

## **Invasive Plant Module for the Schoolyard Environment**

This curriculum was developed to assist classroom teachers in familiarizing their students with common invasive plants of Connecticut. There are six parts to the module and both indoor and outdoor lessons are included. I approached this curriculum from an environmental education background and have therefore integrated nature as an outdoor classroom and teaching tool. My motivation for designing these lessons stemmed from my increasing awareness of the encroachment of invasive plants into the landscape.

I intend these lessons to be modified to meet the needs of individual teachers and to be changed based on the existing knowledge of the students. This curriculum is targeted for students in grades 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup>. Based on the National Science Education Standards, this curriculum attempts to meet content standards for “science as inquiry” and “life science”.

In accordance with the “science as inquiry” standards, the students will integrate observational skills with understanding scientific concepts. The students will understand the nature of science and the dynamic tendencies of the environment. The students will acquire the skills necessary to become independent inquirers about the natural world and then share their knowledge with classmates, administrators, and families. The skills that students acquire while engaging in “science as inquiry” are integral to a comprehensive science education.

To address the “life science” standards, this curriculum includes information about the relationship between organisms and ecosystems as well as the diversity and adaptations of organisms. Life science subject matter including facts, concepts, and principles are included in this curriculum.

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**Session 1:** 2 hours

**Title:** Invasive Plants Invade Our Lives

**Goals:** Students will be able to define what an invasive plant is.

**Objectives:** To identify characteristics of invasive plants.

**Target:** Grades 4-6

**Concept:** Adventitious or aggressive plants

**Vocabulary:**

1. Native Plant- a species that reached its location without any assistance from humans.
2. Exotic Plant- a non-native species introduced into a new location by human activity, either intentionally or by accident.
3. Invasive Plant- a non-native (adventitious) species that is capable of aggressively moving into a habitat and monopolizing resources such as light, nutrients, water and space to the harm of other species.

**Equipment:** Posterboard for Know, Wonder, Learn Activity  
Construction Paper  
White paper to make journals  
3-ring binder for each student  
Plastic sheets to insert plant specimens into journal  
Markers  
Colored Pencils  
Crayons  
Scissors  
Tape  
Glue  
Bean bag for game

**Essential Understanding**

Non-native plants can become a problem in the landscape.

**Guiding Questions (30 minutes) [classroom]**

1. Why do we study invasive plants?
2. How do we distinguish and invasive plant from a native plant?

**Activity (15 minutes) [classroom]**

A KWL is a poster that can take any shape depending on the subject that the class is studying. For this activity, poster board should be used to construct a plant with large leaves and extensive roots. This poster should be large because the students will list 5 things that they already know about invasive plants in the root area and 5 things that they wonder about invasive plants in the stem area. During the final

session the students will fill in the leaves with all the things that they learned about invasive plants during the sessions

Ask the students why the KWL is drawn with large leaves and extensive roots?

**Game (15 minutes) [outside]**

Using a game of tag, illustrate how a few invasive plants can totally change the landscape.

For the game, two students are invasive plants and the rest of the students are native plants. The invasive plants will try to tag all of the native plants causing them to wither up and die. The invasive plants can only tag the native plants with a bean bag so the two invasive plants must work together to take over the area. In the end, only the invasive plants will be left.

After the game, have the students reflect on what it means for a habitat if so few invasive plants can invade and cause the native plants to die.

**Discussion (15 minutes) [classroom]**

Tell the students to think about the speed in which the invasive plants took over the area. Discuss the characteristics of invasive plants that allow for this encroachment.

A list of characteristics is presented here:

1. grow fast
2. spread across large areas
3. reproduce by seeds, buds, fragments and shoots from roots
4. survive in different light, temperature, water and soil conditions
5. difficult to control and nearly impossible to eradicate
6. lack of native control agents, such as insects.

**Discussion (15 minutes) [classroom]**

This is a list of the invasive plants that will be covered during the 6 sessions:

1. Purple loosestrife-A
2. Asiatic bittersweet-T
3. Japanese barberry -T
4. Eurasian watermilfoil-A
5. Multiflora Rose-T
6. Autumn Olive-T

[A= aquatic, T=terrestrial]

**Activity (30 minutes) [classroom]**

Each student will create a journal in a three ring binder.

The journal should have 12-14 pages to allow two pages for each invasive plant. For each plant, the student should have one journal page as shown below and one plastic sheet into which they can insert the plant specimen.

## Journal Format

	Insert plant sample here in a plastic sheet.
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### **Benchmark**

The student knows why invasive plants are a problem (e.g. outcompete the native plants) and understands the speed with which an invasive plant can alter the species composition of an area.

### **Resources**

Appendix IV: Growing Native- The Power of Invasion

Appendix V: *Weeds Gone Wild* fact sheet and brochure

Seasonal Guide to Spotting Invasive Plants

Connecticut Invasive Plant Working Group List of Plants Considered

Widespread and Invasive in Connecticut

**Session 2:** 2 hours 15 minutes

**Title:** Bittersweet (*Celastrus orbiculatus*)

**Goals:** 1. Students will learn to identify plant parts.  
2. Students will use technology to find information on plant distribution.

**Objectives:** 1. To identify invasive plants in the field.  
2. To learn about the ecology of bittersweet.  
3. To use the internet to locate the distribution of native bittersweet.

**Target:** Grades 4-6

**Concept:** The ecological role of lianas or vines.

**Vocabulary:**

1. Vine: a plant whose stem requires support and which climbs by tendrils or twining or creeps along the ground
2. Liana: any of various usually woody vines especially of tropical rain forests that root in the ground
3. Adaptation: modification of an organism or its parts that makes it more fit for existence under the conditions of its environment

**Equipment:** Journal materials

Hand lenses

Computers with internet access (1 per student or work in pairs)

Specimen of bittersweet

**Essential Understanding**

Plants can harm one another.

**Guiding Question (30 minutes) [classroom]**

How destructive can a vine be?

Emphasis should be placed on the support that vines need in order to grow and develop.

Review the vocabulary with the students.

Show the bittersweet specimen to the students and pass it around the classroom.

Then have the students brainstorm the characteristics that would be most helpful in identifying bittersweet in the field.

**Activity (45 minutes) [outside]**

This activity should take place in an area with a lot of bittersweet. To begin have the students explore the area and observe bittersweet in its habitat without taking any samples. The activity is called *Know your Vine*.

Directions for activity:

Each student picks a vine from a pile collected from the study area (earlier in the day by the instructor) and takes a few minutes to study it. All of the vines get placed into a tub and mixed up. Then they are placed on a table or the ground. In turn, each student will find their section of vine and tell how they know that it belongs to them. Then each student must take their section of vine and find which plant in the study area it came from.

As the students are looking for the origin of their vine, have them notice what is supporting the vine and if the support is healthy or dying? Have the students save the sections of vines to use as the specimens for their journal. To conclude this activity, discuss the structure of bittersweet and its adaptations for growth.

### **Activity (45 minutes) [classroom]**

Ask the students: Where all the native bittersweet (*Celastrus scandens*) in Connecticut gone?

The students should use the internet to find the distribution of native bittersweet.

The students should answer the following questions during their search

1. Does native bittersweet overlap with the distribution of the invasive bittersweet?
2. What are the differences between the native and invasive bittersweet?

### **Activity (15 minutes) [classroom]**

The students should complete the journal pages for bittersweet including inserting the plant specimen that was collected in the field.

### **Optional activity**

Have the students make wreaths out of bittersweet vines with their attractive berries. Ask them to display the wreaths in their homes so that the berries will not be dispersed outside.

### **Homework**

Ask the students to explore their backyards to discover if they have bittersweet around their homes.

During the course of this module, the students will construct a group chart where they can tally which plants of the 6 invasive plants that will be discussed are growing in their yards.

### **Benchmark**

The student knows the difference in plant structure between vines and shrubs/trees.

The student understands that plants can harm one another. The student is competent in using the internet to find factual information about plants.

### **Resources**

Appendix I: Distribution map of Asiatic Bittersweet in New England

Appendix II: Asiatic Bittersweet fact sheet

Informational Websites



**Session 3:** 2 hours

**Title:** Aquatic Invasives: Eurasian Watermilfoil (*Myriophyllum spicatum*) and Purple Loosestrife (*Lythrum salicaria*)

**Goals:** Students will understand the structural differences between aquatic and terrestrial plants.

**Objectives:** 1. To explore plant structure through aquatic plant sampling  
2. To understand the ecological and economical implications of invasive plants in our waterways.

**Target:** Grades 4-6

**Concept:** Consequences of destroying wetland ecosystems.

**Vocabulary:**

Wetland: land or areas (as tidal flats or swamps) containing much soil moisture

**Equipment:** Specimens of Eurasian Watermilfoil and Purple Loosestrife  
Journal materials  
Pond sampling equipment: pans, nets, strainers, dissecting scopes, pond life book

**Essential Understanding**

Wetland ecosystems benefit human populations.

**Guiding Questions (30 minutes) [classroom]**

1. Are invasive plants confined to land?
2. What is an ecosystem service?  
This discussion should focus on wetland functions and benefits.

**Activity (15 minutes) [classroom]**

The students should engage in a discussion comparing the structure of Eurasian Watermilfoil and Purple Loosestrife with the structure of bittersweet (using the students' journal specimens).

The following points should be addressed by the discussion:

1. differences in leaf and root structure
2. why do the differences in leaf and root structure exist?
3. differences in the of availability of oxygen and nutrients between the terrestrial and aquatic environments

**Activity: Aquatic Sampling (40 minutes) [outside]**

The students will participate in group and independent exploration.

During the exploration the students should think about:

1. what percentage of the water body have Eurasian Watermilfoil and Purple Loosestrife invaded?
2. collecting a specimen of each plant for their journals

3. taking samples of the roots of Eurasian Watermilfoil and Purple Loosestrife to see if any organisms live in the roots

**Activity (20 minutes) [classroom]**

The instructor should address the importance of a wetland composed of native plant species and then discuss with the students ways to prevent the spread of invasive aquatic plants?

**Activity (15 minutes) [classroom]**

The students should complete the journal pages for Eurasian Watermilfoil and Purple Loosestrife including inserting the plant specimens that were collected in the pond.

**Homework**

Ask the students to explore their backyards to discover if they have Eurasian Watermilfoil and Purple Loosestrife in their ponds.

**Benchmark**

The student understands the difference in nutrient availability between the aquatic and terrestrial environment and how this influences plant form. The student applies the concept of ecosystem services to habitats besides the wetland habitat.

**Resources**

Appendix I: Distribution maps of Eurasian Watermilfoil and Purple Loosestrife in the United States

Appendix II: Eurasian Watermilfoil and Purple Loosestrife fact sheets

Appendix III: Backyard Conservation- Wetland

Appendix IV: Growing Native- Native Plants- Living in Communities

Informational Websites

1. Sea Grant Non-indigenous Species Website  
<http://www.sgnis.org/www/euwater.html>
2. Invasive Plants of the Eastern United States  
<http://www.invasive.org/eastern/species/3055.html>
3. Ecology and Management of Invasive Plants Program  
<http://www.invasiveplants.net/plants/purpleloosestrife.htm>
4. Purple Loosestrife Infocentre <http://www.ducks.ca/purple/>
5. Purple Loosestrife: <http://biology.usgs.gov/s+t/noframe/x193.htm>

**Session 4:** 2 hours 15 minutes

**Title:** Japanese Barberry (*Berberis thunbergii*) and Multiflora Rose (*Rosa multiflora*)

**Goals:** 1. Students will understand the purpose of thorns and other plant defenses.  
2. Students will use the internet to find information about plants.

**Objectives:** 1. To use dissecting microscopes to look at thorn composition.  
2. To do internet research to find out which herbivores feed on Japanese Barberry and Multiflora Rose.

**Target:** Grades 4-6

**Concept:** Plant defenses to herbivory.

**Vocabulary:**

1. herbivore- an animal that eats plants
2. Plant defense- feature that reduces the chance that the plant will be eaten by an animal.

**Equipment:** Dissecting scopes  
Journal materials  
Computers with internet access (1 per student or work in pairs)  
Specimens of Japanese Barberry and Multiflora Rose  
Blindfold for each pair of students

**Essential Understanding**

Plants have adaptations to survive herbivory.

**Guiding Question (30 minutes) [classroom]**

How do plants make themselves unappetizing to herbivores?

Lead the students in a discussion of the types of plant defenses specifically addressing the defenses that the students think are most effective at deterring herbivores.

To demonstrate a thorn as a plant defense, the instructor should pass samples of Multiflora Rose and Japanese Barberry around the classroom.

**Activity (40 minutes) [outside]**

This activity should take place in an area with many Multiflora Rose and Japanese Barberry shrubs. The activity is called *Meet a Shrub*.

The directions for the activity are:

The students should be divided into pairs and one student in each pair is blindfolded and the other student is the leader. The leader will guide the blindfolded student through the forest/field area until reaching a Multiflora Rose or Japanese Barberry shrub of their choice. The blindfolded student should feel the shrub for any identifying features. The leader will wind the blindfolded student back to the starting point and remove the blindfold. The student will then try to find the shrub

that they were led to and identify which species it is. The students will then switch roles so that the leader is blindfolded and led to a shrub following the same procedure.

After *Meet a Shrub*, the students should collect a sample of each shrub for their journals. The students should remain in pairs and use hand lenses to observe three differences between the thorn/spine of Japanese Barberry and Multiflora Rose. These differences should be discussed as a group.

### **Activity (50 minutes) [classroom]**

The instructor should present a list of possible ecological internet resources for the students to explore. The students will perform two internet searches:

1. search for the animals that graze/browse on Japanese Barberry and Multiflora Rose
2. search for a “cool” fact about both Japanese Barberry and Multiflora Rose

The students should search the internet for 40 minutes and then engage in a 10 minute discussion to review the herbivores that they discovered as well as the “cool” facts about each plant.

### **Activity (15 minutes) [classroom]**

The students should complete the journal pages for Japanese Barberry and Multiflora Rose including inserting the plant specimens that were collected in the forest/field.

### **Homework**

Ask the students to explore their backyards to discover if they have Japanese Barberry and Multiflora Rose around their homes.

### **Benchmark**

The student understands the function of a plant defense. The student shows competence in using the internet as a resource for factual information on plants. The student demonstrates the use of alternate senses when blindfolded in *Meet a Shrub*.

### **Resources**

Appendix I: Distribution maps for Japanese Barberry and Multiflora Rose in the United States

Appendix II: Japanese Barberry and Multiflora Rose fact sheets

Information Resources

1. Wisconsin Department of Natural Resources  
<http://www.dnr.state.wi.us/org/land/er/invasive/factsheets/barberry.htm>  
<http://www.dnr.state.wi.us/org/land/er/invasive/factsheets/rose.htm>
2. Wildland Invasive Species Team  
<http://tncweeds.ucdavis.edu/esadocs/berbthun.html>  
<http://tncweeds.ucdavis.edu/esadocs/rosamult.html>

**Session 5:** 2 hours

**Title:** Autumn Olive (*Elaeagnus umbellata*)

**Goals:** 1. Students will understand the reproductive ability of an aggressive plant.  
2. Students will understand how roots help a plant to compete better.

**Objectives:** 1. To discuss fruit production and dispersal.  
2. To discuss why plants need nitrogen and how nitrogen is fixed.

**Target:** Grades 4-6

**Concept:** Fruit load and dispersers. What makes a fruit attractive to a disperser?

**Vocabulary:**

1. Disperser: an organism that spreads or distributes fruits/seeds from a stationary parent plant
2. Nitrogen: a mineral nutrient required in large amounts as an essential component of proteins, nucleic acids and other cellular constituents
3. Nitrogen fixation: organisms cannot use  $N_2$  so it is “fixed” or converted into ammonia by bacteria

**Equipment:** Specimen of Autumn Olive including fruits

Journal Materials  
Cups to collect fruit in  
Scale to weigh fruit  
Surface on which to crush fruit  
Hand lenses

**Essential Understanding**

Plants require seed dispersal to reproduce.

**Guiding Question (30 minutes) [classroom]**

How do plants spread their seed?

Engage the students in a discussion of why seeds need to be dispersed away from their parent plant. The instructor should show the Autumn Olive fruits to the class and lead a discussion of the enticing qualities of the berries. The students should contribute to a list of fruit qualities and the organisms that would enjoy this type of fruit.

**Activity (55 minutes) [outside/classroom]**

This activity should be completed in an area with a large clump of Autumn Olive shrubs.

Have the students conduct a study of Autumn Olive fruit beginning with observations of the shrub:

1. Are the trees heavily laden with fruit?

2. Is the fruit primarily at the students eye level or higher up?
3. What animals would feed at each level of fruit production?

Given that one Autumn Olive shrub can produce up to 80 pounds of fruit in a season, have the students conduct a fruit study.

The directions for the study are:

Each student should collect 20 fruits in a cup and bring them into the classroom. The students should weigh each cup of fruit and determine the weight of an individual berry (divide the total weight by 10). The students should also determine how many fruits must be collected to weigh 80 pounds.

Once the fruits have been weighed, the students should squish the berries and determine how many seeds are in each fruit. Have the students think about how many seeds there would be in 80 pounds of fruit and the consequences of that many seeds being dispersed in the landscape.

#### **Activity (20 minutes) [classroom]**

The instructor will lead a discussion of plant traits that contribute to successful competition.

The discussion should address:

1. the nutrient requirements and methods of acquisition of plants in general, Autumn Olive specifically
2. nitrogen fixation by Autumn Olive roots

Divide the students into groups of 3 and have them observe Autumn Olive roots with a hand lense. The instructor should prepare the students by describing the form of root nodules and then allow the groups to locate the nodules on their samples. While studying the root samples, the students should also observe whether Autumn Olive has one long root or many short fibrous roots because nutrient absorption will be affected by the development of root form.

#### **Activity (15 minutes) [classroom]**

The students should complete the journal pages for Autumn Olive inserting the plant specimens that were collected in the forest/field.

#### **Homework**

Ask the students to explore their backyards to discover if they have Autumn Olive around their homes.

#### **Benchmark**

The student understands the relationship between fruit production and dispersal. The student integrates ecological study with quantitative processes. The student shows competence in using a hand lense to observe details of plant structure.

#### **Resources**

Appendix I: Distribution map of Autumn Olive

Appendix II: Autumn Olive fact sheet

Appendix III: Backyard Conservation- Wildlife Habitat  
Informational Websites

1. Vegetation Management Guideline  
<http://www.inhs.uiuc.edu/chf/outreach/VMG/autolive.html>
2. Virginia Tech Weed Identification Guide  
[http://www.ppws.vt.edu/scott/weed\\_id/elgum.htm](http://www.ppws.vt.edu/scott/weed_id/elgum.htm)
3. West Virginia University Extension Service  
<http://www.caf.wvu.edu/~forage/5412.htm>

**Session 6:** 2 hours 15 minutes

**Title:** How can the students help to eradicate invasive plants?

**Goals:** 1. Students will be able to identify the 6 invasive plants studied.  
2. To demonstrate how common or uncommon invasive plants are around the students' homes.  
3. Students will brainstorm ways to stop the spread of invasive plants in New England.

**Objectives:** 1. To identify the three best features of each plant in the KWL as learned from the module.  
2. To complete a bar graph showing the frequency of occurrence of each plant around the students' homes.  
3. To organize an invasive plant eradication day for the school yard.

**Target:** Grades 4-6

**Concept:** YOU (the student) can make a difference in the future of our environment!

**Equipment:** Journals  
Materials for the bar graph  
KWL and markers  
Materials for creating posters about invasive plants

**Essential Understanding**

Humans can prevent the further spread of invasive plants in the landscape.

**Activity (30 minutes) [classroom]**

The instructor should review the plants studied while having the students follow along in their journals.

The instructor should work with the students to complete the “learned” portion of the KWL by filling in three identifying characters of each plant in the leaves section of the poster.

**Activity (15 minutes) [classroom]**

The instructor should use the chart of invasive plant occurrences in the students' yards to construct a bar graph. The bar graph will show which invasive plants are most common in the students' yards.

**Activity (45 minutes) [classroom]**

The instructor should work with the students to design an invasive plant eradication day for the school.

1. Help the students construct a list of ways an individual can stop the spread of invasive plants.

2. Work with the students to make a list of native plants that are good alternatives to invasive plants in the landscape.
3. Help the students identify the areas surrounding the school that are dominated by invasive plants.
4. The students will need the proper gardening equipment for removing the invasive plants and for planting the native plants.
5. The students should organize a day in late fall or early spring to remove the invasive plants from the schoolyard.
6. If the school cannot provide funding, the students will need money to purchase native shrubs. A great way to raise money would be to organize a fundraiser where the class sells native shrubs to people in the community. This fundraiser will have many benefits because the students will raise money and they will also help to remove invasive plants from the community landscape.

### **Activity (45 minutes) [classroom]**

In order to educate all the students in the school and hopefully get their help with fundraising and removing invasive plants from the schoolyard, the students should create posters to be displayed in the hallways of the school.

After selecting the date for the invasive plant eradication day for the school, the students should designate the month before as “Invasive Plant Awareness Month”.

During “Invasive Plant Awareness Month”, the students will display educational posters. The students should begin to create their posters during this last activity of the module. To make this activity more exciting, the instructor can organize a poster contest with the most effective poster (e.g. detailed facts, realistic illustrations, methods of removal included) winning a native shrub to plant in their yard. The posters can focus on one invasive plant or all six that were discussed in the module. If the students are ambitious and aware of additional invasive plants, they include them on their posters.

### **Alternative Activities**

Some schools will be willing to allow students to remove the invasive plants from the schoolyard and others will not. Given that this resistance is a possibility, there are alternative projects that the students can do to culminate this module.

1. Poster Contest: The students can still organize “Invasive Plant Awareness Month” and display their educational posters to their classmates.
2. Powerpoint Presentation: The class can create a group powerpoint presentation about the ecology of invasive plants, the problems with invasive plants, and the removal of invasive plants. This presentation can be presented to the school at an assembly, the community, parents, or the school board.
3. Editorial/ Opinion letter to the local newspaper: A great way for the students to send a message concerning the problems of invasive plants to the community is through the local newspaper.

4. Science Fair Project: Competition experiments between native and invasive plants are a great way to demonstrate the way that invasive plants push native plants out of the landscape. Perhaps the class can separate into groups and each group can do an experiment with a different pair of plants. (grasses are great for competition experiments)
5. Local School Fair: The students can host an informational table to educate their classmates. The students can create brochures on the computer about the most problematic invasive plants in the town and distribute them at the fair.

**Benchmark**

The student feels that they can contribute to the eradication of invasive plants. The student has a plan for how they will teach other people about the problem associated with invasive plants.

**Resources**

Appendix III: Backyard Conservation- Tree Planting

Appendix IV: Growing Native- Managing and Restoring Native Plant Communities

# Resources for Invasive Plants and Teaching Schoolyard Ecology

## Books:

Aquatic Plant Management Society, Inc. Workbook: "Understanding Invasive Aquatic Weeds". Contact: [scott.aquarium@usm.edu](mailto:scott.aquarium@usm.edu).

Berkowitz, Alan R. and Mary Ford. 2001 Draft. The Schoolyard Ecosystem. Millbrook, NY: Institute of Ecosystem Studies.

Cornell, Joseph. 1998. Sharing Nature with Children. 2<sup>nd</sup> ed. Nevada City, CA: Dawn Publishers.

Cornell, Joseph. 1989. Sharing Nature with Children II. Nevada City, CA: Dawn Publishers.

Mooney, H.A. and H.G. Drake. 1986. The Ecology of Biological Invasions of North America and Hawaii. Springer-Verlag.

Sisson, Edith A. 1982. Nature with Children of all Ages. Englewood Cliffs, NJ: Prentice Hall, Inc.

## Websites:

Biological Control of Eurasian Watermilfoil: <http://www.fw.umn.edu/research/milfoil/milfoilbc.html>

Connecticut Botanical Society- Gardening with Native Plants: <http://www.ct-botanical-society.org/garden/>

Connecticut Department of Environmental Protection- Non-Native Invasive Plant Species Program: <http://dep.state.ct.us/cgnhs/invasive.htm>

Department of Conservation and Recreation: <http://www.dcr.state.va.us/index.htm>

Ecology and Management of Invasive Plants Program  
<http://www.invasiveplants.net/plants/purpleloosestrife.htm>

Gardening with Native Plants <http://www.ct-botanical-society.org/garden/>

IPANE: <http://invasives.eeb.uconn.edu/ipane/>

Invasive Plants Fact Book: <https://www.denix.osd.mil/denix/Public/ES-Programs/Conservation/Invasive/intro.html>

Invasive Plants of the Eastern United States  
<http://www.invasive.org/eastern/species/3055.html>

Maine Invasive Plants <http://www.umext.maine.edu/onlinepubs/htmpubs/2506.htm>

Missouri Department of Conservation: <http://www.conservation.state.mo.us/nathis/>

National Park Service: <http://www.nps.gov/plants/alien>

Natural Resources Conservation Service- Educational Materials- Invasive Plants in CT:  
<http://www.ct.nrcs.usda.gov/invas-educational.html>

The Nature Conservancy

<http://mature.org/wherewework/northamerica/states/connecticut/science/art328.html>

<http://tncweeds.ucdavis.edu/esadocs/celaorbi.html>

Noxious Weeds: <http://www.aphis.usda.gov/ppq/weeds/>

Ohio Department of Natural Resources: <http://www.dnr.state.oh.us/dnap/invasive/default.htm>

Plant Invaders of the Mid-Atlantic Natural Areas:

<http://www.nps.gov/plants/alien/pubs/midatlantic/toc.htm>

Plants Profile [http://plants.usda.gov/cgi\\_bin/plant\\_profile.cgi?symbol=CEOR7](http://plants.usda.gov/cgi_bin/plant_profile.cgi?symbol=CEOR7)

Plant Working Group <http://www.nps.gov/plants/alien/fact/ceor1.htm>

Purple Loosestrife: <http://biology.usgs.gov/s+t/noframe/x193.htm>

Purple Loosestrife Infocentre <http://www.ducks.ca/purple/>

Sea Grant Non-indigenous Species Website <http://www.sgnis.org/www/euwater.html>

State of Virginia: <http://www.state.va.us/~dcr/dnh/inv.proj.htm>

The Nature Conservancy- Wildland Invasive Species Team:

<http://tncweeds.ucdavis.edu/esadocs.html>

United States Department of Agriculture:

[http://plants.usda.gov/plants/cgi\\_bin/topics.cgi?earl=noxious.cgi](http://plants.usda.gov/plants/cgi_bin/topics.cgi?earl=noxious.cgi)

USGS Non-indigenous Aquatic Plant Distribution Information:

<http://nas.er.usgs.gov/plants/index/html>

Vegetation Management Guideline

<http://www.inhs.uiuc.edu/chf/outreach/VMG/autolive.html>

Virginia Tech Weed Identification Guide

[http://www.ppws.vt.edu/scott/weed\\_id/elgum.htm](http://www.ppws.vt.edu/scott/weed_id/elgum.htm)

Weeds Gone Wild: <http://www.nps.gov/plants/alien/>

West Virginia University Extension Service <http://www.caf.wvu.edu/~forage/5412.htm>

Wildland Invasive Species Team <http://tncweeds.ucdavis.edu/esadocs/berbthun.html>  
<http://tncweeds.ucdavis.edu/esadocs/rosamult.html>

Wildlife Habitat Council: <http://www.wildlifehc.org/managementtools/backyard.cfm>

Wisconsin Department of Natural Resources  
<http://www.dnr.state.wi.us/org/land/er/invasive/factsheets/barberry.htm>  
<http://www.dnr.state.wi.us/org/land/er/invasive/factsheets/rose.htm>

Today's invasive plant is \_\_\_\_\_.

The scientific name of the invasive plant is  
\_\_\_\_\_.

It is terrestrial / aquatic. (circle one)

The favorite habitat of the invasive plant is  
\_\_\_\_\_.

The best way to identify it is by

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

One cool thing about this invasive plant is:

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