

The background of the entire page is a grayscale image of a dense cluster of white, bell-shaped flowers, likely Forsythia, with some green leaves. In the lower-left foreground, there is a small, detailed branch with several bright yellow and red flowers, possibly from a different species like a flowering quince, which are in sharp focus compared to the background.

# **Invasive Plants Council**

## **Eleventh Annual Report**

December 10, 2013

*Cover: Oriental bittersweet (Celastrus orbiculatus), an invasive plant.*

*Photo credit: Nicole Gabelman, UConn*

*Background photo credit: Les Mehrhoff, IPANE, UConn*

INVASIVE PLANTS COUNCIL  
ELEVENTH Annual Report  
December 10, 2013

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 Chairman of the Invasive Plants Council, I respectfully submit this letter and attachments for activities conducted during 2013. This Council was established and operates pursuant to Connecticut General Statutes §22a-381 through §22a-381d, and is responsible for the following: developing and conducting initiatives to educate the public about the problems created by invasive plants in lakes, forests and other natural habitats; recommending ways of controlling their spread; making information about invasive plants available to the public; annually updating and publishing the invasive plant list; supporting research on developing and improving methods for controlling invasive species and on developing new non-invasive plant varieties.

### **The Council**

The Council consists of nine members representing government, the nursery industry, scientists, and environmental groups. I am the current Chairman of the Council and Chief of the Bureau of Natural Resources at the Department of Energy and Environmental Protection (DEEP). Dave Goodwin, General Manager at Planters' Choice Nursery, serves as Vice Chairman of the Council. There has been one change in membership since last year's report: Dr. Jeff Ward has replaced Dr. Louis Magnarelli as the representative from the Connecticut Agricultural Experiment Station (Dr. Ted Andreadis has replaced Dr. Magnarelli as the Director of the Station and will be replacing Dr. Ward at future meetings). A list of all Council members can be found in Attachment 1.

It is with great sadness that we report the passing of Louis Magnarelli. Dr. Magnarelli has been involved in the Council since its creation in 2003 and served as Council Chair in 2006 and 2007. Dr. Magnarelli's leadership, technical expertise, and friendship will be deeply missed.

The Council has met five times since its last annual report dated December 11, 2012. See Attachment 2 for the minutes of the five meetings that have taken place over the past year. The

Council has repeatedly demonstrated that it can find solutions to complex problems and work constructively. The Council provides the well-structured, legislatively authorized forum needed to forge and implement a cohesive invasive plant management strategy. This assemblage of representation from the State's key plant-related agencies, educational institutions, businesses and non-profit organizations has been able to develop the consensus strategies and collaboration needed to balance the interests of protecting Connecticut's environment and keeping the nursery and related plant industries productive. The actions of the Council also enhance regional coordination in addressing invasive species, which know no boundaries and continue to spread across political lines.

The continuation of funding for the Invasive Plant Coordinator position has strongly benefitted the Council. Mr. Logan Senack, the state's Invasive Plant Coordinator, is thanked for undertaking crucial outreach, education, prevention, and control initiatives that make it possible for communities and agencies across the state to leverage limited resources and coordinate significant volunteer efforts to address invasive plant problems that threaten the health and public use of lakes, rivers, and forests. The Coordinator also provides critical administrative support which enables the Council to meet its mandated responsibilities and follow through on its initiatives. Funding specifically for the Invasive Plant Coordinator position has been provided by the State Legislature through the end of this fiscal year. These funds are appropriated to the Department of Agriculture (DoAg) for the specific purpose of supporting the Coordinator position at the University of Connecticut. This support for the Coordinator position and related operating expenses has been invaluable to the Council, and will be essential to the continued effectiveness of the Council and to our efforts to address the introduction and spread of invasive plants. The Council also acknowledges the cooperation of the Department of Agriculture for providing conference room space for this year's meetings.

### **Council Activities**

The continuation of funding for the Invasive Plant Coordinator position is a key component of Connecticut's response to invasive plants and continues to benefit the state. Assistance from the Coordinator allowed for the further development of early detection and rapid response procedures for emerging problems. With the Coordinator in place, the Council continues to serve as an advisory body to DEEP as it moves these programs forward. The following is a summary of Council activities and accomplishments during 2013.

The Council drafted and later testified in support of legislation intended to address concerns over the spread of running bamboo (*Phyllostachys sp.*) on landscaped properties. Although it was determined that running bamboo did not meet the statutory criteria for inclusion on the invasive plant list, it was also recognized that running bamboo can grow aggressively, spread to adjoining parcels, cause property damage, and is difficult to control. In response, the Council recommended measures that eventually became law as PA 13-82. Under the requirements of this Public Act, retail sellers of running bamboo must notify purchasers of potential problems caused by this plant, people who plant running bamboo near property lines are required to install and maintain an effective barrier system, and property owners can be held liable for damage caused to neighboring properties.

The Invasive Plant Coordinator organized and held a workshop to educate staff from towns and municipalities throughout Connecticut on the new bamboo law. The workshop was held on August 20 at the Milford City Hall and was attended by approximately 80 people. Attendees were provided with information on the identification and control of running bamboo, followed by a walkthrough and discussion of the details of PA 13-82, and a question and answer session. In addition to providing information to municipal officials, the Coordinator responded throughout the year to many public inquiries regarding running bamboo and the implementation of the new law.

Two actions were taken during 2013 to address the uncertain status of cultivars of those plant species which the Council has determined to be invasive and for which the Legislature has prohibited import, sale, transplant, cultivation and distribution under §22a-381d of the CGS. The Coordinator arranged a webinar in January to enable Council members to discuss and understand how this issue is being addressed in neighboring New York (a draft assessment protocol has been developed). Subsequently, the legislative history was compiled and a review performed by legal staff from the State Agency with enforcement authority (DEEP). This review concluded that cultivars were considered by the legislature when drafting PA 03-136 and were intended to be treated consistent with taxonomic protocol: i.e. if the sale of a species is prohibited then all cultivars of that species are also prohibited from sale. What remains for the Council is to conduct a scientific/technical analysis and to develop recommendations for future action.

During 2013, the Invasive Plant Coordinator continued outreach efforts to inform the public about invasive plants, gather information on new infestations, eliminate new or emerging invasions of invasive plants, and to suggest new plants for potential examination and evaluation by the Council. Efforts continued to reduce the unintentional spread of invasive plants by educating the public via further distribution of the “*Guidelines for Disposal of Terrestrial Invasive Plants*” brochure developed in 2012.

Efforts were initiated in 2013 to better coordinate inspection efforts by the DoAg (pet shops), DEEP (pet shops for non-plant invasive species), and the Connecticut Agricultural Experiment Station (CAES; nurseries and garden centers), with enforcement by DEEP. The primary objective is to provide information and education and to maximize voluntary compliance. This effort will be further advanced during 2014 with the Coordinator providing inspectors with training in invasive plant laws and identification of prohibited invasive plants. Future efforts also include the development and preparation of resources that will provide recommendations for non-invasive alternative plants in accordance with CGS §22a-381b(d).

The Coordinator took the lead role in working with invasive plant specialists from Connecticut and other states to prepare Best Management Practices (BMPs) for giant cane (*Arundo donax*). This plant is native to East Asia and is listed among the world’s 100 worst invasive species. Connecticut is within the plant’s potential range in North America. During 2013, giant cane was approved for use as a biofuel crop in the U.S. (the same traits that make it an invasive species – rapid growth and high yield – make it attractive for meeting our nation’s biofuel commitments). The BMPs authored by the Coordinator are designed to minimize the threat of escape from production areas. They have been submitted to the Environmental Protection Agency for consideration as industry standards.

## **Suggested Plant Regulation Changes**

Individuals requesting that certain plants be listed as invasive or potentially invasive often fail to understand the nuances of the lists that the Council is charged with maintaining, and the related but separate list in CGS §22a-381d that prohibits the sale of certain plants. The Invasive Plants Council is charged with maintaining and annually updating a list of Invasive and Potentially Invasive Plants determined by scientific criteria to be invasive, as defined in CGS §22a-381. The General Assembly has the option of passing legislation to further prohibit a plant from sale, and the Invasive Plants Council is empowered to recommend that step to the Environment Committee on a 2/3 affirmative vote.

During 2013, the Council continued its ongoing review of plant species currently found in Connecticut and of those species whose range is expanding and could potentially include Connecticut in the near future. While a number of species have been added to our informal “watch list,” the Council does not plan to recommend the prohibition of any additional species during the 2014 Legislative Session.

## **Overview of Current Activities and Needs in Connecticut**

In Connecticut, invasive plants continue to cause obvious environmental problems, and public concern about these problematic, non-native species continues to grow. During 2013, as in previous years, the Council continued to receive numerous requests from land holders and managers who want relief from the problems of invasive plants. Removal of invasives from natural areas is a costly proposition, and the State would be well served by a program that both seeks to prevent future invasions and that provides educational and financial resources to implement eradication campaigns. Prevention and early detection of invasive plants is critical to an efficient, timely, and effective response to emerging invasions and merits increasing emphasis.

**We realize that it would be unrealistic at this time to suggest a return to the \$500K/yr funding level that existed for the Invasive Plant Council prior to 2010. However, we do respectfully request continuing support for key “keep-alive” functions, such as the Coordinator’s salary and operating expenses. These total \$90,000 per year and are absolutely essential if the state is going to be able to address the invasive plants problem.**

In its ten years of operation, the Council has worked to refine the initial invasive plants legislation so that the mechanisms for inspection and enforcement are now in place for both terrestrial and aquatic problem plants. We have envisioned what a comprehensive invasive plants program would look like in Connecticut, and with the initial funding for the program, we were able to move forward to create a Coordinator position and begin to implement this vision. Staff in DEEP, CAES and DoAg have taken up the charge of responding to the invasive plants problem, and have utilized the resources and network that the Council provides. When state finances improve and funding for invasive plants is restored, this infrastructure is ready to fulfill the goals initially enunciated by the legislation that formed the Council in 2003. That said, the near term funding for the State Coordinator’s position remains our top priority. I and other

Council members are available to answer questions and provide advice as needed. Feel free to contact me at (860) 424-3010 if questions arise.

Sincerely,



William A. Hyatt  
Chairman

Attachments:

1. In Memoriam
2. Council Members
3. Minutes of Meetings
4. 2013 Revised Invasive Plant List
5. UConn College of Ag. Report and Accomplishments
6. DEEP Invasive Plant Program Report
7. Department of Agriculture Report
8. CIPWG Update 2013

## In Memoriam

### *Louis A. Magnarelli*



Dr. Louis (Lou) A. Magnarelli was an outstanding medical entomologist and Director of The Connecticut Agricultural Experiment Station (CAES) from 2004 through 2013. Throughout his career at CAES, Dr. Magnarelli maintained his unwavering commitment to the Station's motto "Putting science to work for society." His concern for the environment, farming, and the horticultural industry lead to his active participation on the Connecticut Invasive Plant Council from 2004 through 2013, and he served as the Chair or Co-Chair of Council for three years starting in 2005 through 2007. His expertise, leadership, and efforts on the Council were appreciated and will be missed.

Dr. Magnarelli graduated from the State University of New York at Oswego in 1967. He received his Master of Science in biology in 1968 from the University of Michigan. After a brief career teaching high school biology, he began graduate studies at Cornell University and received a Ph.D. in medical entomology in 1975.

Dr. Magnarelli joined CAES in 1975. His research expanded over the years with collaborators at the Station and throughout the U.S. His work on ticks, tick-associated diseases, and serological testing for vector-borne pathogens, in addition to his many other accomplishments are recognized internationally. Through the course of a career that spanned four decades, he published over 218 scientific articles.

Dr. Magnarelli served as Chief Entomologist and State Entomologist from 1987-2004, Vice Director from 1992-2004, and was appointed the Station's eighth Director in 2004. Regulatory responsibilities came with these positions, which required that Dr. Magnarelli establish and enforce quarantines to protect Connecticut. He fully recognized the economic impacts these decisions had on Connecticut residents and always listened intently to those who voiced their concerns at hearings. During his career, he oversaw quarantines on many insect pests, plant pests, and plant pathogens. He capably juggled administrative responsibilities with his research.



## INVASIVE PLANTS COUNCIL MEMBERSHIP

November 2013

Mr. William Hyatt (Chair)  
Chief, Bureau of Natural Resources  
Department of Environmental Protection  
79 Elm Street  
Hartford, CT 06106  
860-424-3474  
[william.hyatt@ct.gov](mailto:william.hyatt@ct.gov)

Dr. Theodore Andreadis  
Director, The Connecticut Agricultural  
Experiment Station  
PO Box 1106, 123 Huntington Street  
New Haven, CT 06504-1106  
203-974-8510  
[theodore.andreadis@ct.gov](mailto:theodore.andreadis@ct.gov)

Mr. David Goodwin  
149 Schrock Rd  
Plymouth, CT 06782  
[david.goodwin@snet.net](mailto:david.goodwin@snet.net)

Mr. Paul Larson  
Sprucedale Gardens  
20 East Quasset Road  
Woodstock, CT 06281  
860-974-0045  
[larsonclan@sbcglobal.net](mailto:larsonclan@sbcglobal.net)

Dr. Richard McAvoy  
Professor and Head  
Department of Plant Science and  
Landscape Architecture  
University of Connecticut  
Box 4163  
1376 Storrs Road  
Storrs, CT 06269-4163  
860-486-2925  
[richard.mcavoy@uconn.edu](mailto:richard.mcavoy@uconn.edu)

Mr. Tom McGowan  
Exec. Director  
Lake Waramaug Task Force, Inc.  
59 Beach Street  
Litchfield, CT 06759  
860-567-0555  
[tajmcgowan@yahoo.com](mailto:tajmcgowan@yahoo.com)

Dr. John Silander, Jr.  
Principle Investigator, IPANE project  
Research Professor, Ecology and  
Evolutionary Biology  
University of Connecticut  
Box 3043  
75 North Eagleville Road  
Storrs, CT 06269-3043  
860-486-2168  
[john.silander\\_jr@uconn.edu](mailto:john.silander_jr@uconn.edu)

Mr. David Sutherland  
The Nature Conservancy  
55 Church Street  
New Haven, CT 06510  
203-568-6297  
[dsutherland@tnc.org](mailto:dsutherland@tnc.org)

Ms. Katherine Winslow  
Property Agent  
Farmland Preservation Program  
Department of Agriculture  
165 Capitol Avenue  
Hartford, CT 06106  
860-713-2589  
[katherine.winslow@ct.gov](mailto:katherine.winslow@ct.gov)

## MINUTES

Invasive Plants Council  
Tuesday, Nov. 13, 2012  
2 pm, Dept. of Agriculture  
Conference Room G8-A  
Hartford, CT

**Council members present:** David Goodwin, Bill Hyatt, Lou Magnarelli, Tom McGowan, John Silander, Katherine Winslow

**Others present:** Ellen Bender, Donna Ellis, Nancy Murray, Logan Senack, Penni Sharp

**1. Hyatt called the meeting to order at 2:01 pm.**

**2. The minutes for the 10/9/12 meeting were reviewed.**

**Goodwin moved (second: Magnarelli) to approve the minutes as submitted. The Council decided to approve the minutes as submitted.** Winslow abstained since she was not present at the last meeting.

### **3. Hiring of Aquatic Nuisance Species Coordinator**

Murray reported that an Aquatic Nuisance Species (ANS) Coordinator has been hired part-time on federal ANS funds. The new hire, Maura Robie, will work with Nancy Balcom, Connecticut Sea Grant and Nancy Murray, DEEP to plan two ANS working group meetings in 2013, update the DEEP Aquatic Nuisance Species website and develop prevention and educational materials for ANS. Murray noted that the amount of federal funding available to Connecticut through this program decreases every year.

Silander pointed out that other states, particularly those in the western U.S., receive millions of dollars in funding for invasive species, even though they may have smaller populations. Silander added that it was important to get additional funding to the eastern part of the country.

### **4. Communications to follow-up on bamboo with legislature**

The group discussed the most appropriate way to report its findings on bamboo to the legislature. Magnarelli suggested that the group contact Senator Meyer, co-Chair of the Environment Committee, after the holidays regarding this issue. Magnarelli noted that if the group were to wait until new committee assignments were given, this could probably not take place until February, but a quicker response would be more appropriate. Magnarelli added that the next step could be for state residents to approach the legislators about a possible bill as they have done in the past. He noted that the Council's role is to provide information to the legislature and not to directly influence the legislative process.

Silander highlighted the importance of the Council remaining objective and providing unbiased advice to the Environment Committee.

## MINUTES

### 5. Report from nominating committee

Hyatt reported that David Sutherland and Paul Larson, the members of the nominating committee, have discussed nominations for the Chair and Vice-Chair positions after the current terms end on December 31, 2012. This issue will be discussed at the next meeting.

### 6. Annual report

#### a. Cover letter

Hyatt distributed copies of the cover letter for the 2012 annual report. The group read over the report and discussed possible revisions. **McGowan moved (second: Magnarelli) to approve the cover letter as amended and to authorize the Chair to make changes over the next few weeks with input from the Council member organizations. The Council decided to approve the motion.**

#### b. Member organization reports

Goodwin will work with Bob Heffernan to submit an update from the Connecticut Nursery and Landscape Association. Winslow will submit material from the Department of Agriculture. Senack will contact Richard McAvoy regarding a UConn/Plant Science Report. Murray will ask Nancy Balcom about a possible Sea Grant report. Senack will work with Ellis to prepare a report from the Connecticut Invasive Plant Working Group (CIPWG).

**Reports should be submitted by December 1 to Senack, in a format ready for printing and publication (such as PDFs).**

### 7. Old Business/New Business

#### a. Association of Fish and Wildlife Agencies report

Hyatt distributed copies of a letter from the Association of Fish and Wildlife Agencies (AFWA) to the federal Office of Management and Budget (OMB) and the Office of Information and Regulatory Affairs detailing concerns about the inclusion of *Arundo donax* (giant reed) and *Pennisetum purpureum* (napier grass) as approved plants for biofuels production. Both species are considered invasive plants in parts of the United States. Hyatt reported that OMB had been flooded with input asking that these species be removed from eligibility for biofuel/renewables credits. He also noted that people who are concerned about invasive plants will need to pay close attention to any new biofuel laws, rules and incentives including what may show up in a revised Farm Bill. Plants that may be considered good biofuels share many growth characteristics with plants that are invasive.

#### b. Council on Environmental Quality

Hyatt reported that he and Penni Sharp met with the Council on Environmental Quality (CEQ) to talk about invasive species issues in Connecticut. CEQ may include funding for invasive species in its upcoming recommendations for the 2013 legislative session.

#### c. Memorandum of Understanding (MOU) on voluntary agreement for pet industry

Hyatt distributed a draft MOU between the Department of the Interior, Pet Industry Joint Advisory Council, and AFWA. The MOU details a voluntary agreement between the parties to manage the importation of new animal species in the pet trade and to pre-screen those species for invasiveness risk.

## MINUTES

### **d. Final report on Connecticut Invasive Plant Working Group (CIPWG) symposium**

Ellis reported on the success of the 2012 CIPWG Invasive Plant Symposium, which was held at the University of Connecticut on October 25. The event sold out, with 475 registered attendees and an additional 60 people turned away when the event filled to capacity. The event was a major success. Attendees appreciated the breakout sessions and workshops, opportunities for plant identification, variety of speakers, and hearing about new research and resources. Ellis thanked Hyatt for presenting the 2012 update on behalf of the Invasive Plants Council. Ellis also thanked Senack and Tom Rathier (Connecticut Agricultural Experiment Station), who co-chaired the planning committee for the conference.

Hyatt noted that this was his first year of attendance and that he was impressed with the event. He noted that the variety of topics and speakers allowed the most technical of scientists and most casual of laypeople to learn and communicate with each other. Hyatt encouraged the group to consider attending the next symposium two years from now in 2014.

### **7. Adjournment**

**McGowan moved (second: Magnarelli) moved to adjourn the meeting. The group decided to adjourn at 2:53 pm.**

The next meeting is scheduled for December 11, 2012, 2-4 pm, in room G8-A at the Department of Agriculture building in Hartford, CT.

## MINUTES

Invasive Plants Council  
Tuesday, Dec. 11, 2012  
2 pm, Dept. of Agriculture  
Conference Room G8-A  
Hartford, CT

**Council members present:** David Goodwin, Bill Hyatt, Paul Larson, Lou Magnarelli, Rich McAvoy, Tom McGowan, John Silander, David Sutherland, Katherine Winslow

**Others present:** Donna Ellis, Logan Senack, Penni Sharp, Jeff Ward

### **1. Hyatt called the meeting to order at 2:00 pm.**

### **2. The minutes for the 11/13/12 meeting were reviewed.**

Silander proposed deleting the first sentence in section 5b, "Silander will...". **Goodwin moved (second: Silander) to approve the minutes with the change. The Council decided to approve the minutes with the change.** Larson and McAvoy abstained since they were not present at the last meeting.

### **3. Annual report**

Senack distributed copies of the 2012 Invasive Plants Council annual report. This is the tenth annual report prepared by the Council. The cover photo is a photo of water hyacinth (*Eichhornia crassipes*), which is on the list as a potentially invasive species in Connecticut. **Larson moved (second: Magnarelli) to approve the report and approve its release and distribution. The Council decided to approve the report for distribution.** Senack will deliver copies of the report to the Environment Committee and others this afternoon and the report will be posted online.

### **4. Meeting schedule for 2013**

The group discussed the meeting schedule for 2013. In 2012, the group met 8 times. The group discussed meeting less frequently in 2013 than in 2012 but potentially for longer periods of time. The group discussed meeting 4 times in 2013: February 19, June 11, September 10, and November 12. The group also discussed reserving the dates of March 12, October 8, and December 10 as tentative dates should additional meetings be needed. The group proposed not meeting in January 2013.

*Tom McGowan arrived at 2:14 pm.*

**Goodwin moved (second: Winslow) to approve the meeting schedule as discussed. The Council decided to approve the meeting schedule as discussed for the 2013 year.** Winslow will work with the Department of Agriculture (DoAg) to reserve room G8-A for 2 pm to 5 pm on those dates. Senack will post the meeting schedule online and with the Secretary of the State's Office.

### **5. Communications:**

#### **a. Council on Environmental Quality (CEQ): update on hearing**

Hyatt followed up on a previous report about draft recommendations for legislation put out by CEQ in November. One of the items for recommended legislation in the CEQ report was that sufficient funds be appropriated to address invasive species and that DoAg, the Connecticut

## MINUTES

Agricultural Experiment Station (CAES), the Department of Energy and Environmental Protection (DEEP), or all three agencies work to prepare a rapid detection and eradication plan for newly discovered terrestrial invasive species. Hyatt reported that CEQ held a hearing on this issue and that a number of people attended or submitted written testimony in support of the recommendations on invasive species.

### **b. Communication plan with Legislature**

The group discussed a plan for communications with the Legislature in 2013. Hyatt noted that the annual report includes a section specifically regarding bamboo. He will also reach out to Senator Meyer, Co-Chair of the Environment Committee, regarding the bamboo issue. Hyatt reported that Senack will work with staff at DEEP to write up draft language for a bamboo bill in case it is requested. Hyatt asked Sutherland to inform the group if any legislative issues arise that need to be addressed.

The group discussed the need and importance of continued funding support for invasive plant efforts in the state.

### **6. Election of Chair and Vice-Chair (Sutherland & Larson)**

The nominating committee (Sutherland and Larson) reported that Hyatt has agreed to serve as Chair of the Council for an additional year if the Council agrees. Magnarelli has been the Vice-Chair but is leaving the Council at the end of his term (Dec. 31, 2012). Sutherland and Larson reported that Goodwin has agreed to serve as the new Vice-Chair for the 2013 year if the Council agrees. Sutherland reminded the group of the general function of the Vice-Chair position: the Vice-Chair would chair any meetings at which the Chair had an emergency absence. Sutherland added if the Chair were to leave or retire, the Vice-Chair would become the interim Chair on a temporary basis, but would not be expected to remain as the Chair for the remainder of the term.

Hyatt and Goodwin left the room while the vote was conducted and Magnarelli assumed the chair. **McAvoy moved (second: Silander) to accept the names proposed by Sutherland and Larson. The Council voted unanimously to approve the Hyatt as Chair and Goodwin as Vice-Chair for 2013.** Magnarelli congratulated Hyatt and Goodwin on their election.

### **7. Old/ New Business**

#### **a. Connecticut Conference on Natural Resources (CCNR) opportunity**

Hyatt reported that the steering committee of CCNR is considering topics for an afternoon session on invasive species at their annual event, scheduled for March 18, 2013, and asked for input on this potential session. The Council discussed possible topics for such a session, including aquatic plants, hearing from Council members, invasive plant control, deer management, restoration plantings, and other topics. Hyatt will follow up as the event date approaches.

#### **b. Coordination of inspections and enforcement: discussion of plan for 2013**

Hyatt reminded the group that DoAg, CAES, and DEEP are responsible for various aspects of facilities inspections and of enforcement of the invasive plant laws, and noted that it would be beneficial to continue collaboration on this topic. Winslow noted that DoAg Conservation Officers continue to check licensed pet facilities and have not found any issues. Magnarelli reported that CAES conducted a survey of pet shops in previous years and found that many stores (28% in 2008 and 29% in 2010) were selling species that were prohibited by state law.

## MINUTES

Magnarelli emphasized that the CAES campaign was only educational and that CAES does not have enforcement authority on this issue. Hyatt reminded the group that education was the preferred option, although DEEP does now have enforcement authority on this topic.

Hyatt asked if DEEP, CAES, and DoAg could meet further to coordinate on this issue. Magnarelli agreed. Winslow will correspond with DoAg staff and will provide the name of the person to contact.

### **c. Future presentation topics for 2013 IPC meetings**

Hyatt asked the group to consider topics for IPC meetings in 2013. One suggestion was 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.

Sutherland asked if Mark Brand could present to the Council again or if the Council wanted to meet at UConn to tour facilities or meet researchers.

McGowan noted that there are frequent anecdotal reports about the spread of various invasive plants over time and asked if there could be a way to get a more formal annual report to the Council on the spread of invasives through the landscape. Hyatt noted that the national Invasive Species Advisory Council may have information that could help with this. Silander added that IPANE also has records of species occurrences in Connecticut and across New England. Senack reported that he is continuing to work on EDDMapS (Early Detection and Distribution Mapping System) awareness in Connecticut, which would be an additional source for information on this material.

Senack suggested that limnologist George Knoeckien might be an appropriate speaker about aquatic invasives.

### **d. Update on recent Candlewood Lake invasive species issues**

Hyatt updated the group on the status of various invasives at Candlewood Lake. He reported that zebra mussels are now in the Housatonic River and that there are concerns over them getting into Candlewood Lake. Candlewood also has issues with invasive milfoil, and has previously used deep drawdowns in an attempt to control these plants, but this plan has so far been hampered by uncooperative weather. Other plans being considered at this point include herbicide applications and the use of triploid grass carp, which have not traditionally been used in water bodies as large as Candlewood Lake. Grass carp may be substantially cheaper than herbicide treatments, but needs to be investigated further to be sure potential secondary effects such as plankton blooms are understood.

## **8. Adjournment**

**Goodwin moved (second: Sutherland) moved to adjourn the meeting. The group decided to adjourn at 3:25 pm.**

The next meeting is scheduled for February 19, 2013, 2-4 pm, in room G8-A at the Department of Agriculture building in Hartford, CT.

## MINUTES

Invasive Plants Council  
Tuesday, February 19, 2013  
2 pm, Dept. of Agriculture  
Conference Room 121  
Hartford, CT

**Council members present:** Steve Anderson (for Katherine Winslow), Dave Goodwin, Bill Hyatt, Rich McAvoy, John Silander, David Sutherland, Jeff Ward, Katherine Winslow

**Others present:** Nancy Murray, Logan Senack

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

**2. The minutes for the 12/11/12 meeting were reviewed.**

**Goodwin moved (second: McAvoy) to approve the minutes. The Council decided to approve the minutes as submitted.** Ward abstained since he was not a member at the last meeting.

**3. Annual report delivery**

Senack reported that copies of the 2012 IPC Annual Report were delivered to the Environment Committee and other required offices on Dec. 11, 2012. As in previous years, the IPC Chair (Hyatt) sent letters to the Co-Chairs of the Env. Committee highlighting the report. The report is also available online at [www.cipwg.uconn.edu](http://www.cipwg.uconn.edu) in PDF format. The press release announcing the report was published by DEEP on Feb. 14. Next year, the Annual Report will be delivered mostly electronically, reducing the need for paper copies.

**4. Bamboo concept bills**

Hyatt reported that there are a few bills relating to bamboo being discussed by the Legislature, and that the Council's suggested legislation was delivered to the Environment Committee. If there are hearings relating to these bills, the Council may wish to submit testimony.

**5. Status of Coordinator position funding**

Goodwin asked about the status of the Coordinator funding for the next fiscal year. Sutherland reported that the funds specified for the position were combined with other funds into a single budget item in the Governor's proposed budget, but the new amount of the combined funds is less than the sum of the individual funds, and it is not clear which items would be reduced. Sutherland would like to meet with Commissioner Reviczky, Winslow, and others to find out the status of the funds. Winslow suggested Sutherland contact George Krivda (DoAg) directly.

**6. Ongoing bamboo discussion**

**a. Review of NY procedure**

Hyatt introduced a bamboo invasiveness analysis conducted by the Scientific Review Committee of the Long Island Invasive Species Management Area (LIISMA-SRC) in New York. The group examined *Phyllostachys aureosulcata* (yellow-groove bamboo) for invasiveness using its own criteria, and found that this species was not assessable because there was no conclusive evidence that the plants had moved from cultivated landscapes to natural areas. As in Connecticut's discussions on this species, the review did include a note that the vegetative spread of this species can cause significant impacts.



## MINUTES

### **b. Another potential site visit**

Senack announced that homeowners continue to report cases of bamboo growing in the state. These reports are predominantly reports of planted stands in yards and gardens. There are one or two sites where there is the potential for the plants to have spread over larger distances, and Senack will collect more information about these locations. If a site visit is warranted, he will plan a site visit in the spring with others who may be interested.

## **7. Update on Coordinator Activities**

### **a. Invasive plant walk project**

Senack reported that he has coordinated with a number of organizations to develop an educational Invasive Plant Walk on DEEP property in the Town of Mansfield. The property has been overtaken by a number of invasive plants, and Senack is coordinating efforts to install a series of interpretive signs that identify and provide information about these plants. This project is scheduled to be installed on National Trails Day (June 1) with help from the CT Chapter of the Sierra Club. The Invasive Plant Atlas of New England (IPANE), USDA Natural Resource Conservation Service, and the Town of Mansfield are also involved.

The designs for the trail signs will be retained and made available for other groups to use at other locations in the state. The walk will be named in honor of Les Mehrhoff, who formerly gave invasive plant tours and demonstrations at the Mansfield site. The costs of this project will be shared between the Coordinator funds and the Connecticut Invasive Plant Working Group. Senack noted that no invasive plants were planted at the site for the purposes of the walk; they were already present on the property.

### **b. Connecticut Invasive Plant Working Group (CIPWG) website revisions**

Senack reported that updates to the CIPWG website were underway and a new website is expected to be launched prior to the next Invasive Plants Council meeting. Funding from UConn through Donna Ellis provided for the hiring of a student worker over winter break to assist in additional updates to the content management system of the website. The CIPWG website hosts the IPC materials and meeting minutes.

### **c. Connecticut Conference on Natural Resources (CCNR) presentations**

Senack reported that several people will present information about invasive species at CCNR on March 18. Senack and IPANE's Dr. Stacey Leicht will present a 1-hour workshop about using online reporting with smartphones for the early detection of invasive plants. Silander added that one of his graduate students will give a presentation on urban invaders. Dr. Scott Williams from the CT Agricultural Experiment Station (CAES) will present on the interaction of invasive plant control and deer browse on native and non-native plants.

## **8. Cultivar discussion and plan for moving forward**

### **a. Review of NY procedure**

Senack provided an introduction to New York's LIISMA's efforts to address invasive plants and cultivars. They have developed a draft cultivar assessment protocol. Hyatt reminded the group of previous IPC actions and provided copies of the letter from the Attorney General regarding cultivars from January 2008. He also redistributed DEEP's proposal from 2010 regarding the treatment of cultivars. Hyatt suggested that a cultivar subcommittee composed of Silander, Dr. Mark Brand, and Dr. John Volin could review what has been put together by

## MINUTES

the NY group in order to determine if it has merit and applicability in Connecticut. Hyatt stressed the need to resolve this issue for clarity regarding enforcement.

The group discussed the documents. Silander noted that the LIISMA group must have had financial resources available to enable the project and that their system is more quantitatively based than Connecticut's. Goodwin noted that examining cultivars of plants that are already banned would not be as important as looking at cultivars of plants that are on the invasive list but are not prohibited. Sutherland noted that only a few of the listed plants have cultivars. McAvoy asked where the burden of proof about the invasiveness of a cultivar should fall. Senack asked if it would be possible for a cultivar of a non-prohibited species to be taken off the invasive list if it was demonstrably sterile. The group discussed the potential development of a cultivar definition. Silander will take the lead in coordinating the cultivar subcommittee. Hyatt will also participate and Paul Larson will be asked to participate. Silander and Hyatt will speak in March about developing this plan further. Silander will report back at the June meeting.

Hyatt will call Winslow later in the week to discuss some developing federal legislation that may affect DoAg.

*Winslow left the room at 3:27 pm and was replaced by Steve Anderson (DoAg).*

### **9. Aquatic Nuisance Species update**

Murray updated the group on the status of ANS efforts. Funding has been used to hire a part-time ANS coordinator. Murray distributed documents for the Council's information, including documents about mitten crabs, hydrilla, and zebra mussels. Murray has asked Bob Heffernan to provide feedback on one public education document about water gardens. The new hire, Maura Robie, is developing a table-top display about invasive aquatics and the importance of cleaning boats and equipment. Nancy Balcom and Maura Robie prepared a Hazard Analysis-Critical Control Point Evaluation document on mechanical harvesting and suction harvesting. Murray may invite Robie and Balcom to a future meeting.

### **10. Inspection plan for 2013**

Hyatt reminded the group that DoAg, CAES, and DEEP should coordinate regarding inspections for the upcoming 2013 year.

### **11. Old/New Business**

#### **a. McGowan request for invasive plant spread report**

Hyatt reminded the group that McGowan asked if it would be possible to obtain an annual report detailing the spread of invasives to new areas in Connecticut. The report could help to illustrate how various species are moving throughout the state. Hyatt will follow up with the National Invasive Species Council about this issue. IPANE and CAES may also have some relevant data. Observations about aquatic plant distribution may be more prevalent than for terrestrial plants. Greg Bugbee (CAES) may have some information available in a report.

#### **b. Federal invasive species legislation update**

Hyatt reported on two proposals for funding invasive plant activities at the federal level. One proposal, by the Healthy Habitats Coalition, would request \$1.4 billion per year for 20 years for invasive species control, but 80% of the funds would be required to be used by the federal

## MINUTES

government on federal lands. The funds could be used for species in terrestrial and aquatic environments and would not be limited to plants. A second proposal titled “The Invasive Fish and Wildlife Prevention Act of 2012” contains assorted mandates and legal changes but no funding. The Association of Fish and Wildlife Agencies (AFWA) is seeking funding to build a collaborative effort to coordinate with government and industry in order to pool similar proposals and build consensus. The effort to garner funds to establish these first steps has received approval from all states Virginia to Maine.

Murray noted that last year the ANS program received only \$22,000 in funding from the federal government and will receive even less support this year. The group discussed the problems associated with limited funding for invasive plant actions.

### **c. Invasive Species Awareness Week in DC**

Hyatt plans to attend events occurring during National Invasive Species Awareness Week in Washington, D.C. These events will provide an opportunity to coordinate on many invasive species issues. Senack may also attend for a portion of the conference.

### **d. Sportsmen’s Caucus presentation**

Hyatt was asked to participate in an invasive species presentation and briefing for the Sportsmen’s Caucus. The meeting was originally scheduled for Feb. 14, but was postponed and a new date has not yet been determined. A representative from the Congressional Sportsmen’s Caucus in DC has the primary responsibility of organizing the event.

### **e. The Council decided that it will meet next on June 11 and will not meet in March.**

f. Sutherland reported that he has been asked to speak at a session about invasive species policy in Connecticut at the New Issues in Environmental Law Conference at Yale University on March 2.

g. Ward distributed a booklet that was produced by CAES and UConn discussing the relationship between Japanese barberry and ticks. The document is also available online.

h. Senack will contact George Knoecklien to invite him to present at the June 11 meeting.

i. Hyatt reported that residents of the area around Candlewood Lake have become very engaged in invasive species issues. They are concerned about zebra mussels in the Lake and the spread of zebra mussels via the Housatonic River. There is interest in a boat sticker program, a registration charge to boats, or funds redirected in order to fund ANS actions, such as education or research. Hyatt would like to meet with Jim McAllister, a resident who contacted Hyatt about this issue, as this may be a potential opportunity to engage new groups. Hyatt will share the meeting information so that people have notice to attend.

## **12. Sutherland moved to adjourn the meeting. The meeting adjourned at 3:59 pm.**

The next meeting is scheduled for June 11, 2013, 2-4 pm, in room G8-A at the Department of Agriculture building in Hartford, CT.

## MINUTES

Invasive Plants Council  
Tuesday, June 11, 2013  
2 pm, Dept. of Agriculture G8-A  
Hartford, CT

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

**Others present:** Nancy Balcom, Ellen Bender, Donna Ellis, Hillary Kenyon, George Knoecklein, Nancy Murray, Maura Robie, Penni Sharp, Logan Senack, 1 guest

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

**2. The minutes for the 2/19/13 meeting were reviewed.**

**Ward moved (second: Goodwin) to approve the minutes.** Larson proposed the following changes: page 3, section 8a, paragraph 2, lines 3 and 4: change “were” to “are”, line 5: delete the first instance of the word “that”, line 6: change “safety” to “invasiveness”. Page 4, section 11i, line 1, change “had” to “have”. **The Council decided to approve the minutes with the changes.** Larson abstained since he was not present at the last meeting.  
*McGowan arrived at 2:06 pm.*

**3. Aquatic invasive plants in CT lakes- George Knoecklein**

Hyatt introduced George Knoecklein, the founder and president of Northeast Aquatic Research. Knoecklein has been surveying CT lakes since 1997. He shared a list of the 5 worst aquatic invasives in his experience: *Cabomba caroliniana* (fanwort), *Myriophyllum spicatum* (Eurasian watermilfoil), *Myriophyllum heterophyllum* (variable-leaf milfoil), *Potamogeton crispus* (curly-leaf pondweed), and *Najas minor* (Brittle water-nymph). Knoecklein reported that he thinks *C. caroliniana* is the worst of the five, due to its ability to create runners and stolons and spread laterally by 30 to 40 feet in a season. All five plants spread by fragments and by other means. They can form dense mats at the lake surface, blocking sunlight. Knoecklein reported that he found one lake where *M. spicatum* completely outcompeted all native vegetation, and reported that fragments spread downstream easily in river systems. Knoecklein answered questions and discussed various topics with the group.

**4. Aquatic Nuisance Species (ANS) presentation- Nancy Balcom and Maura Robie**

Hyatt introduced Nancy Balcom and Maura Robie of the Connecticut Sea Grant. Balcom has been working with DEEP to utilize fish and wildlife service money to survey and research the lightbulb tunicate (*Clavelina lepadiformis*), first found in 2006 in Stonington Harbor and the Thames River.

Robie has developed three new ANS stand displays. She also created a 4-panel display about water chestnut, zebra mussels, mitten crabs, and hydrilla. She distributed handouts about aquatic nuisance species and water gardens. These items are used at outreach events and Senack has added them to the CIPWG website. Murray reported that Bob Heffernan (CT Nursery and Landscape Association) received copies of these and distributed them. Robie is also working on developing Hazard Analysis and Critical Control Points (HACCP) plans for suction and mechanical harvesting. Balcom noted that the purpose of the project is to identify all the risks

## MINUTES

behind the control methods and identify best management practices to reduce those risks. Robie is also researching options to identify sales of restricted ANS online in addition to other tasks.

### **a. Zebra Mussel update- Nancy Murray**

Murray reported that DEEP will be using 2013 ANS funds to research a new method of controlling zebra mussel veligers. DEEP will work with the Federal Bureau of Reclamation to study the effects of a carbon dioxide treatment method in controlling zebra mussel veligers in a closed system, a leaking pipe on the CT/MA border that is allowing zebra mussel veligers to enter Connecticut waters via the Housatonic River. Western CT State University will also be involved in the project.

### **5. Mugwort seed production update- Ward**

Ward collected mugwort (*Artemisia vulgaris*) seeds from several different locations in the state last fall, vernalized the seeds for two months, and planted them in a CAES greenhouse. He reported that the seeds had very high germination and provided a photo of the plants growing in the trays. He suggested that the Council discuss listing mugwort as invasive. Ward will prepare documentation of his project so the issue can be discussed at the next meeting. Senack will assist him with compiling the needed documentation.

### **6. Meeting schedule for 2013**

Senack will redistribute the meeting schedule for the remainder of the year.

### **7. Bamboo legislation update- Hyatt/Senack**

Hyatt reported that the bamboo bill, S.B. 1016, may have received more public comment than any other bill before the Environment Committee this year. There were some concerns about the enforcement burden that would be placed on DEEP. Enforcement authority was changed before passage to include “any duly authorized municipal constable, municipal tree warden, zoning enforcement officer or inland wetlands and watercourses enforcement officer” in addition to DEEP. Hyatt reported that DEEP will be responsible for identifying reported plants as “running” bamboo species.

Senack added that he has received a number of calls and emails since the bill’s passage, asking about enforcement, control, the legality of some plantings, and similar topics. He will continue to investigate the reports and noted that there is a fair amount of confusion regarding the invasive status of bamboo. He has been providing copies of the testimony the Council developed on S.B. 1016 to the public, as it provides a good summary of the history of the bamboo issue in CT. Winslow requested that Senack redistribute the testimony to the group.

### **8. Coordinator funding update**

Hyatt reported that the Coordinator position is scheduled to be funded again this year. There were some budgetary changes between different proposed budgets, but the final change is that funding has been reduced from \$90,000 to \$85,500 for the upcoming fiscal year. Sutherland reported that the Commissioner of DoAg has expressed a strong commitment to keep the position going. Hyatt thanked Sutherland and Bob Heffernan for their efforts.

## MINUTES

### 9. Update on Coordinator activities

#### a. Invasive plant walk project

Senack worked with members of CIPWG, the Sierra Club CT Chapter, and a number of other groups to develop, site, and install a series of invasive plant signs along a trail at the Eagleville Preserve in Mansfield, CT. The signs provide identification and biology information about nine invasive plants found at the site. No invasive plants were planted for the purposes of the trail—the plants had already invaded the site. Additional signs may be added in the future. The walk was named in honor of Les Mehrhoff. The cost of the project was split jointly between the CT Invasive Plant Working Group (CIPWG) and Coordinator funds.

#### b. *Arundo donax* biofuels best management practices project

Senack has been working through Bill Hyatt with the Association of Fish and Wildlife Agencies to develop best management practices (BMPs) for the planting and cultivation of *Arundo donax* (giant cane). *Arundo donax* is considered invasive in some southwestern and western states and is being proposed for use as a biofuel crop on the east coast. A project is currently under development in North Carolina that would involve the planting of 17,000 acres of *Arundo donax*. The BMPs focus on reducing the likelihood of escapes from established cultivated areas. Senack noted that the species is known to spread along riparian corridors and would be hardy in Connecticut. If large-scale plantings are proposed in the state, the Council may want to discuss or review the plant in more detail.

#### c. Invasive species awareness campaigns in other states

Senack shared sample outreach materials from other states that may be useful messaging tools.

#### d. Newsletter

Senack recently sent out the first edition of the Invasive Plant News, an outreach e-newsletter that will highlight relevant invasive plant events, law changes, and the activities of the Coordinator and the Invasive Plants Council.

#### e. Kudzu

Senack reported that the eastern part of New York State has been discussing removing kudzu populations before they get too big or increase with climate change. Massachusetts is also working on kudzu control. Given that kudzu is present only in low numbers in Connecticut, Senack noted that this may be a good opportunity for action before the species becomes a larger problem.

*Dave Goodwin left the room at 3:51 pm.*

### 10. Cultivar discussion and plan for moving forward

Hyatt will call Silander before the end of the week to discuss this item further.

### 11. Inspection plan for 2013

Senack has received a report of goutweed (*Aegopodium podagraria*) being sold in a Connecticut nursery. He also received reports of invasive bittersweet (*Celastrus orbiculatus*) sales, but these have turned out to be American bittersweet (*Celastrus scandens*). He received similar reports for sales of vine honeysuckles which turned out to be native trumpet honeysuckle (*Lonicera sempervirens*). Senack reported that he has seen a plant called “red cabomba” for sale in a pet store, but he does not have any information about whether this is a red form of *Cabomba*.

## MINUTES

*caroliniana* or a different species. The group discussed how to best address sale issues. Hyatt will work with Vickie Smith at CAES and Bruce Sherman at DoAg to set a meeting date to discuss this issue.

### **12. Old/New business**

#### **a. Invasive Plant Spread**

The group discussed ways to track the progress of invasive species spread, including using online resources such as EDDMapS as a central repository of data. McGowan suggested tracking progress in the Council's annual report. The group discussed the possibility of including an annual report section on changes and updates in the distribution of invasives, as well as control successes. Senack noted that the email newsletter could also highlight program successes. Sutherland noted that a Council on Environmental Quality (CEQ) report could also be a good place to note the progress of various projects. Senack noted that prevention efforts, such as the monitoring done by DEEP staff and volunteers at boat launches, is also an important accomplishment and could be covered.

#### **b. Federal invasive species legislation update- Hyatt**

Hyatt updated the group on the status of the two pieces of federal legislation being proposed this year relating to invasives that he had covered at a previous meeting. Funding for both items has been reduced to zero and the programs may be proposed to work within existing resources.

#### **c. Pet industry MOU**

Hyatt reported that an MOU regarding species screening and sales in the pet trade has been developed between industry, the Department of the Interior, and others, and is now ready to be signed by the U.S. Fish and Wildlife Service, industry, and the Association of Fish and Wildlife Agencies. He noted that this effort was a good example of agency and industry collaboration.

#### **d. US Fish and Wildlife Service**

Hyatt reported that he has been asked to be part of a group reviewing the federal ANS plan. Anyone wanting to review the plan should contact him for the details. The plan will direct how the Department of Interior will address invasive species.

### **13. Adjournment**

**McGowan moved (second: Sutherland) to adjourn the meeting at 4:10 pm. The meeting was adjourned at 4:10 pm.**

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

## MINUTES

Invasive Plants Council  
Tuesday, Sept. 17, 2013  
2 pm, Dept. of Agriculture G8-A  
Hartford, CT

**Council members present:** Dave Goodwin, Bill Hyatt, Rich McAvoy, John Silander, David Sutherland, Jeff Ward, Katherine Winslow

**Others present:** Donna Ellis, Chris Martin, Penni Sharp, Logan Senack, 1 guest

**1. Hyatt called the meeting to order at 2:06 pm.**

**2. The minutes for the 6/11/13 meeting were reviewed.**

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

### **3. Incentivizing invasive plant control on private lands**

Hyatt introduced Chris Martin, DEEP Forestry Division Director. Martin presented a summary of the results of the National Woodland Owner Survey, which was conducted with Yale University using supplemental funds from the US Forest Service. The goal of the survey was to provide information to increase the effectiveness of forestry management in the state.

*Katherine Winslow arrived at 2:17 pm.*

After the presentation and discussion of the survey results, Martin distributed a draft concept proposal that would provide for a change in CGS Sec. 12-704 to allow a tax deduction for residents who work on invasive plant control on private land. The tax credit would be for 50% of the expenses incurred controlling invasive plants. The CT Forest and Park Association is also involved with this proposal. The group discussed the proposal and thanked Martin for presenting.

*Dave Sutherland arrived at 2:42 pm.*

### **4. Copy of Invasive Plants Council (IPC) responsibilities and listing procedure**

Senack distributed a document summarizing the activities the IPC is responsible for, based on the language in CGS Sec. 22a-381. The IPC has the ability to use any funds it obtains to enter into contracts to carry out the responsibilities described in CGS Sec. 22a-381a. The document also explains the differences between the invasive and potentially invasive plants list and the prohibited plant list. The two lists have different criteria. Adding a plant to the invasive and potentially invasive list requires a majority vote, while recommending to the legislature to prohibit a certain plant requires a 2/3 vote from the IPC and needs to subsequently be passed by the legislature. Senack also reminded the group that plants do not necessarily have to be present in Connecticut to be listed. For example, both *Salvinia molesta* (giant salvinia) and *Eichhornia crassipes* (water hyacinth) are both listed species. *Salvinia* is not known to be present in the state and water hyacinth is sometimes reported, but it is not known to overwinter in the state and populations do not become established. Both species could cause widespread problems in Connecticut if they became established.



## MINUTES

### 5. Update on Coordinator activities

Senack distributed a brief summary document about his activities and provided additional updates to the group:

#### a. Bamboo

- **Workshop:** Senack worked with DEEP to host a workshop on August 20 about the new bamboo law, focusing on information for parties responsible for enforcing the law. The workshop was a success, and approximately 85 people attended the event. Most of the attendees were town staff.
- **Frequently asked questions:** To help answer some of the most frequently asked questions about the new bamboo law, Senack is working with DEEP to develop a Frequently Asked Questions document that will be posted on Connecticut Invasive Plant Working Group (CIPWG) website.
- **Website:** Senack has set up a webpage on the CIPWG site to provide information about bamboo to the public, enforcement officers, and anyone who has questions ([www.cipwg.uconn.edu/bamboo](http://www.cipwg.uconn.edu/bamboo)). The page is also linked to from multiple locations on the DEEP website, and includes information on bamboo identification, control, containment, and disposal, as well as a reminder that bamboo is not listed as invasive by the Invasive Plants Council.
- **Call-in number:** Hyatt reported that DEEP has developed a call-in number tree to address incoming bamboo calls internally.

#### b. Reported invasive plant violations

Senack reported that there have been three reports of listed, prohibited invasive plants being sold at nurseries and garden centers this year. DEEP is working on follow-up at these locations. Senack and others also received a report about a contractor potentially spreading fill contaminated with Japanese knotweed while doing roadwork. Since transporting and moving of knotweed, including “reproductive portions” of the plants, is prohibited under Sec. 22a-381d, this could potentially be a violation of the invasive plant laws. Ellis added that concerns over the spread of invasive in this manner had come up in previous years. The group discussed the concerns associated with inadvertent spread and the potential role of contractors and state agencies in spreading or preventing the spread of invasive species along roadsides or from mulch, soil, and fill sold by landscapers. Hyatt noted that increased awareness among all parties of the problems associated with the inadvertent spread of invasive plants could help address this issue, and that he does not foresee any enforcement action taking place in this instance. See item #7 for further discussion of this topic.

#### c. Other projects

Senack coordinated a project to develop best management practices (BMPs) for *Arundo donax* (giant reed), a plant considered invasive in western states that is being examined as a potential biofuel crop in North Carolina. The results of the project will be discussed with EPA. In addition to BMPs relating to reducing the risk of spread of this plant from cultivated areas, the document included financial requirements for the project, funds for environmental response, and information about subsequent treatments and monitoring of escaped stands.

## MINUTES

Senack highlighted that this project could be broadly applicable to other species in the future, as *Arundo donax* is a fast-growing, rhizomatous plant and there are several other similar rhizomatous plants on the invasive plant list, including Japanese knotweed and phragmites.

### **6. Coordinator deliverables review**

Senack distributed copies of the proposed Coordinator projects for the upcoming year. Council members should send any comments on the document to Hyatt or Senack.

### **7. Containerized plants and inadvertent spread** (see #5 for related discussion of this item)

Ward asked that the Council discuss issues relating to the spread of invasive plants by equipment, containerized plants, fill, and inadvertent means. Ward asked if more outreach on this issue could help to prevent the movement of seeds or viable fragments on tires and treads of equipment, especially equipment used along roadsides for maintenance, and the value of acting proactively before this became a legal issue. The group discussed and noted that spread by these methods could be contributing to new patches of plants spread by seed and fragments along roadsides, such as Japanese knotweed and Japanese stiltgrass. Spread by these methods could be difficult to prove, and education and outreach to groups such as DOT could be helpful. Senack will be working on the development of Best Management Practices for controlling invasive plant spread along roadsides in the coming year. Ward will talk with Bruce Villwock (DOT) regarding this issue.

### **8. Legal review of cultivar status**

Hyatt summarized the history of the cultivar issue and distributed a memo from DEEP's legal office relating to the sales of cultivars of invasive plants that were prohibited from sale. Hyatt reminded the group that the lack of clarity relating to cultivars could hinder enforcement. In the past, DEEP has contacted the Connecticut Nursery and Landscape Association (CNLA) when a report of a plant sale came in asking that the plants be removed from sale, and CNLA would work with the grower to remove the plants. Hyatt indicated that DEEP would continue this process. However, given that the agency now has enforcement authority, it needs to know how to proceed with an uncooperative seller. Hyatt took the question of cultivar sales to DEEP legal staff. Unlike previous examinations of the issue, the legal staff examination of the issue included a review of the legislative record and looked at transcripts from the discussion of the law as it was developed. They concluded that cultivars were discussed by the legislature and that prohibiting the species meant prohibiting the cultivars.

Hyatt noted that this provides clarity regarding how DEEP would proceed if a business refused to voluntarily remove plants from sale. However, Hyatt re-emphasized that this would not change DEEP's general approach to enforcement of the invasive plant laws: the agency still plans to approach with education and outreach first, seeking voluntary compliance while in contact with CNLA, in order to remove the plants from sale. Hyatt added that, while this memo clarifies how DEEP would respond to violations, the IPC could ask the Attorney General's office for further comment. The group discussed the memo.

Ward asked if the decision would cover hybrid plants. Hyatt responded that hybrid plants would likely not be affected by this decision. Goodwin added that there were concerns about the development of sterile cultivars and the potential erosion of the market that occurs once a plant is

## MINUTES

no longer sold. Hyatt added that sterile cultivars of plants that were prohibited could be made legal for sale through a legislative change. Sutherland asked which of the plants that were prohibited had sterile cultivars under development that would be impacted. The group discussed the fact that the plants that are prohibited from sale are not the plants for which sterile cultivars are being developed. Burning bush (*Euonymus alatus*) and Japanese barberry (*Berberis thunbergii*) in particular are not prohibited from sale and these are the plants for which sterile cultivars are under development. Sutherland noted that there seemed to be agreement among the Council members that the cultivars are banned if they are cultivars of banned plants. Goodwin added that the memo seemed well-researched. Hyatt will contact Bob Heffernan (CNLA) to discuss this topic further and it will be discussed at a future IPC meeting.

### **9. Inspection plan for 2013-2014**

After the last IPC meeting, Hyatt and Senack met with staff from the Department of Agriculture (DoAg) and the CT Agricultural Experiment Station (CAES) to discuss coordinating inspections of pet shops and nurseries. Senack will develop a brochure for pet stores about the sale of invasive plants and will collaborate with DEEP to incorporate information about the sale of invasive animals as well. DoAg also requested that an invasive plant refresher course training be set up for the inspectors. Senack will contact Greg Bugbee (CAES) about collaborating on the training since CAES has live aquatic plant specimens. DoAg plans to work on a form for reporting invasives at pet stores.

### **10. Meeting schedule for remainder of year**

The Council will need to meet to work on the yearly update to the Invasive Plant List and develop the annual report. The Council decided to cancel the tentative Oct. 8 and Nov. 12 meetings previously scheduled, and to instead meet on Tuesday, Oct. 29, 2-4 pm, at the DoAg G8-A meeting room in Hartford, CT. Senack will communicate the new dates to the Secretary of the State's Office and post the dates on the website.

### **11. Adjournment**

**Sutherland moved to adjourn the meeting. The Council decided to adjourn at 4:03 pm.**

The next meeting is scheduled for Oct. 29, 2-4 pm, in room G8-A at the Department of Agriculture building in Hartford, CT.

## CONNECTICUT INVASIVE PLANT LIST

October 2013

## 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 banned a subset of the January 2004 list making it illegal to move, sell, purchase, transplant, cultivate or distribute banned plants. Effective July 1, 2009, Public Act 09-52 removed the ban 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](http://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 carpgrass	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 xylosteum</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
		<i>*Note: This plant is especially aggressive in coastal areas</i>		
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

**University of Connecticut**  
**Department of Plant Science and Landscape Architecture**  
**2013 Invasive Plants Council Update**

Dr. Mark Brand reports that he expects to begin the introduction of six sterile or near-sterile barberries (*Berberis thunbergii*; a compact purple, medium-size purple, compact yellow, very compact yellow, medium-sized green and semi-evergreen green) in 2014. These plants have been selected as the best from a group of 27 sterile or near-sterile individuals that have been evaluated for seven years, both in containers and in the field.

Dr. Brand also reports that he has two new *Aronia* sp. genotypes (one that is especially compact) that have been distributed for evaluation with key growers. These improved genotypes should be good alternatives to exotic invasive shrub species like barberry and euonymus.

Dr. Yi Li is expecting to release sterile burning bush (*Euonymus alatus*) in 2015 or 2016.

## **CT Invasive Plant Coordinator**

Funding from the CT State Legislature was allocated in the 2013 budget for an Invasive Plant Coordinator salary and operating expenses. These funds are essential for the state to be able to make progress on invasive plant issues and provide educational outreach on the significant damages caused by invasives. The funds allowed the state to continue to maintain an Invasive Plant Coordinator based at the University of Connecticut Department of Plant Science and Landscape Architecture for a fifth year, until June 30, 2014. Logan Senack, the Invasive Plant Coordinator, reports to the University of Connecticut and works closely with DEEP and other agencies. Donna Ellis (UConn Department of Plant Science and Landscape Architecture) supervises Mr. Senack and provides oversight.

## **2013 Highlights - Coordinator Accomplishments**

### **Provided administrative support to the Invasive Plants Council**

Assisted the Invasive Plants Council (IPC) with various administrative functions, including preparing and posting meeting minutes for the six Invasive Plants Council meetings and organizing agendas and attendance logistics. Responded to several IPC requests for information regarding plants such as running bamboo (*Phyllostachys species*) and mugwort (*Artemisia vulgaris*). Conducted site visits to collect information about bamboo occurrences in the state for the Invasive Plants Council.

### **Conducted site visits, educational presentations, and events for towns, including invasive plant removal events**

Conducted site visits throughout the state to collect information on mile-a-minute vine and other invasive plants, and conducted educational presentations or training workshops in multiple towns. Related tasks included assisting with the organization of invasive plant removal events in eastern Connecticut and working with local volunteers or with staff from the Department of

Energy and Environmental Protection (DEEP) to reduce populations of mile-a-minute vine and other invasive plants. Responded to reports of invasive plants from the public, which led to the discovery of mile-a-minute vine in new locations in the state.

**Towns visited included:** Beacon Falls, Bridgeport, Farmington, Glastonbury, Groton, Haddam, Litchfield, Mansfield, Milford, New London, New Milford, Newtown, Norwich, Salisbury, Southbury, Sprague, Stonington, Vernon, Waterbury, West Hartford, Westport, and Woodbury.

### **Communicated with public and conducted outreach**

Developed press releases to inform the public of relevant invasive plant issues in Connecticut, including a reminder about the prohibition of sales of Oriental bittersweet and other invasive plants. Created an e-newsletter messaging program to provide monthly updates on invasive plant news and efforts in the state to the public. Provided material for presentations and discussions about invasive plants to a variety of groups at several statewide events, including meetings of the CT Association of Wetland Scientists, the CT Association of Conservation and Inland Wetlands Commissions, CT Agricultural Experiment Station Plant Science Day in Hamden, and the Connecticut Nursery and Landscape Association Summer Field Day.

### **Website development**

Continued with the development of Connecticut websites about invasive plants and worked closely with DEEP and Connecticut Invasive Plant Working Group (CIPWG) webmasters to update sites, improve navigation, and add new materials including plant photographs, species distribution information, conference update information, and other items.

### **Invasive plant walk project**

Worked with members of CIPWG, the Sierra Club CT Chapter, DEEP, the Town of Mansfield, and a number of other groups to develop, site, and install a series of invasive plant signs along a trail at the Eagleville Preserve in Mansfield, CT. The signs provide identification and biological information about nine invasive plants found at the site. No invasive plants were planted for the purposes of the trail—the plants had already invaded the site. Additional signs may be added in the future. The walk was named in honor of botanist and naturalist Les Mehrhoff, who was a member of the Invasive Plants Council for many years. The cost of the project was split jointly between CIPWG and Coordinator funds.

### ***Arundo donax* biofuels best management practices project**

Worked through Bill Hyatt and DEEP with the Association of Fish and Wildlife Agencies to develop best management practices (BMPs) for the planting and cultivation of *Arundo donax* (giant cane). *Arundo donax* is considered invasive in some southwestern and western states and is being proposed for use as a biofuel crop on the east coast. The BMPs focus on reducing the likelihood of escapes from established cultivated areas. The species is known to spread along riparian corridors and would be hardy in Connecticut. If large-scale plantings are proposed in or near Connecticut, the Council may need to review this plant in more detail.

### **Bamboo project**

Worked closely with DEEP and the Invasive Plants Council to collect information, develop solutions to bamboo issues, provide information about bamboo to the public, and host a workshop for town staff and the public about the new bamboo law. The workshop was attended by approximately 80 people.

**CONNECTICUT DEPARTMENT OF ENERGY and ENVIRONMENTAL  
PROTECTION**

**Invasive Plant Program 2012 Year End Report**

## **2013 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, coordinate and lead water chestnut control activities from Hartford north into Massachusetts including major infestations on the Hockanum River and several other sites in the Hartford area.

This year, due to cutbacks in the number of seasonals and the availability of boats, IFD staff surveys were limited to sections of the river (including coves and several tributaries) where plants have previously been found. No plants were found in the Portland /Gildersleeve Island area and in the Hartford/Glastonbury area from the Hartford Flood Control Pond (North Meadows) to Crow Point (White Oaks) Cove (including Wethersfield Cove, and lower Keeney and White Oaks coves). In response to a report from an angler, staff located and removed two “pick-up truckloads” of plants from the CT River near Andrews Marina/Goodspeed Bridge in Haddam. Since 2011, the Tidewater Institute (with coordination from USFWS) has surveyed portions of the lower river, locating and removing plants from the Eustasia Island area and several small patches in Salmon River Cove. A new patch was recently found in Salmon River Cove, however it is likely too late in the season for removal to have much impact (seeds have ripened and fallen). Note that a communication late Monday suggested that Tidewater removed a number of plants from this site with seeds still attached.

In western Connecticut, IFD staff surveyed Mudge Pond (removing many plants), Lake Lillinonah (removed numerous plants during one trip on the lake, most plants were found uprooted and drifting) and the confluence with the Still River (removing one plant).

USACE surveyed West Thompson Lake in mid-August and found only a limited number of plants (in 2012 DEEP & USACE removed several tons of plants including a 50 ft x 50 foot patch).

## **2013 DEEP Forestry Division**

A total of 118 acres of invasive plants were controlled by certified forest practitioners. Of that, 80 acres of control was completed by Andrew Bosse and 20 acres by DEEP Forestry. An additional 18 acres were controlled by seven practitioners.



## 2013 DEEP Boating Division Report on Invasive Investigators Program

Wendy Flynn/ Eleanor Mariani

The DEEP Boating Division hired one additional Aquatic Invasive Species Boating Education Assistant (BEA) as seasonal staff in 2013, bringing the total number of BEAs to 23. The additional position, funded with federal Aquatic Nuisance Species (ANS) funds, was assigned to water bodies in western CT where the water chemistry was suitable for zebra mussels, and assisted with training Invasive Investigators. BEAs visit boat launches to educate boaters about clean and safe boating techniques, including ways that boaters can help prevent the spread of aquatic invasive species. The BEAs 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 BEA season ended on October 15, 2013. The state wide BEA Program, including the one position funded with Federal ANS funds, collected 10,470 Clean Boater Pledges and conducted 1,564 AIS vessel inspections and 5,470 Vessel Safety Checks. Based on the AIS vessel inspections conducted in 2013, for the 878 vessels that were about to launch at the time of the inspection, 89% of boaters inspected for and removed plant fragments, 88 % disposed of their bait in an upland trash, 88% drained their vessels, and 76% washed their boat prior to launching.

# 2013 DEEP Wildlife Division Non-native Invasive Plant Control

Proj. #	Site	Town	Treatment	Acres	Date	Invasives Present	MGT Intent
1	Quinnipiac River SP	North Haven	Spray/manual	12	September	mile-a-minute, autumn olive, multiflora rose & bittersweet	Cedar/forest understory
2	West Rock SP	Hamden	Spray/manual	12	August	autumn olive & multiflora rose	Cedar/forest understory
3	Sessions Woods WMA	Burlington	Spray	19	August	black locust	Forest understory
4	Housatonic River WMA	Kent	Spray fields & forest regeneration	71	August	bush honeysuckle, wormwood, barberry, autumn olive	Old fields/forest regeneration
5	Bear Hill WMA - 06	Bozrah	Spray fields & forest regeneration	46	August	autumn olive, barberry & multiflora rose	Old fields & forest understory
6	Belding WMA-6080br	Vernon	Mow	16	August	barberry & multiflora rose	Grasslands
7	Aircraft Rd	Middlefield	Manual & spray	2	July	barberry & multiflora rose Control barberry, autumn olive & multiflora rose	Grasslands Old fields
	Talbot WMA	Scotland	Spray	4.2			
8	Spignesi WMA	Scotland	Spray fields & forest regeneration	4	September	barberry & autumn olive	Grasslands & forest understory
9	FFTA	East Windsor	Mow fields	150	August	autumn olive & multiflora rose	Grasslands
10	FFTA	Windsor	Spray grasslands	50	August	multiflora rose and bittersweet	Alder enhancement
11	Mad River FCA	Winsted	Mow	19	February	autumn olive, barberry & multiflora rose	Meadow/old field
12	Mad River FCA	Winsted	Spray	19	July	autumn olive, barberry & multiflora rose	Meadow/old field
13	Barn Is. WMA	Stonington	Spray grasslands	28	September	autumn olive, barberry & multiflora rose	Grasslands
14	Machimoodus SP	Moodus	Spray grasslands	32	July	autumn olive, barberry & multiflora rose	Grasslands
15	Naugatuck SF	Naugatuck	spray fields	14	September	barberry & autumn olive	Old fields
16	Roraback WMA	Harwinton	Spray fields & forest regeneration	51	August	autumn olive, barberry & multiflora rose	Forest understory & old fields
17	Camp Columbia	Morris	Spray fields & forest regeneration	12	July	autumn olive, barberry & multiflora rose	Forest regeneration
18	Pachaug SF	Sterling	Spray/mow old fields	42	September	autumn olive	Old fields
19	Enders SF	Granby	Grassland spraying	10	August	autumn olive, barberry & multiflora rose	Grasslands
20	Suffield WMA	Suffield	Grassland mowing	111	February	autumn olive, barberry & multiflora rose	Grasslands
21	Suffield WMA	Suffield	Grassland mowing	111	February	autumn olive, barberry & multiflora rose	Grasslands
22	Talbot WMA	Scotland	Spray old field	2.4	September	autumn olive, barberry & multiflora rose	Old fields
23	Minetto SP	Torrington	Mow grasslands	10	August	autumn olive, barberry & multiflora rose	Grasslands
24	Somers Grasslands	Somers	Mow grasslands	200	February	autumn olive, barberry & multiflora rose	Grasslands
25	Simsbury WMA	Simsbury	Mow fields	16	March	autumn olive, barberry & multiflora rose	Old fields
26	Simsbury WMA	Simsbury	Spray tree of heaven/old field	3.5	August	tree of heaven & multiflora rose	Forest regeneration
27	Robbin Swamp WMA	Falls village	Mow	12	January	autumn olive, barberry & multiflora rose	Old fields
28	Salmon River SF	Colchester	Facon mow	14	Januray	autumn olive, barberry & multiflora rose	Old fields

29	Nathan Hale SF	Coventry	Mow/manual removal	6	May	autumn olive, barberry & multiflora rose	Old fields
30	Nod Brook	Avon	Spray	35	September	autumn olive, barberry & multiflora rose	Grasslands

**Total state land acres treated 1,134.10**

**Private landowners through the NRCS Working Lands for Wildlife cooperative project**

1	Landowner	Lebanon	Spray forest understory	15	September	barberry	Forest regeneration
2	Sportsmen's Club	Woodbury	Spray forest understory	18	September	barberry	Forest regeneration
3	Land Trust	Stonington	Spray forest understory	23	September	barberry	Forest regeneration
4	Land Trust	Stonington	Spray fields	2	August	porcelain berry, black swallow wort	Fields

**Total private land acres treated  
58**

# 2013 Wetland Habitat Restoration and Mosquito Management (WHAMM) Program Project List- Herbiciding

		<u>Update:</u>	10/2/2013				
		Date of	Product	Product	Before		
Acres	Spraying	Gallons	Gallons	Acres	vendor	Freshwater	
		Imaz	Glyph			Brackish	
<b>1st Year Spraying 2013</b>							
Taylortown, Westport	3	7/22	100		3	DA AH	TB
Dodge Paddock, Stonington	1	7/31-9/12	50	10	1	PC RW	TF
West River, Guilford LIP	20	9/9,12,17		680	30	DA AH	TB
MAM, Sprague	1	7/10	30		1	PC RW	F
Van Wrinkle Grant - Great Island, Old Lyme	2	7/18	50		20	DA AH	TB
Ripley, Litchfield	16	9/23		400	10	DA AH	F
Point O woods, Old Lyme	2	9/30		45		DA AH	
Knox Preserve	0.5	7/31-9/12	15	5	0.5	PC RW	F
Simmons Preserve ALT	0.5	7/31-9/12	15	10		PC RW	
Pomfret Private Whip	4	8/14	100		2	DA AH	F
Edgewood Park New Haven	3	9/18		75	4	DA AH	F
Laurel Marsh, Manchester NCCD - Vendor	10	9/19		250	100	DA AH	F
Town of Lebanon, Small pond at Rt87 DPW	0	8/19	0		1	PC RW	F
Lake Tarrameggas, Marlborough	0	9/8		10	1	PC RW	F
Flathery Field Trial Area - Wildlife	3	9/18		75	2	PC RW	F
Kent Wyantenock SF, DOT 3&4, Wildlife #1	3	9/25		80	4	DA AH	F
Little River, New Haven	8	9/30		200	100	DA AH	TB
Seaside Ave, Guilford, LIP	2	9/17		50	5	DA AH	TB
Silver Sands SP, Milford	4	9/11		100	75	PC RW	TB
Columbia Yellow Floating Heart - Nancy Murray		8/30		4 sonar	1	PC RW	F
Ayers Point WMA, OS NRCS -	8	9/26		200	110		
Tuttle Point, Guilford	4	9/17		100	3	AH PI	
Hammonasett SP, Madison - ongoing	5	9/18,30		125	25	DA AH	TB
Otter Cove, Old Saybrook	8	9/18		200	10		
West River, Inner areas, New Haven		7/30	300		12	DA AH	TB
108		660		2615	3579		
Acres		Gallons		gallons	Acres		
		mix (final vol)				<b>Product</b>	
2013 Products used and control		rate		3275	Gallons Total	<b>total</b>	
Glyphosate 5.4 (Alligare) EPA 81927-8		2.5%		65	Gallons		
Imazapyr 4 SL (Vegetation Manager)							
EPA 74477-5		1.5%		10	Gallons		
Alligare 90 (Surfactant) SN 001A-072307		0.5%			Gallons		
Ecotriclopyr 3 SL (triclopyr) EPA 110405				0	Gallons		
Sonar AS (Fluridone) EPA 67690-4				0	Quart		

# **Connecticut ANS Management Program**

## **State of Connecticut**

### **A Report to the Aquatic Nuisance Species Task Force for State Fiscal Year 2013**

#### **FY 2009 Funds \$34,677**

##### **1 Summary**

Funds were used to hire and fund a part-time Connecticut Aquatic Nuisance Species (ANS) Coordinator to assist the Connecticut Department of Energy and Environmental (CT DEEP) CT ANS Program. Deliverables have been completed.

##### **2 Major Accomplishments**

Connecticut DEEP Bureau of Natural Resources, Inland Fisheries Division, Aquatic Nuisance Species Program has completed the Project Agreement with the University of Connecticut to fund a part time Aquatic Nuisance Species coordinator. Detailed tasks completed include, but are not limited to: organize one full CT ANS Panel meeting; review and revise the Early Detection-Rapid Response species list; Updated the draft CT Early Detection Rapid Response Plan; update the DEEP and University of CT ANS websites; and participate in events to educate the public on preventing spread of ANS. Please see Attachment A for details on the work completed.

##### **3 Program Expenditures**

All \$34,677 was committed through a Project Agreement with the University of Connecticut to hire a part time Aquatic Nuisance Species Coordinator. Please see Attachment A for work completed.

##### **4 Programmatic Needs**

Fund a full time ANS Coordinator - Environmental Analyst 1 at 78,197 annually, including salary, fringe and benefits and \$30,000 for budget

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

##### **Federal Agency ANS Estimated Expenditures**

Prevention	\$10,677
Detection & Monitoring	\$ 0
Early Detection	\$10,000
Control & Management	\$ 0
Rapid Response	\$ 9,000
Restoration	\$ 0
Education	\$ 5,000

# **FY 2010 Funds \$33,593 (funds expire December 2013)**

## **1 Summary**

### **Request to redirect funds was not approved by ANS Task force**

The original funding award was to hire a part time ANS Coordinator. Unfortunately these funds will expire in 2013, before they can be used for an ANS Coordinator. In 2012 we requested to redirect these funds for purposes of non-chemical control work for *Trapa natans* (water chestnut) and other early detection/rapid response species and conduct surveys of known *Hydrilla verticillata* sites. CT DEEP would hire two seasonal staff to do *Trapa natans* pulling in the Connecticut River, West Thompson Reservoir, and Mansfield Hollow and the hydrilla surveys.

## **2 Major Accomplishments**

No work has been completed to date. Please see Summary above requesting allocation of funds for new tasks.

## **3 Program Expenditures**

No funds have been expended to date and expire at end of 2013. These funds shall be decommitted.

## **4 Programmatic Needs**

### **Great need for staff to conduct EDRR as described above**

Fund a full time ANS Coordinator – Environmental Analyst 1 at 78,197 annually, including salary, fringe and benefits and \$30,000 for budget \$98,197

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

### Federal Agency ANS Estimated Expenditures

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

# **FY 2011 Funds \$29,861**

## **1 Summary**

## **2 Major Accomplishments**

### **Boating Educational Assistants**

The DEEP Boating Division hired two additional Aquatic Nuisance Species Boating Education Assistants (BEAs) as seasonal staff in 2012 and 2013. The positions were funded with ANS funds. These BEAs focused most of their time at water bodies where the water chemistry is suitable for zebra mussels. The BEAs also educate boaters on ways they can help prevent the spread of aquatic invasive plants and animals.

The rest of 2011 the funds were used for zebra mussel work in 2012. All zebra mussel work was completed in 2012.

### **3 Program Expenditures**

A total of \$20,000 has been spent funding two DEEP Boating Education Assistants in 2012 and 2013. The rest of the funds were used for zebra mussel work in 2011.

### **4 Programmatic Needs**

Environmental Analyst 1 at \$78,197 annually, including salary, fringe and benefits and \$30,000 for budget \$98,197

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

### **Federal Agency ANS Estimated Expenditures**

Prevention	\$ 20,000
Detection & Monitoring	\$ 6,000
Early Detection	\$ 0
Control & Management	\$ 0
Rapid Response	\$ 0
Restoration	\$ 0
Education	\$3,861

# FY 2012 Funds \$25,473

## 1 Summary

*Clavelina ledadiformis*, a non-native tunicate research project will include an organism Risk Assessment that follows the ANSTF recommended format; diver surveys to map and photograph the two existing populations in Stonington Harbor and the Thames River and collect substrate samples. Part 2 will conduct in situ experiments to determine *Clavelina ledadiformis* recruitment distance and ability to recruit on algae and eelgrass and the ability to grow reproductive adults on algae and eelgrass.

## 2 Major Accomplishments

2012 ANS Funds were formally received on September 30, 2013 and work began in October and expires on December 29, 2013. We have asked for an extension so the research can be done and a final report submitted. Survey work has started on the *Clavelina ledadiformis* population documented in Stonington Harbor and the Thames River. The Final report is expected to be completed on or before June 30, 2014.

## 3 Program Expenditures

DEEP has a fully executed Project Agreement with the University of Connecticut using \$25,473.

## 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 will be used to monitor numbers of zebra mussel veligers entering the Housatonic River in Connecticut during the time when veligers are active and detectable. CT DEEP will be funding the carbon dioxide research.

## **2 Major Accomplishments**

2013 ANS Funds were formally received on August, 16, 2013 and a Project Agreement has been drafted so we can start work in 2014 when zebra mussel veligers are present.

## **3 Program Expenditures**

To date no funds have been allocated. 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 to cover project liability. CT DEEP will be funding the carbon dioxide portion of this project. Funds will be used to cover the cost of the carbon dioxide research once a landowner liability issue is settled. Work is expected to start in 2014 when veligers are present.

## **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

# Attachment A

**DEEP 2013 Aquatic Nuisance Species Cooperative Agreement  
PS# 2013-13036; 12DEEP13036AA  
Nancy Balcom, Connecticut Sea Grant, University of Connecticut**

## **Deliverables**

1. Advertised, interviewed and hired a part-time Aquatic Nuisance Species Coordinator.

The ANS Program Coordinator position was drafted, advertised, and interviews with two viable candidates held. Maura Robie was hired and began work on 11/2/2012. Robie works two days a week, 16 hours per week.

2. Assisted with developing updated educational information for DEEP and UConn Sea Grant Aquatic Invasive Species (AIS) websites.

Robie has reviewed both the DEEP and Connecticut Sea Grant aquatic invasive species web pages. Problems with links were provided to both Nancy Murray and Nancy Balcom to bring to the attention of their respective web masters.

3. Participated in periodic meetings with DEEP on AIS plan implementation.

Balcom, Murray and Robie have met in person or by phone to discuss AIS plan implementation and program coordinator deliverables on 8 Nov 2012, 4 December 2012, 3 January 2013, 24 February 2013, 31 January 2013, and 28 February 2013.

4. Following final approval by ANS Task Force in November 2012, post the new national guidelines for spread prevention for recreational activities on DEEP and Sea Grant web sites; develop means for sharing them at major boating and fishing shows, utilizing DEEP booth space.

The new national recreational spread prevention guidelines were passed by the ANS Task Force at their fall 2012 meeting. The guidelines are currently going through public review and need to be published in the Federal Register. Until the final version is accepted following public input, we are using part of them but not promoting them widely in their entirety.

Two fact sheets were developed – one titled “What Are Aquatic Invasive Species” and the other, “Water Gardens and Invasive Plants”, in a card format so that they can be printed two per page. The fact sheets went through several rounds of reviews, including Inland Fisheries and Boating staff, and Bob Heffernan from the CT Nurserymen’s Association. Bob Heffernan was able to send an email of our water garden fact sheet to the nursery industry in the country.

5. Organized a half day taxonomic break-out meeting(s) for the Marine species, Aquatic Plants, and Aquatic Animals sub-committees, including preparing the agenda(s); sending notification

of the meeting date(s), assembling relevant handouts/documents, and taking and disseminating meeting notes/minutes.

Robie has contacted members of the Aquatic Plant and Marine sub-committees to determine their availability for a half-day meeting in April. Responses have been slow in coming but a date will be set soon. It is being determined whether there is a need for the freshwater Aquatic Animals sub-committee to meet. Agenda items have been drafted and additional input sought.

6. Updated list of Early Detection Rapid Response Aquatic Invasive Species
7. Review and revise Management Class assignments for all Aquatic Invasive Species lists and add new species as necessary.

A preliminary review and update was completed. Additional input will be sought from working group members.

8. Developed portable displays on vectors and participate in major boating and fishing shows to help educate participants about AIS.

Four panels for a tabletop display were developed, providing specific information on zebra mussels, Chinese mitten crab, hydrilla and water chestnut. These also were reviewed by Inland Fisheries. The panels will be printed on a large printer, and laminated. Four banners (~31" x 84") were drafted for use at boating and fishing shows, and other large public events. One focuses on "What are Aquatic Invasive Species", one is directed at both boaters and anglers, one at just anglers, and one for water garden enthusiasts. The banner will be produced by Essex Design and Display in Haddam, CT; their graphics designer is assisting with the banner designs. The banners will be produced as double-sided and retractable; each will have the "What are Aquatic Invasive Species" on one side and one of the other three designs on the other. Preliminary designs by the graphic designer were reviewed and approved by Murray, Balcom and Robie on 28 February.

Due to the lengthy review and design process, none of these materials were available for distribution at the CMTA Boat Show, the Northeast Fishing and Hunting Show, or the Connecticut Flower Show in 2013. They will be completed and made available for the 2014 shows, in addition to other pertinent events.

9. Organize and hold a full ANS Coordinating Group meeting including: preparing the agenda; sending notification of the meeting date, and assembling relevant handouts/documents and take meeting notes/minutes.
10. Edits were made to the "DRAFT" CT Early Detection Rapid Response Plan by CT ANS Panel and DEEP. We still need to update the section on new current State Statutes and regulations.

11. Research protocols and develop model HACCP plans for minimizing the spread of invasive species during mechanical weed harvesting and suction harvesting activities; post on web sites and share with Connecticut Lake Associations.

Robie reviewed USFWS information on HACCP plan development and drafted plans for mechanical harvesting and suction harvesting. The plans were reviewed by the Balcom and Murray and will be presented to the Aquatic Plants sub-committee and DEEP staff for additional review and input. They will be presented to the full Working Group as models for future similar efforts. *For copies of the HACCP plans, contact Nancy Murray (nancy.murray@ct.gov).*

## Reductions in property value

Properties adjacent to streams, lakes, ponds, and coastal areas are valued significantly higher than those located away from the water. However, water quality problems can cause waterfront values to decline rapidly. The value of homes located on an uninfested lake can be higher than homes on a lake so choked with weeds that no recreation can occur.

## WHAT CAN I DO ABOUT AQUATIC INVASIVE SPECIES?

- To prevent the spread of hitchhiking species, thoroughly clean, drain and dry all boats, kayaks, canoes, and recreational gear after use.
- Do not release live bait or live fish into a new body of water.
- Buy pets from reputable dealers whose non-native animals are imported legally, properly labeled, and don't include invasive pests and diseases.
- Do not release an unwanted pet into the environment. Try returning it to a local pet shop, giving it to another hobbyist, or donating it to a school, nursing home, or nature center.
- Do not dump aquatic plants or aquarium water into any water bodies. Many plants for aquaria and water gardens are extremely invasive.
- Take action! Join a volunteer invasive species monitoring or eradication group. Meet new friends, get outdoors, and help to protect our environment.
- If you see an unfamiliar aquatic plant or animal, contact CT DEEP (860-424-3589).

## FOR MORE INFORMATION:

Protect your waters: [www.protectyourwaters.net](http://www.protectyourwaters.net)

ANS taskforce: [www.anstaskforce.gov](http://www.anstaskforce.gov)

For Kids: [www.iiseagrant.org/nabinvader](http://www.iiseagrant.org/nabinvader)

CTSG-13-07



# Aquatic Invasives FACTSHEET

## WHAT ARE AQUATIC INVASIVE SPECIES?

- **Non-native** plants, animals, and pathogens
- Live primarily in **water**
- Can rapidly thrive in a **new environment**
- Cause economic **loss**, environmental **damage**, or **harm** to human health

*(Note that not all non-native species are invasive.)*

## WHERE ARE THEY FOUND?

Aquatic invasive species can be found in oceans, lakes, streams, and wetlands. There are many ways that aquatic invasive species are transported including:

- Ballast water operations
- Biofouling of ship hulls
- Fishing bait release
- Carried on watercraft and fishing gear
- Escape from nurseries and water gardens
- Intentional release of unwanted aquatic pets
- Release of classroom and laboratory animals

## WHAT ENVIRONMENTAL OR ECONOMIC DAMAGE DO THEY CAUSE?

### Reductions in food sources

Zebra mussels disrupt the food chain by removing significant amounts of food from the water, called plankton, upon which larval and juvenile fish feed. As larger gamefish feed on juvenile fish, this can adversely impact sport and commercial fisheries.



### Changes to fish habitat

Invasive plants such as water chestnut, Eurasian water milfoil and hydrilla grow to the surface, blocking sunlight and choking waterways. This changes the habitat, which in turn may cause shifts in the types of fish present.



## PROHIBITED AQUATIC INVASIVE PLANTS IN CONNECTICUT\*

### Common name

### Scientific name

Flowering rush	<i>Butomus umbellatus</i>
Fanwort	<i>Cabomba caroliniana</i>
Pond water-starwort	<i>Callitriche stagnalis</i>
Brazilian water-weed	<i>Egeria densa</i>
Hydrilla	<i>Hydrilla verticillata</i>
Yellow iris	<i>Iris pseudacorus</i>
Purple loosestrife	<i>Lythrum salicaria</i>
European waterclover	<i>Marsilea quadrifolia</i>
Forget-me-not	<i>Myosotis scorpioides</i>
Parrotfeather	<i>Myriophyllum aquaticum</i>
Variable-leaf watermilfoil	<i>Myriophyllum heterophyllum</i>
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Brittle water-nymph	<i>Najas minor</i>
Onerow yellowcress	<i>Nasturtium microphyllum</i>
Watercress	<i>Nasturtium officinale</i>
American water lotus	<i>Nelumbo lutea</i>
Yellow floating heart	<i>Nymphoides peltata</i>
Crispy-leaved pondweed	<i>Potamogeton crispus</i>
Giant salvinia	<i>Salvinia molesta</i>
Water chestnut	<i>Trapa natans</i>
Common reed	<i>Phragmites australis</i>

\* If you don't live in CT – check your state laws

### TIPS ON BUYING AQUATIC PLANTS

- Choose a reputable local nursery, store, catalog, or Internet site.
- Ask if the vendor knows which species are state and federally banned.
- Make sure you don't have unwanted plants or animals attached to your purchase by rinsing plants in a light-colored bucket of tap water until they are clean, looking for snails and plant fragments.

### AQUATIC INVASIVE PLANT DISPOSAL GUIDE

[http://www.cipwg.uconn.edu/pdfs/Aquatic\\_Invasive\\_Plant\\_Disposal\\_Guide4-2011.pdf](http://www.cipwg.uconn.edu/pdfs/Aquatic_Invasive_Plant_Disposal_Guide4-2011.pdf)

### FOR MORE INFORMATION:

Aquarium hobbyists / Water Gardeners: [www.habitattitude.net](http://www.habitattitude.net)  
Conn. Invasive Plant Working Group: [www.cipwg.uconn.edu](http://www.cipwg.uconn.edu)

CTSG-13-08

## Water Gardens & Invasive Plants FACT SHEET

### WHAT ARE AQUATIC INVASIVE SPECIES?

They are **non-native** plants, animals, and pathogens that live primarily in **water**, can rapidly thrive in a **new environment**, and cause economic **loss**, environmental **damage**, or **harm** to human health.

### HOW CAN I MINIMIZE THE RISK OF INTRODUCING INVASIVE PLANT SPECIES?

- Freeze unwanted plants, put in trash or burn.
- Never put cuttings or unwanted plants in compost, seeds can survive.
- Never dump unwanted plants or plant pieces into a water body.
- Create water gardens only in areas cut off from waterways to avoid accidental release.
- Use native plant species.
- Know where your plants are coming from and that they are properly identified.
- Know local, state, and federal laws.

### EXAMPLES OF INVASIVE PLANTS FOUND IN WATER GARDENS AND AQUARIA THAT SHOULD BE AVOIDED

Curly Leaf Pondweed



Brazilian Water-Weed



Fanwort



Parrotfeather



# What are AQUATIC INVASIVE SPECIES?

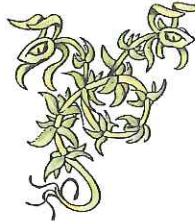
Non-native plants, animals,  
and disease-causing  
organisms



Sea Squirt



Chinese Mitten Crab



Hydrilla

...that live primarily  
in water

...have traits  
making it easier  
to thrive in new  
environments



Rusty Crayfish



Asian Shore Crab



Gracilariopsis  
Red Algae



Smooth Cordgrass

...and cause economic loss,  
environmental damage or  
threats to human health



Water Chestnut



Rapa Whelk



Northern Snakehead





# ANGLERS



## STOP AQUATIC HITCHHIKERS!

Prevent the transport of nuisance species.  
Clean all recreational equipment.  
[www.ProtectYourWaters.net](http://www.ProtectYourWaters.net)

## CLEAN

- Inspect and clean off plants, animals, and mud from fishing gear and equipment *before leaving* the water access area.

## DRAIN

- Drain water from livewell and bait containers *away from ramp*.
- Save unused live freshwater bait by refilling livewell with tap water to *avoid moving* microscopic organisms to another water body.

## DISPOSE

- Dispose of unwanted bait, fish parts, worms, and packing materials in trash, *not in water or on shore*.
- *Never release* live fish or other organisms from one water body into another water body.





# Water Gardens

## Minimize Spread Risk

- Purchase **native** plants
- Locate garden away from waterways
- Dispose of by freezing or put in trash
- Avoid composting, seeds can live to sprout
- Never dump plants in water body
- Know local, state, and federal laws

## Purchase Aquatic Plants with Care

- Choose reputable vendor
- Review prohibited plant lists
- Remove unwanted hitchhikers by rinsing new plants in bucket of tap water until clean, before adding to water garden

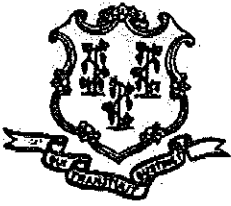
## Examples of Invasive Plants to Avoid Buying

(left) Parrotfeather (*Myriophyllum aquaticum*)

(center) Brazilian water-weed (*Egeria densa*)

(right) Fanwort (*Cabomba caroliniana*)





STATE OF CONNECTICUT

DEPARTMENT OF AGRICULTURE

Office of Steven K. Reviczky  
Commissioner



November 15, 2013

Mr. William Hyatt, Chair, Invasive Plants Council  
Department of Energy & Environmental Protection  
79 Elm Street  
Hartford, CT 06106

Dear Chairman Hyatt:

Thank you for the opportunity to provide input to the Invasive Plants Council (IPC) 2013 Annual Report. DoAg continued to host and attend IPC meetings this year. DoAg was in the minority on a vote that failed to list running bamboo as potentially invasive; unfortunately, inquiries and legislation on this plant continue to occupy time of the IPC and its staff. Nonetheless, DoAg strives to represent the best interest of agriculture and the State. Some items of interest in the realm of invasive plants accomplished this year include:

On June 27, 2013, a meeting was held between DoAg's Bureau of Regulation and Inspection staff, IPC Chairman and Coordinator, and staff of Connecticut Agricultural Experiment Station to discuss the enforcement of invasive plant laws (minutes attached). No reports of prohibited aquatic invasive plants were made as a result of inspections at 146 DoAg-licensed pet shop 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, received 85 applications on 1,060 acres; many involve the removal of hedgerows containing invasive plants. Current restoration plans are developed for each project.

If you have any questions, please contact Katherine Winslow of my staff at 860.713.2589.

Sincerely,

Steven K. Reviczky  
Commissioner

cc: Logan Senack, CT Invasive Plant Coordinator

Attachment

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

Notes and Action Items: 6/27/13 at 1:00 pm: invasive plant laws enforcement at DoAg

Ray Connors and Bruce Sherman, DoAg  
Vickie Smith, CAES  
Bill Hyatt, DEEP  
Logan Senack, UConn

### **DoAg**

Pet shops- DoAg only inspects pet shops where there are non-fish animals being sold

100+ pet shops

At 50% staff, aim for 1x per year inspections, anywhere from 30 min. to 1 hour each depending on species present and paperwork needed

Inspections are unannounced, not scheduled, and fit into schedules of inspectors as time allows.

Might be possible to coordinate joint inspections with DEEP during slower times of year (Nov. Dec. season)

Developing a pamphlet re: sales at pet stores

DoAg could provide reports on where they've done pet store inspections after the fact. Ray will develop a form to be used.

DoAg does go to feed stores (Agway, etc.)

Anyone can check list of businesses at the state E-Licensing website. Go to Agriculture section.

### **CAES**

Discussed Greg Bugbee's projects briefly

Aim of inspectors is to visit nurseries 1x per year

Working on Garden Sales in Norwalk- *Paulownia* being sold out-of-state

Most issues resolved simply by educating the sellers about the invasive plant laws

Cultivar issue still a loophole

Mail-order plants still a loophole

### **Action items:**

- Logan will work to develop a pamphlet for pet stores on invasive plants and animals.
- Logan and DEEP will work to plan an invasive plant ID/law refresher session for DoAg inspectors, probably with Greg Bugbee's involvement.
- DoAg will work on a form for reporting pet store inspections. DoAg & DEEP will exchange information on inspections and findings of prohibited species.
- CAES and DEEP will work on increased information exchange regarding inspections and findings of prohibited species.

# Connecticut Invasive Plant Working Group (CIPWG)

## 2013 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 16<sup>th</sup> 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 (University of Connecticut 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 is in the planning stages for fall 2014. Previous symposia have attracted up to 475 attendees. CIPWG's news and events list serve has approximately 730 members. The CIPWG website moved to a newer server at the University of Connecticut in 2012 and is now accessible at [www.cipwg.uconn.edu](http://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 University of Connecticut server. Online reporting forms for mile-a-minute vine (*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](http://www.eddmaps.org)) to accept additional reports of any other invasive plant. 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 in 2013.

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)
- Volunteer (organize and provide assistance for pulling parties and other invasive plant activities where volunteers are needed).

Two invasive plant pulling parties for control of mile-a-minute vine were conducted in Sprague, CT on July 12 and July 24, 2013. Approximately 15 volunteers and project coordinators attended the events, which were co-sponsored by CIPWG, DEEP, the University of Connecticut, and the Connecticut Agricultural Experiment Station.



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 2013. Two CIPWG exhibits developed in 2011 that feature terrestrial plants and aquatic species continue to be displayed at many public events.

Other CIPWG member activities:

- Charlotte Pyle (USDA Natural Resources Conservation Service) provided invasive plant educational materials to the Woodbridge Conservation Commission (5 members).
- Rose Hiskes (The Connecticut Agricultural Experiment Station) gave invasive plant talks at the Long Hill Garden Club in Trumbull (50 attendees) and the Orchard Valley Garden Club in Southington (47 attendees).
- Cynthia Boettner (Silvio O. Conte National Fish and Wildlife Refuge) reported that the Connecticut Department of Energy and Environmental Protection (DEEP) and the Conte Fish and Wildlife Refuge continued their long-term collaboration to control water chestnut in the Connecticut River watershed with the help of volunteers. The Tidewater Institute and the Lower CT River Valley Council of Governments joined the effort in 2010. Program highlight: During 2000, 50 tons of water chestnut plants were removed in the Upper Hockanum River through mechanical harvesting and 684 hours of hand-pulling. In 2013, only 40 pounds were found and removed.

**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 2013 (reported by Donna Ellis, Logan Senack, and the UConn Master Gardener Program):**

- Ag Day at the Capitol
- CIPWG general meeting, East Hartford (40 attendees)
- CT Agricultural Experiment Station Plant Science Day, Hamden (1,000 attendees)
- CT Association of Conservation and Inland Wetlands Commissions Annual Meeting, Cromwell (250 attendees)
- CT Conference on Natural Resources, Storrs (200 attendees)
- CT DEEP Headquarters, Hartford
- CT Flower and Garden Show, Hartford (37,000 attendees)
- CT Grounds Keepers Association Turf and Landscape Conference (150 attendees)
- CT Nursery and Landscape Association Summer Field Day, Hamden (400 attendees)
- CT Nursery and Landscape Association Winter Symposium and Expo, Manchester (496 attendees)
- Durham Fair (15 attendees)
- Fairfield Earth Day
- Fall Garden Day, Norwich (150 attendees)
- Farmer's Markets in Norfolk (1,000 attendees)
- Flanders Farm Day, Bethlehem (218 attendees)
- Gillette Castle, Haddam (405 visitors)
- Glastonbury Partners in Planting Invasive Plant Presentation and Walking Tour (50 attendees)

**List of 2013 outreach events, continued:**

- Goshen Fair (30,000 attendees)
- Hamden Earth Day Celebration (4,000 attendees)
- Haddam Neck Fair (30 attendees)
- Harwinton Fair (26,000 attendees)
- Hebron Plant Sale
- Invasive Plant Presentation, Ridgefield (40 attendees)
- K-8 School Grounds Athletic Field Management Workshop, East Haddam (70 attendees)
- K-8 School Grounds Ornamental Plant Management Workshop, Madison (42 attendees)
- Lebanon Fair (8,000 attendees)
- Ledyard Agricultural Fair (20 attendees)
- Les Mehrhoff Invasive Plant Walk installation (a National Trails Day event), Mansfield
- Lyme Garden Club (35 attendees)
- Mile-a-minute Weed Biological Control Cooperators' Meeting, Trenton, NJ (100 attendees)
- National Garden Clubs New England Regional Symposium, Westbrook (130 attendees)
- New England Grows Great Ideas Pavilion, Boston, MA (15,000 attendees)
- North Stonington Agricultural Fair
- Ornamental and Turf Short Course; 3 locations in East Haven, North Haven, and West Hartford (70 attendees)
- Riverton Fair (18,000 attendees)
- Simsbury Garden Club meeting (60 attendees)
- UConn Advanced Master Gardener Program, Bethel (20 attendees)
- UConn Cornucopia Fest, Storrs (5,000 attendees)
- UConn Garden Conference, Storrs (300 attendees)
- UConn Master Gardener Program; 5 locations in Bethel, Brooklyn, Haddam, Stamford, and West Hartford (225 attendees)
- UConn Master Gardener Summer Tour, Storrs (40 attendees)
- UConn New London County Master Gardener Plant Sale, Norwich (100 attendees)
- UConn Museum of Natural History Invasive Plant Presentation and Guided Tour (10 attendees)
- UConn Perennial Plant Conference, Storrs (325 attendees)
- Vernon Conservation Commission Earth Day Event, Vernon
- WMRD/WLIS Radio Program, CT Outdoors with Suzanne Thompson, Middletown

*Submitted by Donna Ellis (University of Connecticut Department of Plant Science and Landscape Architecture; CIPWG Co-chair), with contributions from Cynthia Boettner (Silvio Conte National Fish & Wildlife Refuge), Rose Hiskes (Connecticut Agricultural Experiment Station), Charlotte Pyle (USDA Natural Resources Conservation Service), Logan Senack (University of Connecticut), Penni Sharp (Connecticut Botanical Society; CIPWG Co-chair), and University of Connecticut Master Gardener Coordinators Patricia Eldredge, Susan Munger, and Gail Reynolds.*

- 12 November 2013