joanne Lutz of Griffin Greenhouses will give an overview of how to diagnose different plant deficiencies.



UConn Turf Program Update: Research & Programming that Supports IPM and Sustainable Turf Care Practices

3:00-4:00 pm

Many landscape professionals in the landscape & horticultural industry are not up-to-date with UConn's turf research projects. A review of current research which supports Turf IPM and Sustainable Turf research projects. Vickie Wallace will review current research which supports Turf IPM and Sustainable Turf Management.



Appendix G

Seminarios en Español / Program for Spanish-speaking Staff

9:00 - 10:00 am Practical Tree ID (English & Spanish)

La plática será una introducción a la identificación de árboles y arbustos que son comunes en Connecticut. Aprenderá como usar las hojas, yemas y la corteza para distinguir entre varias especies de plantas leñosas. Jeffrey Ward, CAES

10:00- 11:00 am Sexual Harassment: a common sense approach in Spanish - Toni Ruiz

11:00 am- 12:00 pm Plant Deficiencies - Deficiencias en las Plantas - Joanne Lutz

1:00 - 2:00 pm Guided Vendor Tour - Visita guiada de los Vendedores - Darryl Newman

2:00 - 3:00 pm How to Scout for and Identify Harmful Insects in the Nursery and Landscape - Como Buscar y Identificar Insectos Dañosos en el Jardín y Vivero - Ana Legrand



1:00 - 2:00 pm

Increasing Your Sales in a Recovering Economy

Frustrated by prospects always looking for low price? Concerned about how to differentiate yourself? Rochelle Carrington from Sandler Training will discuss how to sell differently to see more.



Boxed Lunches

each day for \$7 per person. Additional fee, not included in registration



Winter Symposium & Expo

JANUARY 14-15, 2014 • MANCHESTER COMMUNITY COLLEGE

Meet with our keynote speakers!

Dinner with Anna Ball
January 14th, 6:00 pm
\$60.00 per person, 15 person maximum

Dinner with Dwight Hughes
January 15th, 5:00 pm cash bar
6:00 pm dinner
\$60.00 per person

Call or email the CNLA office to make reservations
800-562-0610
ConnNrsry@aol.com

Directions to Manchester Community College,

Great Path, Manchester, CT 06040
Tel: 860-512-3000
Take Exit 1 off I-384
•westbound right at end of ramp
•eastbound left at end of ramp
•right onto Hillstown Road.
•Take first left onto Great Path and proceed to stop sign.
•Take a right onto Founders Drive South to Parking Lot C and Lot B.
•Enter the tall white tower.

Advance Registration

Take the member rates if you're in CFA-CGGA-CNLA-CGKA-CTASLA-CTAPLD-CICA

RETURN WITH YOUR PAYMENT TO YOUR ASSOCIATION:

Connecticut Nursery & Landscape Association OR Connecticut Greenhouse Growers Association
P.O. Box 414, Botsford CT 06404
800-562-0610 • Fax 203-261-5429
E-mail: ConnGreen@aol.com

Company _____
Contact _____
Address _____
Town _____ State _____ Zip _____
Phone _____
E-mail _____

CHARGE TO YOUR CREDIT CARD:
Card Number: _____
Expiration ____/____
Signature _____

YOU ARE A MEMBER OF: ___nonmember
___ CNLA ___ CGGA ___ CFA ___ CGKA

Print Attendee Names & Circle Amounts	Registration • Jan. 14			Boxed Lunch Jan. 14	Registration • Jan. 15			Boxed Lunch Jan. 15	Subtotals
	Member	Nonmbr	Student		Member	Nonmbr	Student		
	\$35	\$45	\$20	\$7	\$35	\$45	\$20	\$7	
	\$35	\$45	\$20	\$7	\$35	\$45	\$20	\$7	
	\$35	\$45	\$20	\$7	\$35	\$45	\$20	\$7	
Join Your Association Today!					CNLA Annual Dues (call for dues rate: 800-562-0610)				
					CGGA Annual Dues (call for dues rate: 203-261-9067)				
On-site registration fees will be \$10 higher/day!					TOTAL ENCLOSED \$				

Payments to the Connecticut Nursery & Landscape Association or the Connecticut Greenhouse Growers Association may be tax deductible as business expenses, not as charitable contributions. All fees nonrefundable.

Who Should Attend

This conference will address the development of practical solutions and methods for invasive plant management and detail the actions needed to promote native species, improve natural areas, and benefit wildlife. All interested people, including municipal staff (parks and recreation, public works, inland wetlands/conservation commissions), nursery, tree and landscape professionals, educators, students, landscape architects, gardening enthusiasts, state and federal employees, and members of conservation organizations are encouraged to attend.

DRIVING DIRECTIONS

NEW, MORE CONVENIENT LOCATION: The Symposium will be held at the University of Connecticut, Student Union, 2110 Hillside Road, Storrs, CT 06269.

Registration fee includes parking in the North or South Garage. Bring your ticket to the symposium for validation.

From Hartford:

Take I-84 East to Exit 68 in Tolland. Go South on Route 195, about 6 miles to the University. At the white Congregational Church on campus, turn right onto North Eagleville Road.

From Route 6 and points south:

Take Route 195 North. Pass thru Storrs Downtown and Mirror Lake (on left). Take next left onto North Eagleville Rd. by white Congregational Church.

From intersection of Rte 195 / North Eagleville Rd:

Proceed to 2nd stoplight (just past North Garage). Turn left onto Hillside Rd. Take a hard left into the parking garage driveway at the intersection with Alumni Rd. For the South Garage, continue (slight left) on Hillside Rd. Turn right (after Gampel Pavilion) onto Jim Calhoun Way, then left into South Garage driveway.

The University of Connecticut website includes campus maps and directions to Lodewick Visitors Center located across from the North Garage
<http://maps.uconn.edu/>

CONTINUING EDUCATION CREDITS

Pesticide Recertification Credits and other continuing education credits will be offered (see CIPWG website).

QUESTIONS: donna.ellis@uconn.edu; (860) 486-6448

WEB-LINK to registration form and program:

www.cipwg.uconn.edu

Appendix H INVASIVE PLANT SYMPOSIUM

Invasive Plants 2014: Where Are We Now?

PRESENTED BY:



TUESDAY, OCTOBER 7, 2014

8:00 A.M. – 4:30 P.M

**Student Union
University of Connecticut- Storrs, CT**

This 7th biennial conference features national, regional and local experts as well as citizen volunteers sharing practical solutions for managing invasive plants, promoting non-invasive plants, and improving wildlife habitat.

Co-Sponsoring Organizations are listed on the CIPWG website at:
www.cipwg.uconn.edu

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Gregory Weidemann, Director, Cooperative Extension System, University of Connecticut, Storrs. An equal opportunity program provider and employer.

Donna Ellis
University of Connecticut
Department of Plant Science & Landscape Architecture
1376 Storrs Road, Unit 4067
Storrs, CT 06269-4067

CONCURRENT SESSIONS AND SPEAKERS

Time	SESSION 1	SESSION 2	SESSION 3
1:00 - 2:15	A Progress Report: What's Working	Panel: ID, Management and Alternative Plants	Aquatics Update
2:15 - 2:30	<i>Refreshments and move to next session</i>		
	SESSION 4	SESSION 5	SESSION 6
2:30 - 3:45	Wildlife Habitats Large and Small	Beginner Botany and New Early Detection Action Alerts	Priorities and Partnering for Invasive Plant Management

Breakout Sessions Descriptions:

Full list of speakers and additional details available online

Session 1: Progress in battling invasive plants is being made on multiple fronts. This session will cover management successes, native shrubs for harsh sites, and working with volunteers. (Ann Pettengill, Chris Polatin, Jessica Lubell)

Session 2: A panel of experts prepared to address 10 common invasive plants will present species-specific information on identification, control, and alternative plants in an order prioritized by the audience.

Session 3: Control of invasive plants in aquatic and wetland ecosystems is difficult. Topics to be covered include management of *Phragmites*, herbicide resistance in aquatics, and State efforts on aquatic invasives spread. (Paul Capotosto, Lori Benoit, Gregory Bugbee)

Session 4: Using non-invasive plants to improve habitat for wildlife (including birds, bees, and butterflies), whether in a homeowner garden, park, or restoration area. (Andy Brand, Peter Picone)

Session 5: Learning how to tell if you have an invasive plant is the first step in curbing the spread of invasive plants. A review of basic plant ID (including new on-line tools) will be followed by a presentation on recognizing species with high invasion potential. (Bryan Connolly)

Session 6: Panel discussion. At the Town-wide scale, despite different priorities and capabilities, we are all in this together. Invasive plant priorities, needs, prioritization processes and how Town and non-Town efforts might be coordinated will be covered.

See website for more information: www.cipwg.uconn.edu

Appendix H CONNECTICUT INVASIVE PLANT WORKING GROUP SYMPOSIUM

Invasive Plants 2014: Where Are We Now?

TUESDAY, OCTOBER 7, 2014

Student Union
UConn - Storrs, CT

8:00	Check-in table opens - View posters/exhibits (on display throughout the day) - Refreshments
9:00	Greetings and Orientation DONNA ELLIS, UCONN, CIPWG CO-CHAIR - AND - GREGORY WEIDEMANN, DEAN <i>UConn COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES</i>
9:15	Opening remarks STATE LEGISLATIVE REPRESENTATIVE
9:30	Invasive Plants Council update INVASIVE PLANTS COUNCIL
9:40	Leslie J. Mehrhoff Award
9:50	Invited Talk <i>Tips for Contracting Invasive Plant Control</i> STEVEN MANNING AND LEE PATRICK <i>INVASIVE PLANT CONTROL, INC.</i>
10:10	Break; visit displays
10:40	KEYNOTE TALK <i>Five-year Target: A down-to-earth vision bridging policy, research and management</i> SARAH REICHARD, PROFESSOR/DIRECTOR UNIVERSITY OF WASHINGTON BOTANICAL GARDENS <i>UNIVERSITY OF WASHINGTON</i>
11:40	Poster Session - visit posters and exhibits
12:00	LUNCH
1:00	Concurrent Sessions 1 through 3
2:15	Refreshments; move to next session
2:30	Concurrent Sessions 4 through 6
3:45	Closing Remarks and Adjournment DAVID GUMBART <i>THE NATURE CONSERVANCY</i>
4:15	Speed Raffle
4:30	Event ends

Connecticut Invasive Plant Working Group (CIPWG) Symposium **October 7, 2014**

Invasive Plants 2014: Where Are We Now? **Registration Form**

Register online at www.cipwg.uconn.edu or tear off this portion and mail it with a check payable to The University of Connecticut at the mailing address below. **Early registration \$45** (postmarked on or before September 8); **regular registration \$55** (postmarked AFTER September 8 or for walk-in registrations); **student fee \$25** - bring valid school identification. If requested at least 72 hours in advance, every effort will be made to provide special accommodations. Credit card registrations accepted online only. Registration is non-refundable. **WALK-IN REGISTRATIONS ONLY IF SPACE IS AVAILABLE.**
Mailing address: Donna Ellis, University of Connecticut, Dept. of Plant Science & Landscape Architecture, 1376 Storrs Road, Unit 4067, Storrs, CT 06269-4067.

Name _____

Email (required) _____

Business/Affiliation _____

Phone (required) _____ Address _____

Street

Town _____ State _____ Zip Code _____

For questions, contact Donna Ellis at: donna.ellis@uconn.edu or (860) 486-6448.
For online registration, program details, or a printable registration brochure, visit www.cipwg.uconn.edu

Circle Sessions you expect to attend:

{1, 2, OR 3}
{4, 5, OR 6}

Vegetarian lunch?

Yes



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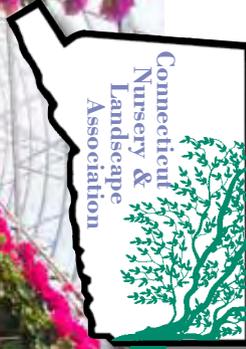
Wednesday July 16 at



NORTH BRANFORD CT

This Program is a cooperative effort of CNLA, UCONN Extension, the Connecticut Department of Agriculture, and the Risk Management Agency/USDA

Host Facility



P.O. Box 414, Botstford CT 06404
Address Service Requested

Seminars & Pesticide Credits

9:30 - 10:30 am **Welcome to Van Wilgen's**
Tour of the retail garden center with Bill Van Wilgen
Tour of growing facilities with Ryan Van Wilgen

11:00 - 12:00 pm **The Roots of Plant Health Care**
Proper planting and soil management for sustainable landscapes.
Dr. Neil Hendrickson, Bartlett Tree Experts

12:00 - 1:00 pm **Lunch - Big Green Pizza Truck**

1:00 - 2:00 pm **Panel Discussion - Working Together**
Today's relationship between grower/distributor and retail garden center.
Mark Sellew and Chris Valley of Prides Corner Farms, Jason Scire and Rich Baker, Managers Van Wilgen's Garden Center, Henry Eggert, Moderator

2:00 - 3:00 pm **Current Diseases of Connecticut**
An update of current disease management in the state.
Jim Lamondia, CT Agricultural Experiment Station

10:00 - 2:00 pm **Bus Tours to Van Wilgen's Guilford Garden Mart at Bishop's Orchard**

GET CREDITS! Programs qualify for state private applicator, grounds & arborist pesticide credits, also for CANP recertification credits

In the 1970's Bill Van Wilgen carried on the family tradition, and focused on enhancing landscape services and opening Van Wilgen's Garden Center. Over the years Bill transitioned his landscape business to a premier retail establishment and growing his own product line. Van Wilgen's products are grown right here on our farm, in our greenhouses and growing fields. It doesn't get any more local than that.

Tours of the retail center & growing facilities



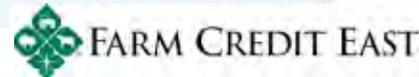
Appendix I Learn, Explore & Have Fun.



Breakfast & Pizza Lunch



Enjoy a continental breakfast served 8:00-10:00 am. **Back by popular demand!** The Big Green Pizza Truck will feed you delicious wood-fired pizza from 11:30 am - 1:00 pm. Sponsored by **Farm Credit East & Connecticut Mulch**. All included in your admission fee.



CT Nurserymen's Foundation

CNF Auction

You can bid on dozens of products donated by our Trade Show exhibitors. Proceeds go to the Foundation and its scholarship endowment. Starts at 10:00 am.



How To Get There



Enjoy a treat from the Sugar Bakery Cupcake Truck. A portion of the proceeds will be donated to the CT Nurserymen's Foundation.

Harrells.com • myHarrells.com

Plant I.D. Contest



Prizes for the top two winners:
FIRST PLACE:

A \$400 gift certificate good at any CNLA-member supply company

SECOND PLACE:

A \$100 gift certificate good at any CNLA-member supply company

DIRECTIONS to Van Wilgen's Garden Center, 51 Valley Road (off Route 139), North Branford, Connecticut 203-488-2110

From I-95: take exit 55. **Northbound:** right at end of ramp onto Rt. 1

Southbound: left at end of ramp onto Rt. 1 From Rt. 1, take the first left on Rt. 139 Travel 1 mile and turn right onto Valley Road



UCONN Dairy Bar Ice Cream

Buy some delicious UConn-made ice cream with proceeds going to the CNF Scholarship endowment. Provided by the UCONN College of Agriculture, Health and Natural Resources Alumni

REGISTER TODAY BY
phone 800-562-0610
email ConnNrsry@aol.com
online www.cnla.biz

See the newest products & services for nurseries, garden centers, and landscapers at our Trade Show. Up to 75 companies will have exhibits on-site in our huge tents. Many will also show their large pieces of equipment. **Open 8:00 am to 3:00 pm**

Outdoor Equipment & Trade Show



Register Here or Online

RETURN THIS FORM & YOUR PAYMENT TO:
Connecticut Nursery & Landscape Association
P.O. Box 414, Botsford CT 06404
800-562-0610 • ConnNrsry@aol.com

One Low Admission Price Covers It All:
Breakfast, pizza luncheon, soft drinks, trade show, 3 seminars, tours. Take the low CNLA member rate if you're a member of CFA, CGGA, APLDCT, CTASLA, or CGKA

Company _____
Contact _____
Address _____
Town _____ State _____ Zip _____
Phone _____ Fax _____
E-mail _____

Print Names of Attendees for Badges

# people	Advance Registration	1-4 Persons	5+ Persons	Sub Totals
	CNLA member companies	\$45/person	\$37/person	
	Nonmember companies	\$55/person	\$47/person	
	Students or Youths under age 18	\$30/person		

CNLA Annual Dues Join now and take the lower member registration fee! Call the CNLA office for your dues rate.

Total Check/Credit Card Enclosed \$ _____



CHARGE TO YOUR CREDIT CARD:

Card Number: _____
Expiration ____/____
Signature _____

You can also register online at www.cnla.biz click on the Summer Field Day link

All fees nonrefundable. Payments to the Connecticut Nursery & Landscape Association may be tax deductible as business expenses, not as charitable contributions. Registration substitutions may be made on day of meeting at no charge.

WEDNESDAY, JULY 16 • Van Wilgen's Garden Center • North Branford

Appendix J

The Ornamental Plant Extension Team and the Home and Garden Education Center present the

MARCH 21 **GARDEN** 2014 **CONFERENCE**

A Conference for the Home Gardener



LEWIS B. ROME COMMONS
University of Connecticut, Storrs, CT

EARLY REGISTRATION DEADLINE
postmarked on or before March 14, 2014

www.2014garden.uconn.edu

If you have questions about the conference, please contact Joan Allen at (860) 486-6740 or email: joan.allen@uconn.edu.

UConn | COLLEGE OF AGRICULTURE
AND NATURAL RESOURCES



MARCH 21 2014 GARDEN CONFERENCE

Schedule

- 8:00** Registration opens; refreshments served
- 9:15** Kelly Gill, *Pollinator Conservation Specialist, Xerces Society for Invertebrate Conservation*
www.xerces.org

Conserving Pollinating Insects with Pollinator Friendly Gardening

- 10:15** Mark Weathington, *Assistant Director and Curator of Collections, JC Raulston Arboretum, NC State University, Raleigh, NC*
www.ncsu.edu/jcraulstonarboretum

That Hits the Spot, Plants to Fit Problem Spots in the Landscape

- 11:15** Break
- 11:30** Jonathan Lehrer, *Assistant Professor of Ornamental Horticulture, Farmingdale State College (SUNY), Long Island, NY*
www.farmingdale.edu/academics/business/ornamental-horticulture/

Useful Native Woody Plants for Connecticut

- 12:30** Lunch
- 1:45** Amy Ziffer, *Owner, A Shady Lady Garden Design, Sherman, CT*
www.amyziffer.com

Shade Revealed: How to Garden Successfully in Low Light (Really!)

- 2:45** Break
- 3:00** Nancy DuBrule-Clemente, *Owner, Natureworks, Northford, CT* and Stephanie Cohen, *Horticultural Consultant, Collegeville, PA*
www.naturework.com
www.ThePerennialDiva.com

The Tall and Short of It

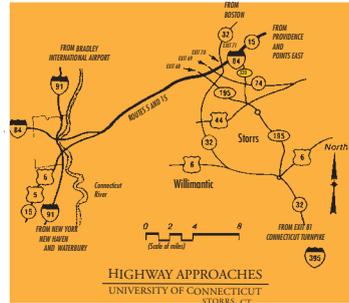
- 4:30** Adjournment

Appendix J

Sponsored by the Ornamental Plant Extension Team and the Home and Garden Education Center:

Joan Allen, *Assistant Extension Educator, Consumer Horticulture*
 Donna Ellis, *Senior Extension Educator, Integrated Pest Management*
 Jessica Lubell, *Assistant Professor of Horticulture*
 Richard McAvoy, *Extension Specialist, Greenhouse Crops*
 Dawn Pettinelli, *Assistant Extension Educator, Consumer Horticulture*
 Leanne Pundt, *Extension Educator, Commercial Horticulture*
 Victoria Wallace, *Associate Extension Educator, Sustainable Landscapes*

First Class Mail
 U.S. Postage
 PAID
 Storrs, CT
 Permit No. 36



DIRECTIONS: Lewis B. Rome Commons, UCONN
 626 Gilbert Road Extension, Storrs, CT 06269

From Route 84: Take Exit 68 and travel south on route 195. Make a right onto Mansfield Road. Mansfield Road is about 2 miles south of the intersection of Route 195 and Route 44. Follow signs to park in S Lot.

From Route 6 and points south: Take Route 195 traveling north. Soon after passing E.O. Smith High School, turn left onto Mansfield Road. Mansfield Road is approximately 6 miles north of the intersection of Route 195 and Route 6. Proceed to S Lot.



Joan Allen
 University of Connecticut
 Department of Plant Science and Landscape Architecture
 1376 Storrs Road, Unit 4067
 Storrs, CT 06269-4067

The Ornamental Plant Extension Team presents the

March 20
2014 Perennial Plant
Conference

A Conference for the Landscape and Horticultural Professional

www.2014perennial.uconn.edu



Lewis B. Rome Commons
University of Connecticut, Storrs, CT

Early Registration Deadline
postmarked on or before March 13, 2014

If you have questions about the conference, please contact Donna Ellis at 860-486-6448 or email: donna.ellis@uconn.edu

SPONSORED BY the Ornamental Plant Extension Team:

Joan Allen, Assistant Extension Educator, Consumer Horticulture
Donna Ellis, Senior Extension Educator, Integrated Pest Management
Jessica Lubell, Assistant Professor of Horticulture
Richard McAvoy, Extension Specialist, Greenhouse Crops
Dawn Pettinelli, Assistant Extension Educator, Consumer Horticulture
Leanne Pundt, Extension Educator, Commercial Horticulture
Victoria Wallace, Associate Extension Educator, Sustainable Landscapes



Follow the Ornamental Plant Extension Team on Facebook

SCHEDULE

8:00 Registration opens; refreshments served

Session A: (Attendees may move freely between sessions)

9:10 Cultural Practices and Pest Management Strategies for Low Input Gardens
Cheryl Smith, University of New Hampshire Cooperative Extension, Durham, NH

10:10 Some Like It Hot - Water Wise Plants that Pack a Punch
Mark Weathington, JC Raulston Arboretum at North Carolina State University, Raleigh, NC

11:30 Bringing THE Awesome EVERYDAY!!
Lloyd Traven, Peace Tree Farm, Kintnersville, PA

1:45 Bringing Fantastic New Plants to Market
Lloyd Traven, Peace Tree Farm, Kintnersville, PA

3:00 Mixing It Up: Flowering Shrubs for the Mixed Border
Stephanie Cohen, Horticultural Consultant, Collegeville, PA

Session B: (Attendees may move freely between sessions)

9:10 Fifty Shades of Green: Gardeners and the Green Industry
Jane Nadel-Klein, Trinity College, Hartford, CT

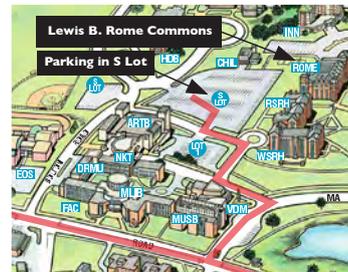
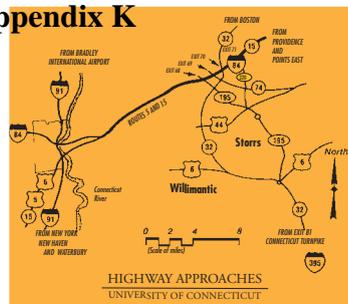
10:10 Top Native Shrubs and How to Use Them in Your Landscape
Jim Engel, White Oak Nursery, Geneva, NY

11:30 Garden Design Trends in Europe
Robert Herman, Horticultural Consultant, New Hartford, CT

1:45 After the Storms: The Challenges of Running a Landscaping Business with Today's Extreme Climate Events
Nancy DuBrule-Clemente, Natureworks, Northford, CT

3:00 Green Screens AKA Life After Leyland
Mark Weathington, JC Raulston Arboretum at North Carolina State University, Raleigh, NC

Appendix K



Donna Ellis
University of Connecticut
Department of Plant Science and Landscape Architecture
1376 Storrs Road, Unit 4067
Storrs, CT 06269-4067

First Class Mail
U.S. Postage
PAID
Storrs, CT
Permit No. 36

DIRECTIONS: Lewis B. Rome Commons, UCONN
626 Gilbert Road Extension, Storrs, CT 06269

From Route 84: Take Exit 68 and travel south on route 195. Make a right onto Mansfield Road. Mansfield Road is about 2 miles south of the intersection of Route 195 and Route 44. Follow signs to park in S Lot.

From Route 6 and points south: Take Route 195 traveling north. Soon after passing E.O. Smith High School, turn left onto Mansfield Road. Mansfield Road is approximately 6 miles north of the intersection of Route 195 and Route 6. Proceed to S Lot.

Appendix L



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Connecticut Association of Conservation and Inland Wetlands
Commissions
[Home](#) :: [CC](#) :: [IWC](#) :: [Tools](#) :: [About CACIWC](#) :: [Publications](#) :: [Links](#) :: [Legislation](#) :: [Events](#)
**Connecticut Association of Conservation & Inland Wetlands Commissions
37th Annual Meeting & Environmental Conference**
[Conference
Information](#)

Saturday, November 15, 2014



Villa Capri Banquet Facility

906 N. Colony Road Wallingford, CT 06492

(203) 265-7174

New location and revised agenda

In response to your comments from the 2012 & 2013 meeting surveys, CACIWC has revised the format of our 2014 annual meeting, developed an improved lunch menu, and scheduled the meeting at a new location with larger workshop rooms:

Directions to the Villa Capri 906 N. Colony Road, Wallingford, CT 06492

Traveling North or South

I-95 North (From Rhode Island or New York) I-95 (North or South) to I-91 North Exit 15 (Durham-Yalesville). Left off exit onto Rt. 68W. Proceed 2.2 miles (6 lights) to Rt. 5. The Villa Capri is 1/4 mile on the left side.

Traveling South I-91

Exit 15, take a right off the exit onto Rt. 68. Proceed 2 miles (5 lights) to Rt. 68 Overpass (Rt. 5 directly under overpass). Turn right on off ramp. At the end of ramp, turn left onto Rt. 5. The Villa Capri is 1/4 mile on the left side.

Traveling North or South on the Merritt or Wilbur Cross Parkway (Rt 15)

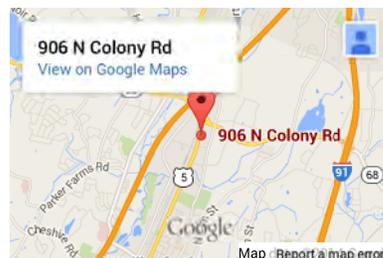
Exit 66. Turn left at the end of the ramp onto Rt. 5. The Villa Capri 3/4 mile on the left side.

Rt. 84 from Boston

To Rt. 84W to I-91S. Follow directions above from I-91S.

Rt. 84 from Danbury

East Rt. 84 to exit 27 (Rt. 691) to exit 10 to the Merritt/Wilbur Cross Parkway Exit 66. Turn left at the end of the ramp onto Rt. 5. The Villa Capri is 3/4 mile on the left side.



Registration Form [click here](#)

Fill out the form, print and mail with payment or fill out form save a copy and email to board@caciwc.org

NEW!
[Register online](#) using your credit card!

Awards Form [click here](#)

Schedule for the Day

Registration & Breakfast
8:30 – 9:00 am

Welcome & Business Mtg.
9:00 – 9:30 am

Session 1 Workshops
9:30 – 10:30 am

Break 1
10:30 – 10:45 am

Session 2 Workshops
10:45 – 11:45 am

Break 2
11:45 – 12:00 noon

Lunch, Keynote Speaker & Awards
12:00 – 1:30 pm

Break 3
1:30 – 1:45 pm

Session 3 Workshops
1:45 – 2:45 pm

Displays will be on view from
8:30 am – 2:45 pm.

For information on our Annual Meeting, please email us at:
AnnualMtg@caciwc.org



Keynote Address

We are honored to host State of Connecticut Department of Energy & Environmental Protection (DEEP) Commissioner Rob Klee as the keynote speaker of CACIWC's 37th Annual Meeting and Environmental Conference

The Connecticut Department of Energy & Environmental Protection (DEEP) is well known to CACIWC members, being the state agency charged with conserving, improving and protecting the state's natural resources and environment, along with providing first-rate outdoor recreation opportunities to residents and visitors of our state. The DEEP is also charged with bringing cheaper, cleaner, and more reliable energy to Connecticut's residents and businesses. In this role, DEEP is focused on integrating energy and environmental policies and helping Connecticut to build a sustainable and prosperous 21st-century economy.

Commissioner Klee joined DEEP in April 2011 as Chief of Staff. In that role he oversaw the work of the agency, supported the efforts of the Commissioner, and advised the Commissioner and senior staff on a wide range of environmental and energy policy issues. Klee was appointed DEEP Commissioner by Governor Dannel P. Malloy in January 2014.

Prior to joining state service, Commissioner Klee was an attorney with Wiggin and Dana LLP, in New Haven, where he specialized in appellate work and energy and environmental law. From 2004 to 2005 Commissioner Klee worked as a Law Clerk for the U.S. District Court in Connecticut and from 2005 to 2006 as a Law Clerk for the U.S. Second Circuit Court of Appeals. He served as a Research Affiliate in the Yale School of Forestry and Environmental Studies from 2006 to 2008.

Commissioner Klee holds a PhD from Yale's School of Forestry & Environmental Studies in industrial ecology, a law degree from Yale, and an undergraduate degree from Princeton in geology and environmental science. Commissioner Klee and his wife Anne have two sons.

In his keynote address Commissioner Klee will also emphasize the joint role of DEEP and CACIWC member commissions is supporting our 2014 conference theme of *Preparing Connecticut for the Impact of Global Changes*. The challenges to our members from these global changes range from preparing our towns for the impact of climate change on our state's important habitats to balancing the regional and global needs for food and energy with local environmental conservation and protection.

Our members have long labored to protect and preserve our forests, open meadows, and wetland systems. Many of these beautiful places serve an important conservation role by preserving critical habitats for native plants along with resident and migratory birds and other wildlife. Together, these lands provide countless opportunities for quiet walks and other enjoyable recreation activities for residents and visitors alike.

Our member commissions, along with land trusts and other organizations, are already facing increasing local challenges in their efforts to appropriately balance the growing demands for development with the long term goals of habitat preservation. Expected changes related to climate along with regional and global economic pressures will further

Appendix L

challenge our members. With our new workshops and keynote address, this year's conference will help our members commissions maintain their role as effective stewards of wetlands and open space lands within their towns.

Please join us at our 37th Annual Meeting and Environmental Conference!

Workshop Schedule (Four Tracks, Three Sessions, 12 Workshops):

	Session 1	Session 2	Session 3
	9:30 – 10:30 am	10:45 – 11:45 am	1:45 – 2:45 pm
Open Space & Conservation Biology Track	Workshop A1	Workshop A2	Workshop A3
Land Use Law & Legal Updates Track	Workshop B1	Workshop B2	Workshop B3
Wetlands Science & Engineering Track	Workshop C1	Workshop C2	Workshop C3
Climate Change & Planning Track	Workshop D1	Workshop D2	Workshop D3

Session 1 (9:30-10:30 AM)

A1. "Identification & Control of Bamboo and Climate Change & Invasive Plants" Responding to Public Act 14-100 on Running Bamboo

Jeff Ward, Connecticut Agriculture Experiment Station

Public Act 14-100 declared Running Bamboo a nuisance if it grows beyond the boundaries of a parcel of property. Public Act 13-82 puts the responsibility of enforcing the control of bamboo on a duly authorized wetland agent if wetlands are present. This workshop will help municipal agents identify the specific type of bamboo the law addresses and how to distinguish it from the other types as well as methods for control.

Long- & Short-term Impacts of Climate Change on Invasive Plants in Connecticut

Charlotte Pyle, PhD, Landscape Ecologist USDA - Natural Resources Conservation Service

Scientists are increasingly recognizing both the long-term and short-term impacts that climate change will have on populations of invasive plants in Connecticut. This workshop will describe and characterize these expected changes and help municipal commissions and agents better prepare for and help mitigate these changes.

B1. "What's in Municipal Wetlands Regulations? Results of Statewide-Survey of Municipal Wetlands Regulations, Part II"

Janet Brooks, Attorney at Law, LLC

Attorney Brooks will present Part II of the results from her fall 2013 statewide-survey of municipal wetlands regulations. At this workshop you will explore the oases, helpful and positive additions to the standard Model Municipal Regulations as well as mirages, lacking statutory support, found in actual agency regulations. We'll explore beavers and superstorms, "assumption" of jurisdiction until otherwise determined, emergency authorizations, artificial illumination, "intentional setting of fire," time limits to complete a regulated activity, occupancy of a structure for greater than 180 days. Are these regulations mirages? Can they be saved? We'll try to transform the mirages into oases and pay our last respects to those regulations we cannot.

C1. "Pond dredging: The Responsible Protocols and the Associated Risks"

Mark June-Wells, PhD, Limnologist & Plant Ecologist, Director of Water Resource Services
NALMS Certified Lake Manager & ESA Certified Ecologist; All Habitat Services LLC

Independent of what technique is chosen; pond dredging imparts a significant disturbance to lentic systems. However, dredging is a powerful tool in lake and pond management because it can improve the recreational availability, reduce internal nutrient loads, increase fish habitats, and reduce non-native plant species biomass. There are numerous dredging techniques available today and many of those methodologies have overlapping principles. Therefore, it is important to understand the specifics of each protocol including the associated regulatory requirements. This workshop will examine dredging techniques, their risks, and what regulatory processes are required.

D1. "Climate Change and Wetlands"

Juliana Barrett, PhD, Assistant Educator in Residence Connecticut Sea Grant College Program, UConn Extension Program Center for Land Use Education and Research (CLEAR), Nonpoint Education for Municipal Officials (NEMO)

Many Connecticut residents witnessed the impact that Hurricanes Irene and Sandy had on their communities. Many wetland systems were in the path of these storms or impacted by their associated storm surges. Juliana Barrett will describe the environmental impacts of severe storms on coastal and inland wetlands systems and recommend management options for wetland adaptation to climate change. The roles of conservation and inland wetlands commissions in helping to prepare their communities will also be discussed.

Session 2 (10:45-11:45 AM)

A2. "Open Space Management: Creating & Managing Trails"

Clare Cain, Trail Stewardship Director, Connecticut Forest & Park Association (CFPA)

Connecticut conservation commissions and their staff work to identify and preserve important habitats within their municipality. In addition to documenting natural resource inventories and developing land management plans, these commissions frequently seek to establish trails and provide other opportunities for passive recreation. This workshop will provide information on design of sustainable trails, best practices for preventing erosion, and approaches to developing enjoyable trail systems that provide access and help protect local habitats.

B2. "2014 Wetlands Law Update with Question & Answers Session"

Janet Brooks, Attorney at Law LLC
David Wrinn, CT Attorney General's Office
Mark Branse, Branse & Willis, LLC

This trio of wetlands attorneys has been brought back by popular demand to keep you current with the latest state Supreme Court and Appellate Court cases. This workshop will also include the 30-min question-and-answer session that you asked for!

C2. "Management of Invasive Aquatic Plants"

Gregory J. Bugbee, Associate Scientist, Connecticut Agricultural Experiment Station, Department of Environmental Sciences

Connecticut's lakes and ponds face an imminent threat from invasive plants. Their dense stands negatively impact native aquatic ecosystems, interfering with recreation, and lower property values. Management is accomplished by a variety of methods, including: watershed protection, education, boat inspections, early detection, and rapid response. Efforts to control established populations of invasive aquatic plants entail physical removal, antagonistic biological organisms, herbicides, benthic barriers, water level manipulation, and dredging.

Appendix L

D2. "Coastal Adaptation as an Opportunity for Ecological Design"

Alexander J Felson, PhD, RLA, Assistant Professor, Yale School of Forestry & Environmental Studies and Yale School of Architecture; Director, Urban Ecology and Design Laboratory

Following the devastation of Hurricane Sandy the federal government introduced an innovative design competition, Rebuild by Design, in an attempt to integrate long-term resiliency into the disaster recovery funding. In Connecticut this effort was focused on Bridgeport and a team of architects, engineers, ecologists, community engagement specialists and urban planners all worked collaboratively to design a plan that improved the city's resilience to climate change, economic opportunities, and environmental health. This presentation will review the proposed plan for Bridgeport with an emphasis on the components aimed at restoring hydrologic connectivity, improving stormwater management, and using natural buffers living shorelines to slow erosion and inundation of populated areas. The Bridgeport case study is only one example of how coastal adaptation efforts present myriad opportunities to rethink the potential of Long Island Sound, the coastal zone, and in turn rethink the ecosystem services provided by the supporting ecosystems. This presentation will also review many of non-traditional stakeholders that could be involved to support this new approach to ecosystem-based adaptation.

Session 3 (1:45-2:45 PM)

A3. "Coexisting with Black Bears in Connecticut"

Felicia A. E. Ortner, Connecticut Master Wildlife Conservationist & Founder, The Bear Reality

Many Conservation Commissions and their staff have been asked to respond to questions resulting from the increasing number of Black Bear sightings in their town. This workshop will provide information on Connecticut's dynamic bear population including their life cycle, winter dens, preferred food and habitats. The presentation will review findings of recent scientific research including remote tracking programs. Advice on habitat management and appropriate behavior while encountering bears will help commissions educate their residents on how to best coexist with these captivating species.

B3. "Working with Local Commissions & Federal Agencies"

Attorney Mark Branse, Branse & Willis, LLC

This workshop will continue discussions on how municipal Conservation Commissions and Inland Wetlands Commissions can work more effectively with each other, as well as with their local Planning & Zoning (P&Z) Commission, in efforts to minimize the environmental impact made by new development and other activities within their towns. Cooperative strategies focusing on state and local Plans of Conservation and Development (POCD) and Low Impact Development (LID) regulations will be examined. The workshop will also provide guidance to municipal commissions on what roles they can take when federal agencies, such as U.S. Army Corps of Engineers (USACE) and the Federal Emergency Management Agency (FEMA), come to town.

C3. "Stormwater Management & Control"

William Lachenauer, Project Coordinator, Hudson Engineering & Consulting, P.C.

Designing outside the proverbial "box." An examination of innovative, environmentally sound and fiscally responsible approaches to stormwater management design through the use of "green" practices. This session will explore bio-retention, roof downspout disconnection, bio-swales and vegetative planting strips as methods of achieving stormwater quality and stormwater rate attenuation.

D3. "The Value of Riparian Corridors and Plantings for Storm Defense"

Juliana Barrett, PhD, Assistant Educator in Residence, Connecticut Sea Grant College Program, UConn Extension Program, Center for Land Use Education and Research (CLEAR), Nonpoint Education for Municipal Officials (NEMO)

This workshop will explain the role that natural riparian corridors and buffer plantings play in both riverine and coastal environments to protect against streambank and shoreline erosion, biofiltration of excess nutrients and improvement of wildlife habitat. The value of these natural corridors and plantings in defending important Connecticut habitats from storm damage and threats related to climate change will be discussed. Recommendations for specific plant species in varied environments will be given as well as recommended buffer widths.

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Appendix M



- [Registration](#)
- [Directions and Parking](#)
- [Proceedings](#)
- [Accommodations](#)

Connecticut Conference on Natural Resources 2014
Monday, March 17, 2014 9:00 AM - 5:00 PM (Eastern Time)

UConn
Student Union
2110 Hillside Road
Storrs, Connecticut 06269
United States

 [Map and Directions](#)

CCNR will take place "snow" or shine!

Welcome!

The 8th Annual Connecticut Conference on Natural Resources (CCNR) is a multidisciplinary conference bringing together individuals working with natural resource and environmental management in Connecticut to share research, information, and ideas. The sentiment "many resources, one environment" reflects the conference vision that, while many may focus their efforts on the conservation of particular natural resources, Connecticut has but one environment, and we all work and live much too close together to not gather and interact with one another. The conference features a mix of professional and informal forums to promote information exchange, networking, a sense of community regarding Connecticut's natural resources, and recognize achievements of dedicated individuals and groups.

The conference is for all those working with the environment and natural resources through state and federal government, academia, non-governmental organizations, and the engaged public whom might belong to and volunteer with non-governmental organizations, place-based conservation organizations, and local government committees.

The 2014 Agenda and Abstract Listing is available above under the "Proceedings" tab.

Conference Logistics

This year's keynote speaker will be [Dr. Margaret Davidson](#), Acting Director of the NOAA Office of Ocean and Coastal Resource Management.

All CCNR sessions will be held in the Student Union. The registration desk will be located in front of the Student Union

Appendix M

Ballroom on the third floor.

For your convenience, [click here for a link to the UConn campus map](#) .

Sponsorship begins at \$250.00 and includes 2 registrations. You may indicate your sponsorship level during the registration process. If you have questions about becoming a sponsor, please contact Richard Anyah at richard.anyah@uconn.edu .

Regular Registration Fee

General Registration: \$50.00

Student Registration: \$25.00

Late Registration Fee

(EXTENDED - begins Monday, March 10, 12:00 AM EST)

Late General Registration: \$75.00

Late Student Registration: \$35.00

Why should you attend the 2014 Connecticut Turf & Landscape Conference?

- 1 day of educational seminars offering recertification credits for owners and operators.
- Organic and traditional methods of management.
- Personal access to leading university scholars.
- Networking opportunities with other businesses.
- Vendor displays in the same room as the presentations.
- Convenient location with free parking, available lodging for you and your staff.



University of
Connecticut
College of Agriculture
and Natural Resources



Connecticut Grounds Keepers Association
P.O. Box 803
Orange, CT 06477

STD Presort
US Postage
PAID
New Haven, CT
Permit #415

**Register online at: www.cgka.org
No Walk-Ins**

Appendix N

2014 Turf & Landscape Conference

INFORMATION YOU CAN PROFIT FROM



REGISTER FOR CONFERENCE

**By mail or online at
www.cgka.org**

No Walk-Ins

Deadline: January 17

**January 22, 2014
Crowne Plaza Hotel
Cromwell, CT**

We appreciate all of you who have participated in our past shows and look forward to the continued strong support of our industry by suppliers, manufacturers, dealers and Landscape Professionals. Last year, our two day conference, while successful, proved more than the industry's needs required. This year we will return to one day of seminars covering turf and landscape. We will be able to provide credits for CT DEEP registered supervisors.

In keeping with our mission, the CGKA is again offering this opportunity to Green Industry professionals for continuing education credits, networking and other industry updates. Our association exists to promote education, awareness, stewardship and responsibility in our field. It is our hope that you will find this a worthwhile investment and we look forward to seeing you at this year's conference.

2014 CONFERENCE REGISTRATION



CONNECTICUT GROUNDS KEEPERS ASSOCIATION
 P.O. Box 803
 ORANGE, CT 06477
 203-699-9912 – OFFICE
 203-404-7044 – FAX
 WWW.CGKA.ORG
 INFO@CGKA.ORG

**REGISTRATION by mail or online at www.cgka.org
 by January 17, 2014**

<u>Circle Choices</u>	<u>Member Rate</u>	<u>Non-Member Rate</u>
Education Programs and Lunch	\$65.00	\$95.00
Total	\$ _____	\$ _____

Name on Registration: _____

Company Name: _____

Mailing Address: _____

City, State, Zip: _____

Phone: _____ Fax: _____

Email: _____

CGKA member rate applies only to individual members. Join now to take advantage of member rates apply online. Please fill out separate forms for each person attending (forms available online at www.cgka.org). You may pay total amount with one check by mail, or Register online at www.cgka.org to pay by credit card securely.

YOU MUST REGISTER - NO walk-ins can be admitted.

Don't get turned away at the door - YOU MUST REGISTER.

Wednesday, January 22, 2014

Turf & Ornamentals

7:30 - 8:15	Registration & Visit Vendors
8:15 - 8:30	Welcome
8:30 - 9:00	CT DEEP Update - <i>Regulations affecting our industry.</i>
9:00 - 10:00	Richard Harper, UMass Extension - "Urban Forests" <i>Common-sense strategies to improve our urban forests.</i>
10:00 - 10:30	Break & Visit Vendors
10:30 - 10:45	CTEC Update - Michael Dugan <i>News from the state capitol and what to expect for this year.</i>
10:45 - 11:00	UCONN and NVCC Scholarships & CANR Updates
11:00 - 12:00	Michael Dietz UConn - "Rain Gardens 101" <i>Sitting, Sizing, Installing and maintaining residential rain gardens.</i>
12:00 - 1:00	Lunch and Visit Vendors
1:00 - 2:00	Michelle DaCosta & John Inguagiato - <i>This husband and wife team will look at turf health from both the view of a plant physiologist and a plant pathologist. Many topics discussed can be applied to ornamental plants as well.</i>
2:00 - 3:00	Randy Prostack, UMass Extention - "Turf Weed Management" <i>Difficult to control weeds, new herbicides, preparing for 2014.</i>
3:00 - 3:15	Afternoon Break and Visit Vendors
3:15 - 4:15	Richard Cowles, CAES - "White Grubs" <i>Time to change our methods?</i>
4:15 - 4:30	Recertificatio Credits Distributed and Visit Vendors <i>(You must pick up your credit sheet at the close of the meeting)</i> 4:30 Trade Show closes

Appendix O

ABOUT US CONTACT US FAQ SUGGEST A LISTING CT 10% PARTNERS SPONSORS SIGN IN REGISTER



what are you looking for?

PRODUCT PLACE

search for

06484



HOME

TRAILS

EVENTS

FOOD + GOODS

WINTER'S TOP 10

MARCH 19, 2014 10:00 AM TO 1:00 PM

210 Capitol Avenue
Hartford, CT

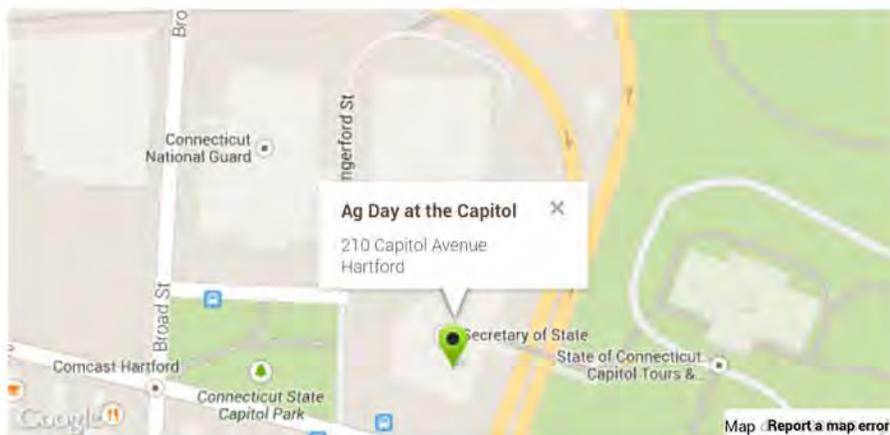
Categories: Agricultural Fair

Held in the North Lobby and Hall of Flags at the State Capitol building in Hartford, over 50 organizations and state and federal agencies from across Connecticut, celebrate agriculture in Connecticut at the state's annual Ag Day at the Capitol.

The various exhibits show the diverse aspects of agriculture from across the state. Additionally, awards are given to a number of the outstanding farmers in the state.



SUGGEST AN EVENT



<< Prev Event

Next Event >>



Add a comment...

Comment



Jack McConnell · Wethersfield, Connecticut

I'll have 16 of my CT Farmer photos on display in the Rotunda at the Capitol outside the Hall of Flags where the farm organizations will be exhibiting. Join us from 10am-1pm on Wed March 19.

Reply · Like · 10 · March 10 at 9:18am

Facebook social plugin

googleplus

Jan 1, 2014 - Nov 19, 2014

Audience Overview

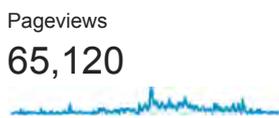
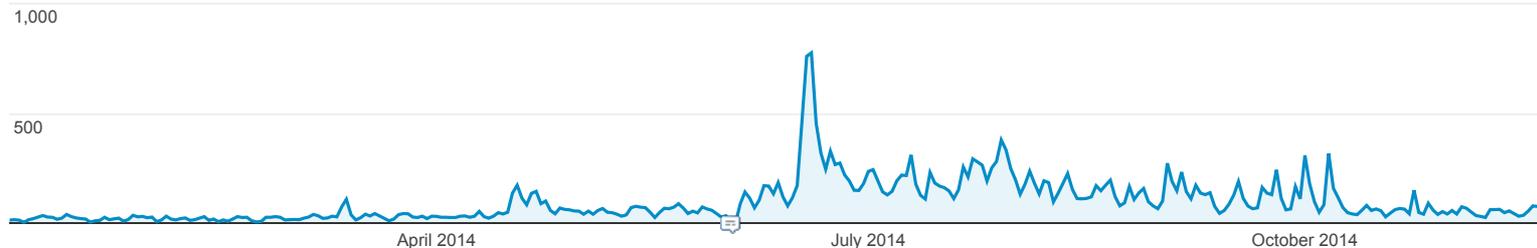
You are using a filtered view, which may cause your Users count to be inaccurate. [Learn more](#)

All Sessions
100.00%

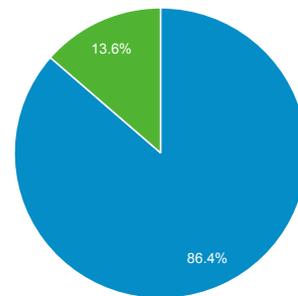
+ Add Segment

Overview

● Users



■ New Visitor ■ Returning Visitor



Language	Sessions	% Sessions
1. en-us	30,636	94.86%
2. en-gb	612	1.89%
3. en-ca	310	0.96%
4. en	277	0.86%
5. fr	75	0.23%
6. pl	62	0.19%
7. zh-cn	30	0.09%
8. pt-br	27	0.08%
9. fr-fr	25	0.08%
10. es-es	17	0.05%



COLLEGE OF AGRICULTURE & NATURAL RESOURCES

Pesticide Safety Education Program

Ornamental & Turf Short Course

(<http://psep.extension.uconn.edu/2013/12/10/ornamental-turf-short-course/>)

The Ornamental & Turf/Golf Course Superintendents Short Course, an in-depth review of the the material necessary for passing the Ornamental and Turf/Golf Course Superintendent's State of Connecticut Supervisory Pesticide Applicator Certification exam, will begin in West Hartford on January 7, 2014.

The nine-week session meets on Tuesdays from 1 – 4 PM.at the UConn Hartford County Extension Center.A student who attends all lectures and independently studies the material outside of class should be ready to pass both the written and oral exams associated with the certification.

Cost for the class averages \$385. This does NOT included the required Pesticide Applicator Training Manual (the "Core Manual") which costs \$36.00. On optional, but recommended, text, the Ornamental and Turf Manual – Category 3, is \$3.

The state licensing written exam date is Tuesday March 4, 2014, weather permitting. An additional fee of \$200 is payable at the time of the exam. Those who pass the written exam will then be scheduled for the oral section of the exam.

CLASS SIZE IS LIMITED TO 40 PARTICIPANTS – First come, first serve. Registration Deadline is **December 31, 2013**. For more information, contact Candace Bartholomew, Pesticide Safety Education Program Coordinator at 860-570-9010.

December 10, 2013 stb05003 (<http://psep.extension.uconn.edu/author/stb05003/>)

EPA releases new Bee Advisory Box on labels
(<http://psep.extension.uconn.edu/2013/12/10/epa-releases-new-bee-advisory-box-on-labels/>)

Search this site

Search

Recent News

Ornamental & Turf Short Course
(<http://psep.extension.uconn.edu/2013/12/10/ornamental-turf-short-course/>)
EPA releases new Bee Advisory Box on labels
(<http://psep.extension.uconn.edu/2013/12/10/epa-releases-new-bee-advisory-box-on-labels/>)



Invasive Plants Workshop

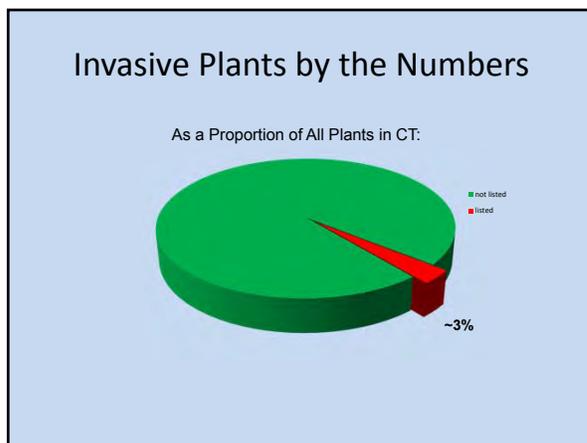
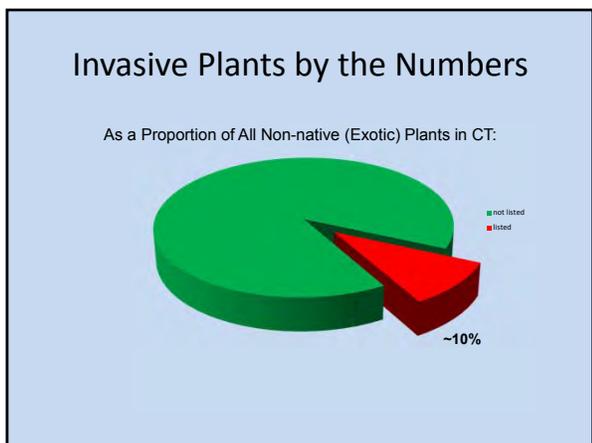
May 27, 2014
Southbury Town Hall

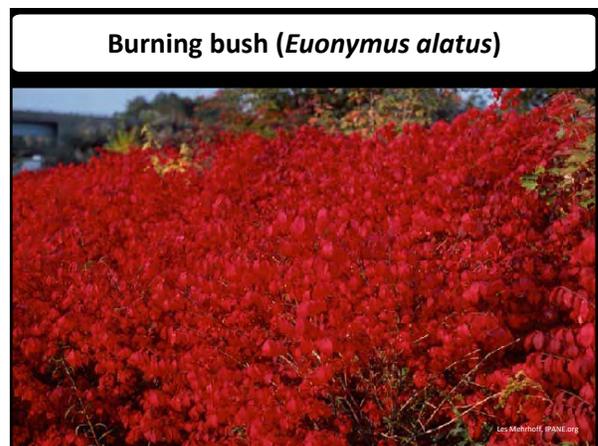
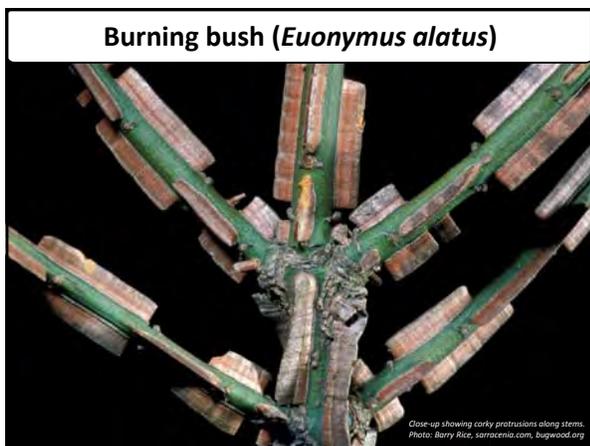
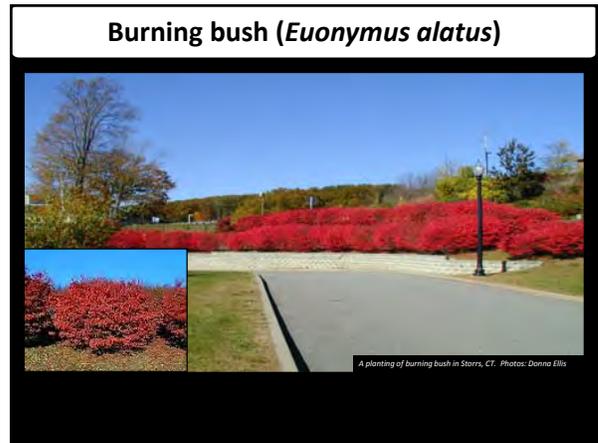
Logan Senack
CT Invasive Plant Coordinator
UConn
UNIVERSITY OF CONNECTICUT

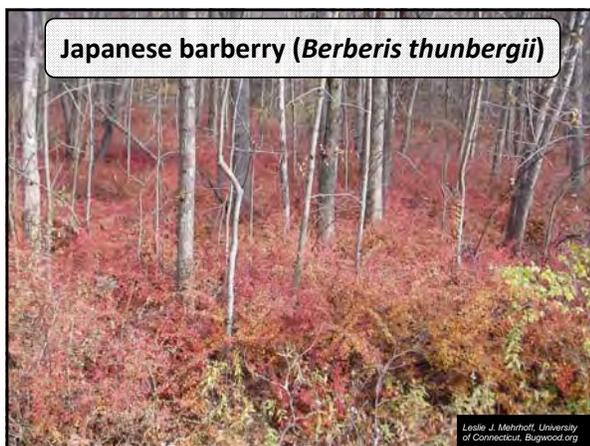
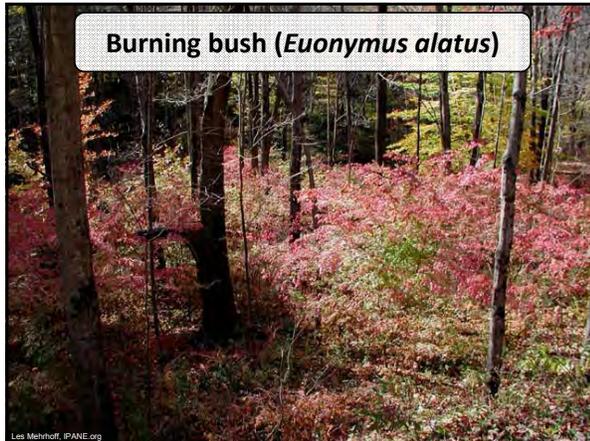
Nicole Gohelman / UConn



First, the basics.
(briefly)







Environmental Impacts

- Soil chemistry
- Tree/forest regeneration
- Native plants
 - Native insects
 - Native birds, animals

Nicole Gabelman, UConn



Environmental Impacts

- Soil chemistry
- Tree/forest regeneration
- Native plants
 - Native insects
 - Native birds, animals




Nicole Gehelman / iCyan

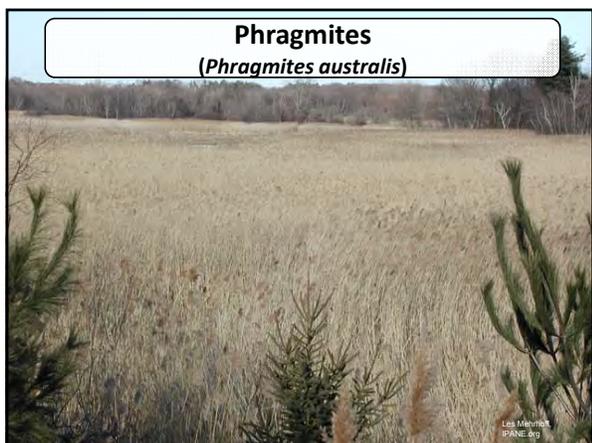


Environmental Impacts

- Soil chemistry
- Tree/forest regeneration
- Native plants
 - Native insects
 - Native birds, animals

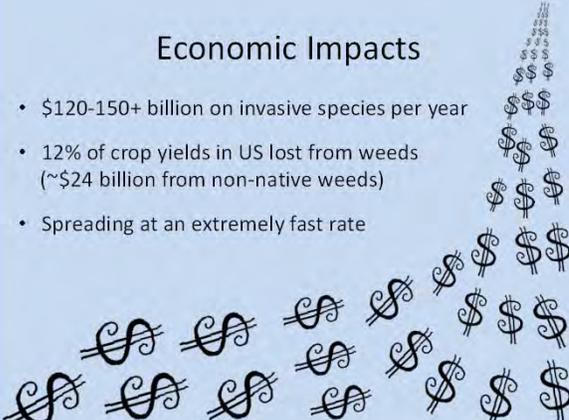



Nicole Gehelman / iCyan



Economic Impacts

- \$120-150+ billion on invasive species per year
- 12% of crop yields in US lost from weeds (~\$24 billion from non-native weeds)
- Spreading at an extremely fast rate





Land Use Impacts

- Hiking
- Fishing and boating
- Hunting
- Gardening and farming
- Sense of place

William R. Hooper, Mississippi State University, Bugwood.org UGA132993





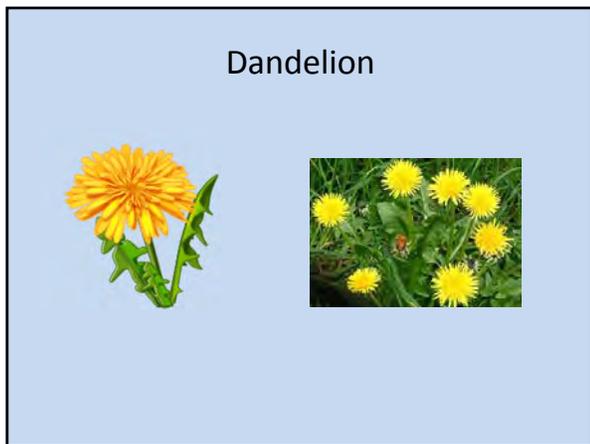
Federal Definition

1. Non-native 
2. Cause harm
 - Economic
 - Environmental
 - Human health

Connecticut

9 criteria, including:

- demonstrated or possible rapid growth
- high dispersion potential
- outcompete other species in the same natural plant community
- potential to exist in high numbers outside of intensely managed habitats





State Lists

Invasive Plant List:
Scientific criteria list
 - 97 species
 - Meet 9 criteria for invasiveness/potential
 - Invasive Plants Council

Prohibited List:
Legal list about sales
 - 80 of 97 species
 - Subset of all listed invasive plants
 - Legislature

Legal Restrictions on Invasive Plants

In CT, it is illegal to:

- import
- move*
- sell
- purchase
- transplant
- cultivate
- distribute

any of the species on the prohibited list
(state agencies and their contractors cannot use plants on the whole list)

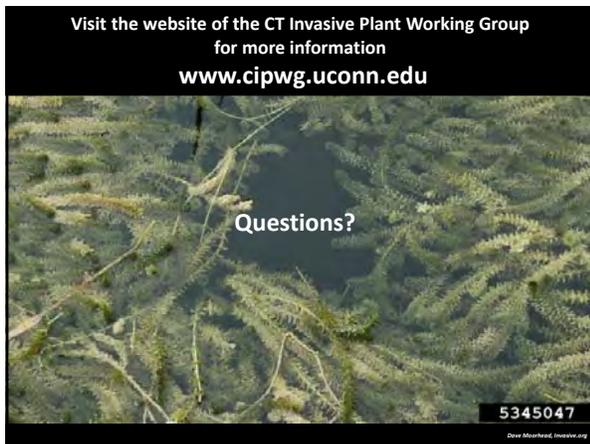
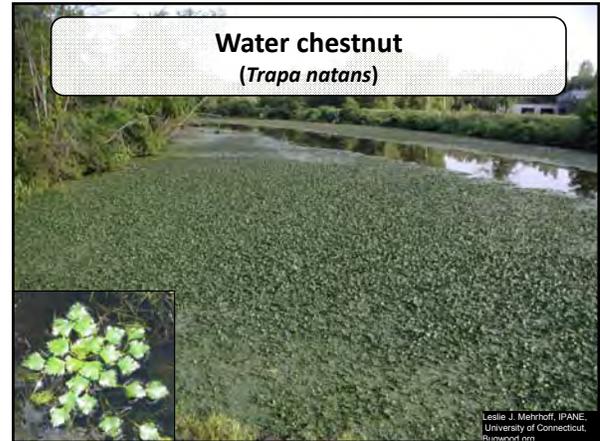
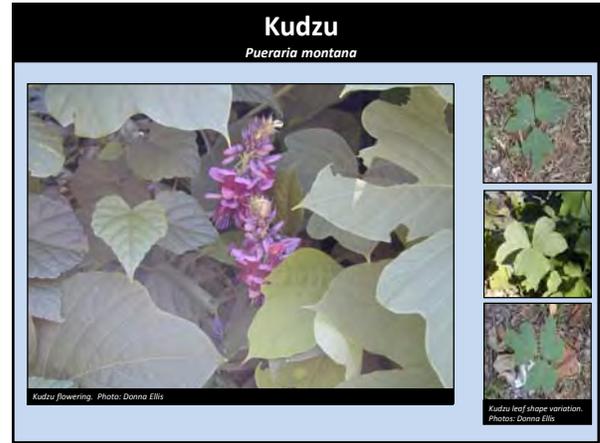
punishable by up to \$100 fine per plant (includes plant parts, seeds, etc.)

DEEP has enforcement authority as of Oct. 2010



Watch for:







GIVE INVASIVE SPECIES THE BRUSH OFF.

Clean Your Gear Before Entering And Before Leaving The Recreation Site.



Help Prevent The Spread Of Invasive Plants And Animals.

- Wipe off dirt/goo
- Use brush or pulled brush
- Use brush to avoid berries
- Shake out brush
- Make sure you're clean and ready.



STOP INVASIVE SPECIES IN YOUR TRACKS.

Boot brush stations




TNC/MN

Available CT Resources

www.cipwg.uconn.edu



Connecticut Native Tree and Shrub Availability List



Connecticut Department of Environmental Protection
Bureau of Natural Resources
Publications

Available CT Resources




CT distribution of mile-a-minute vine

Native plants (and other alternatives)




Workshops



Event Displays



CIPWG



Don't forget:

- Other Land Trusts
- Non-profits, Conservation Organizations
- Town groups:
Conservation Departments, Conservation Commissions
- State groups:
CT Invasive Plant Working Group
CT Botanical Society
- Federal:
Fish and Wildlife Refuge System

Visit the website of the CT Invasive Plant Working Group
for more information
www.cipwg.uconn.edu



Control and Management



Control and Management

- MAKE A PLAN FIRST
– Match the technique to the job

- Plan to follow-up later

- Dispose of plants properly*

- Follow-up again



Connecticut Efforts and Resources



Appendix S

- [Call for Speakers](#)

[Expo & More!](#)

- [EXPO Overview](#)
- [Floorplan and Exhibitor Search](#)
- [Sprint Sessions on the Expo Floor](#)
- [Learning Opportunities](#)
- [Network & Exhibitor Meetings](#)
- [Network Central](#)
- [Dining options](#)
- [Sponsors](#)

[Register](#)

- [Attendee Registration Overview](#)
- Attendee Registration (*available fall 2014*)
- [FAQs](#)
- [First Timer Tips](#)

[Plan Your Visit](#)

- [Hotel Reservations](#)
- [Travel & Parking](#)
- ["Grows After Dark" Socializing](#)
- [Directions](#)

Event Archives: 2014: Sprint Sessions

Common Ground Stage - Sprint Session Schedule

Rapid-fire, information-packed Sprint Sessions

Presented by Extension personnel, leading supplier, and other industry experts

Offered in 15-minute bursts on the Common Ground stage, located in the center of the Expo Floor

Wednesday, February 5

11:30 a.m.

Ticks: New Disease Problems and What You Need to Know

Margaret Hagen, University of New Hampshire

New England states have among the highest rates of Lyme disease, Babesiosis, Anaplasmosis, and Eastern Equine Encephalitis. You can greatly decrease your risk of contracting these diseases. Learn how they are transmitted and how to

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protect yourself.

12:00 noon

Knowing the Ropes: Choosing & Using the Knots

Ken Palmer, ArborMaster, Inc.

The history and development of tree climbing and rigging techniques are directly related to technology in rope equipment design, manufacture, and fabrication. Learn why understanding the physics behind climbing and rigging knots will ensure wise choices on the job site.

12:30 p.m.

Do Your Customers' Pollinator Gardens Provide the Best Bee Resources?

Dr. Lois Berg Stack, University of Maine

Many pollinator-preference plant lists are based on studies and observations conducted in very diverse locations. Local data, matching locally adapted plants with our regionally native bees, make all the difference. Results of our multi-year study of bee preferences can help you and your customers succeed.

1:00 p.m.

Keeping Bees Healthy

Noah Wilson-Rich, Ph.D., Urban Beekeeping Lab/Bee Sanctuary, The Best Bees Company

Honeybees are vitally important pollinators of more than 130 crops and they are dying. Learn the latest about what may be killing our bees and what you can do to help keep them healthy.

1:30 p.m.

Pollinators' Favorite Plants at the URI Botanical Gardens

Gabrielle Torphy, University of Rhode Island

Discover what plants pollinators prefer at the URI Botanical Gardens.

2:00 p.m.

Ergonomics & Rejuvenation Stretching

Jeff Spratt, NCLMT, Spratt Muscular Therapies, LLC

Reclaim your advantage! Learn an easy rejuvenation exercise series design to invigorate and prepare your body for the physical work that comes with being a green industry professional.

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2:30 p.m.

Problems on Spruce and White Fir - Needlecasts and Needle Blights

Dr. Cheryl Smith, University of New Hampshire

Have you seen spruce declining in recent years? Learn what needle diseases have been occurring on spruce & white fir in New England, and explore management options.

3:30 p.m.

Rhythm Room Live!

The energy and power of percussion, dynamic vocals and a few surprise instruments create an explosive, captivating experience that will stick with you long after itâ€™s over!

Thursday, February 6

9:30 a.m.

Motorcycles and Trees

Dennis Ryan, University of Massachusetts

Working in the tree care industry is like riding a motorcycle. Both tree care professionals and motorcyclists face risks that other people do not live with - and both reap rewards that many people might not understand. Learn why safety professionals recommend two key points for both: ATGATT and situational awareness.

10:00 a.m.

Emerging Trends in Synthetic Grass: Backyard Putting Greens

Karen Moulton, TM Turfscapes

Learn to easily expand your business, gain a competitive edge, and grow sales with SYNLawN, the world's leader in high-performance artificial turf. See how you can use existing crews and equipment to deliver professional and custom synthetic putting greens wherever your clients want them - backyards, roofs, poolside or patios.

10:30 a.m.

Invasive Plants - Management and Alternatives

Donna Ellis, University of Connecticut

Invasive species can outcompete desirable plants in landscapes. Learn about

Appendix S

invasive plant management options and replacement plants that can be used as alternatives.

11:00 a.m.

Quick 2D and 3D Landscape Design

Eric Gilbey, Vectorworks Landmark Software

Join us for a lively demonstration of how to create 2D/3D landscape plans using Vectorworks Landmark Software. See how easy it is to take imported plot plans and create rendered 2D landscape plans and amazing photorealistic 3D models and walkthroughs, allowing you to more fully express the ideas you have for your client's site.

11:30 a.m.

Wilt Based Irrigation of Turf

Jason Lanier, University of Massachusetts

Long-standing recommendations call for irrigation events to be deep and infrequent to encourage deeply rooted, resilient turf. Wilt-based irrigation scheduling offers a simple timing mechanism for the practice of deep and infrequent irrigation. Allowing for mild drought stress enables water conservation and promotes drought resistance and cold tolerance in turf.

12:00 noon

Arborist Climbing Knots & Hitches

Ken Palmer, ArborMaster, Inc.

Learn eight of the most useful climbing knots and their best job site applications. Gather around the MAA Learning Hub immediately following this talk for hands on instructions and a head-to-head knot tying competition.

12:30 p.m.

Elongate Hemlock Scale: A Major Problem for True Fir

Nick Brazee, University of Massachusetts

The non-native elongate hemlock scale is also a serious pest of true fir (*Abies* spp.). Symptoms can go unnoticed until the infestation is severe, leading to early needle drop and branch dieback. The stress facilitates infection by opportunistic pathogens, makes trees more susceptible to drought stress and detracts from their aesthetic appearance.

1:00 p.m.

POS Systems: Boon or Brainwash?

John Deery, J.D. Associates, Inc.

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Can a Point of Sale system really pay for itself? A no holds-barred look at the numbers. Learn how to see clearly which numbers are crucial to increasing your profit; analyze how fast a POS system will pay for itself; and identify the many "extras" in a POS system. Learn the facts and decide if a POS system is the right retail technology for your garden center.

1:30 p.m.

Making a Wildflower Meadow

Amy Papineau, University of New Hampshire

Wildflower meadows provide food and habitat for pollinators and other wildlife. Learn what it takes to create a perennial meadow with native wildflowers and grasses. We'll discuss site preparation and species selection for season-long diversity in colors, textures, and heights.

2:00 p.m.

Urban Beekeeping & Your Business: How to Build Your Sustainability Brand

Noah Wilson-Rich, Ph.D., Urban Beekeeping Lab/Bee Sanctuary, The Best Bees Company

Today's competitive market is forcing green businesses and institutions to go even further to prove their sustainability record. Learn how beekeeping is helping some well-known New England brands and how it can help yours, too.

Friday, February 7

9:30 a.m.

Diagnosing *Phytophthora* Diseases in the Landscape and Nursery

Heather Faubert, University of Rhode Island

View images of *Phytophthora*-infested plants and learn how to diagnose this disease with immunostrips.

10:00 a.m.

Ergonomics & Rejuvenation Stretching

Jack Spratt, NCLMT, Spratt Muscular Therapies, LLC

Working in the green industry presents a lot of challenges including the risk of injury. Take away useful techniques to help lower stress and strain caused by

Appendix S

overuse and repetitive movement.

10:30 a.m.

The Economics of Alternative Nursery Production Methods

Dan Lass, University of Massachusetts

The costs, returns and risks of three different nursery production methods, field grown, pot-in-pot, and fabric containers, are compared for river birch and swamp white oak production.

11:00 a.m.

MNLA's 15 Favorite Apps for the Green Industry

Chris Kennedy, MCH, Kennedy's Country Gardens

So many apps - so little time! We polled green industry colleagues across the region to discover the mobile apps they're using every day and how they make their jobs easier. Find out which apps made the list and why.

11:30 a.m.

How Tree Production Systems Affect Root Structure and Transplant Success

Dr. Cathy Neal, University of New Hampshire

We have examined hundreds of tree root systems produced in plastic and fabric containers, and compared them to field grown B&B plants. Anyone who purchases, plants and/or maintains landscape trees should carefully weigh the risks and benefits of each product and how it should be prepared for transplanting.

12:00 noon

Arborist Rigging Knots & Hitches

Ken Palmer, ArborMaster, Inc.

Learn eight of the most useful rigging knots and their best job site applications. Gather around the MAA Learning Hub immediately following this talk for hands on instruction and a head-to-head knot tying competition.

12:30 p.m.

Pruning Trees and Shrubs

Geoffrey Njue, University of Massachusetts

Pruning is a common need, particularly with young trees, and it is the most common cultural practice performed on trees. Pruning is also the practice that can do the most harm, if performed incorrectly. Learn when to prune and how to apply proper pruning methods for trees and shrubs.

Appendix T



[Home](#) [About Us](#) [F.A.Q.](#) [Projects](#) [Invasives](#) [Education](#) [Calendar](#) [Join GPIIP](#) [Volunteer](#)

Together we can help make Glastonbury a more beautiful, greener place to live.

Invasives

Invasive Plants Journal: [Battling Invasives](#)

Our 2nd Successful Work Day!

More than 40 bittersweet battlers turned out on October 25, 2014 to enjoy great fall weather and to clear an area next to the 2013 parcel at Riverfront Park that was threatened by invasive plants. Within a few hours, the several-acre site along the walking path to Main Street was cleared of hundreds of tangled and matted bittersweet vines leaving the Town crew to treat the cut vines to prevent resprouting. Afterwards, a number of resolute volunteers continued down to the riverfront trail near a secluded picnic table to cut new bittersweet vine growth that has reappeared since last years Save-a-Tree day.

Everyone felt good about their contribution to bringing back the natural beauty of the park. The trees and natural habitat will now flourish providing us with their beauty. It was a very satisfying morning well spent.

Contributing to the success of the event was Greg Foran and the Glastonbury Parks and Recreation Department team. From planning, to site preparation, to debris cleanup, Glastonbury Partners in Planting couldn't ask for better partners.

GPIIP will be restoring the cleared parcels with native plants in the near future.

Appendix T



INVASIVES RESOURCE LINKS

[Invasives 2014](#)

ORIENTAL BITTERSWEET:

[Plant Conservation Alliance Fact Sheet](#)[Ecological Landscaping Association Fact Sheet](#)[Identifying Oriental Bittersweet \(Invasive\)
Versus American Bittersweet \(Non-Invasive\)](#)

POISON IVY:

[Poison Ivy Fact Sheet \(UCONN\)](#)[Dealing With Poison Ivy \(UCONN\)](#)

INVASIVE PLANTS (GENERAL INFORMATION):

[Invasive Plants in Your Backyard! A Guide to Their
Identification and Control](#)[Connecticut Invasive Plant Working Group \(CIPWG\)](#)[Invasive Plant Disposal Guide](#)[Weed Control Methods Handbook](#)

OTHER RESOURCES:

[Japanese Barberry and Lyme
Disease](#)[Connecticut Cooperative Extension
System](#)[Glastonbury Partners in Planting:
Invasive Plants Blog - Battling
Invasives](#)

Appendix U



[Home](#) [About Us](#) [F.A.Q.](#) [Projects](#) [Invasives](#) [Education](#) [Calendar](#) [Join GPIIP](#) [Volunteer](#)

Together we can help make Glastonbury a more beautiful, greener place to live.

Invasives

Invasive Plants Journal: [Battling Invasives](#)

Save A Tree at Ferry Landing!

Ferry Landing Park saw more than its usual early morning joggers in early June. Fifteen devoted battling invasives volunteers, armed with loppers and pruning shears, cut massive amounts of bittersweet vines growing at the park. Looking at the many debris piles left on the side of the ½ mile path, it was estimated that nearly 100 tall, stately trees were saved from the terrorist bittersweet vines!

Appendix U



Oriental Bittersweet

At a recent board meeting it was decided that GPIIP would like to take a leading role in an initiative to battle the invasive and prolific oriental bittersweet that threatens all of Glastonbury's parks and forests as well as many backyards. We have put together a mission and purpose that includes community-wide partnerships, educational outreach, hands-on remediation projects and continuous learning and research.

Our Battling Bittersweet Work Day at Riverfront Park on September 28th was a huge success thanks to the nearly 75 intrepid volunteers who worked throughout the day cutting away the strangling bittersweet vines and removing the multi-flora rose. What was once a dense jungle is now open space for trees and native understory to flourish.

Before

Invasive and Potentially Invasive Plant Early Detection List

These plants are known to be invasive or potentially invasive in Connecticut and are on Connecticut's list of Invasive and Potentially Invasive Plants. They are known to be present only in relatively low numbers at limited locations in Connecticut. These species should be considered for control and eradication efforts in the state when resources are available. See the CT Invasive and Potentially Invasive Plant list for synonyms and full nomenclatural information.

If you find these species: Report your findings immediately to the CT Invasive Plant Coordinator at reportinvasives@uconn.edu. Aquatic species reports will be forwarded to DEEP. Be sure to include as much detail as you are able (attach photographs if possible) and provide your contact information. You may also report these and other species online at www.EDDMapS.org. EDDMapS is an online mapping program that can be used to track invasive plants.

<u>Scientific Name</u>	<u>Common Name</u>	<u>CT Inv. status</u>	<u>Present in CT?*</u>
<i>Arthraxon hispidus</i> Present in SE CT. Invader of moist sunny fields and open areas. Only one CT site known.	Hairy jointgrass	Pot. Inv.	Yes
<i>Bromus tectorum</i> This plant is known to be very invasive in other states and may be underreported in CT.	Drooping-brome/Cheatgrass	Pot. Inv.	Yes
<i>Butomus umbellatus</i> Present in north central and south central CT. Perennial aquatic plant. Freshwater shorelines.	Flowering rush	Pot. Inv.	Yes
<i>Carex kobomugi</i> Not currently known in CT. Perennial sedge.	Japanese sedge	Pot. Inv.	No
<i>Egeria densa</i> Found in various locations in CT. Submersed perennial plant.	Brazilian water-weed	Pot. Inv.	Yes
<i>Hydrilla verticillata</i> Present in SE and SW CT. Submersed aquatic perennial. Limited distribution.	Hydrilla	Invasive	Yes
<i>Impatiens glandulifera</i> Eastern CT. Herbaceous annual. Moist areas, roadsides. Limited distribution.	Ornamental jewelweed	Pot. Inv.	Yes
<i>Pueraria montana</i> Present in southern and central CT. Perennial vine. Grows in a variety of habitats. Limited distribution.	Kudzu	Pot. Inv.	Yes
<i>Senecio jacobaea</i> Not currently known in CT. Herbaceous plant. Roadsides, river edges, disturbed sites.	Tansy ragwort	Pot. Inv.	No

*Present in Connecticut means listed as occurring in the state by the *Flora Novae Angliae* by Arthur Haines or a documented occurrence recorded with the Invasive Plant Atlas of New England (IPANE) or the George Safford Torrey Herbarium (CONN) at the University of Connecticut. Plants do not need to be present in Connecticut prior to being listed on the state's invasive or potentially invasive plant lists.

Research List

This is a list of plants about which more information is desired. This is not a regulatory list or an invasive plant list. Plants are not necessarily listed here prior to inclusion on an invasive plant list. Rather, more information about these plants and their occurrence in the state is desired and current records are limited. The Invasive Plants Council is the body responsible for the Invasive Plant List under CT General Statutes Sec. 22a-381b. To request a species be examined by the Invasive Plants Council, fill out the “Guidelines for submitting a Candidate Species for Council Review” document available on the IPC website at <http://cipwg.uconn.edu/criteria-for-listing/>.

If you find these species: Report your findings online at www.EDDMapS.org.

<u>Scientific Name</u>	<u>Common Name</u>	<u>CT Inv. status</u>	<u>Present in CT?*</u>
<i>Actinidia arguta</i>	Hardy Kiwi	Not listed	Yes
This plant was discussed by the CT Invasive Plants Council in 2010. No IPC action was taken. Plants may not be producing viable seeds and may not be spreading to new areas. DOT controlled plants at a site in west central CT where this plant was reported.			
<i>Akebia quinata</i>	Chocolate vine	Not listed	Yes
Sometimes found at old/historic home sites. Evidence of new dispersal is lacking.			
<i>Anthriscus sylvestris</i>	Wild Chervil	Not listed	Yes
Native to Europe. Reported to be spreading in CT and throughout New England.			
<i>Aralia elata</i>	Japanese aralia	Not listed	Yes
Native to Asia. Found in some New England states.			
<i>Eragrostis curvula</i>	Weeping lovegrass	Not listed	Yes
Native to Africa. Found in southern New England.			
<i>Hydrocharis morsus-ranae</i>	common/European frogbit	Not listed	No
Native to Europe. Not known to be present in CT. Found in VT.			
<i>Kummerowia striata</i>	Japanese clover	Not listed	Yes
Native to eastern Asia. Found in southern New England.			
<i>Lespedeza cuneata</i>	Sericea lespedeza	Not listed	Yes
Native to eastern Asia. Also found in MA.			
<i>Ludwigia peploides</i> ssp. <i>glabrescens</i>	Ftng. primrose-willow	Not listed	No
Native elsewhere in US but not native in CT.			
<i>Oplismenus hirtellus</i>	Wavyleaf basketgrass	Not listed	No
This plant was discussed by the CT Invasive Plants Council in 2012. No action was taken. The IPC may review this plant annually.			
<i>Phellodendron amurense</i>	Amur corktree	Not listed	Yes
Native to eastern Asia. Present in several locations in Connecticut.			
<i>Phyllostachys</i> spp.	Various bamboo species	Not listed	Yes
<i>Phyllostachys aureosulcata</i> and other <i>Phyllostachys</i> species were examined for listing in 2010 and 2012. Species in the genus <i>Phyllostachys</i> did not meet criteria set forth in CGS Sec. 22a-381b. There is a lack of evidence that species in this genus spread to new areas of the state unless they are intentionally planted, moved, or improperly discarded.			

Appendix W

<i>Pyrus calleryana</i>	Callery pear	Not listed	Yes
Native to eastern Asia. Present in several locations, escaping from planted sites.			
<i>Rhodotypos scandens</i>	Jetbead	Not listed	Yes
Native to Japan.			
<i>Salix atrocineria</i>	Large gray willow	Not listed	Yes
Native to Europe and western Asia. May be confused with other willows.			
<i>Salvia glutinosa</i>	Jupiter's distaff	Not listed	No
Found spreading along a trail in NY just west of CT border.			
<i>Symplocos paniculata</i>	Sapphire-berry	Not listed	Yes
Native to China and Japan.			
<i>Utricularia inflata</i>	Swollen bladderwort	Not listed	No
Native to southeastern US. Now found in MA.			
<i>Viburnum dilatatum</i>	Linden arrowwood	Not listed	Yes
Native to eastern Asia.			
<i>Wisteria floribunda</i> and <i>Wisteria sinensis</i>	Wisteria vine	Not listed	Yes
These species are sometimes found at old/historic home sites, where they may form dense stands. Evidence of new dispersal is lacking.			

*Present in Connecticut means listed as occurring in the state by the *Flora Novae Angliae* by Arthur Haines or a documented occurrence recorded with the Invasive Plant Atlas of New England (IPANE) or the George Safford Torrey Herbarium (CONN) at the University of Connecticut.