

The Connecticut  
Agricultural  
Experiment  
Station

Windsor, CT



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# **Field Guide, Plant Management Calendar**

**and Top Ten Poster**

**of**

**Selected Invasive  
Terrestrial Plants**

**Found in  
Connecticut**

**Rose Hiske**

## **WHAT ARE INVASIVE PLANTS?**

Invasive plants are non-native plants that are disruptive in a way that causes environmental or economic harm, or harm to human health.

In minimally-managed areas, invasive plants crowd out native plants.

## **WHY ARE PLANTS INVASIVE?**

- ✓ they are able to establish new plants and grow rapidly under a wide variety of site conditions
- ✓ they have a high reproductive rate
- ✓ they are able to disperse over wide distances, often by the spreading of vegetative fragments as well as seeds
- ✓ they lack any natural controls on growth and reproduction that would be found where the invader is native.

## **WHEN YOU PLANT, PLEASE SELECT NATIVE OR NON-NATIVE, but NON-INVASIVE PLANTS.**

CONNECTICUT INVASIVE PLANT WORKING GROUP (CIPWG)  
[www.hort.uconn.edu/cipwg](http://www.hort.uconn.edu/cipwg), (860)-486-6448

**Thanks to the INVASIVE PLANT ATLAS of NEW ENGLAND (IPANE) for allowing us to use images from their website.**

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

The author thanks Todd Mervosh and Michelle Salvas for their assistance.

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From CIPWG, created by Emmett Varricchio

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# Bishop's Weed, Goutweed

*Aegopodium podagraria*  
Herbaceous Perennial

**Origin:** native to Europe.

**Leaves:** compound toothed leaves, lower ones have petioles, those on flowering stalk do not.

**Flowers:** white clusters held above foliage in June.

**Size:** groundcover, species can get to 3' tall.

**Reproduction & Dispersal:** via stolons.



Photo credits: IPANE



# Garlic Mustard

*Alliaria petiolata*  
Herbaceous Biennial

**Origin:** native to Europe.

**Leaves:** basal rosette with rounded leaves up to 4 in. across. Venation is palmate and margins are toothed. When crushed they give off a garlic odor. Leaves on flower stalk are triangular and smaller.

**Flowers:** White flowers with four petals in May to June held above the foliage.

**Size:** grows to 3' the flowering year.

**Reproduction & Dispersal:** seed.



Photo credits: IPANE; Chris Evans, Bugwood



## Narrowleaf Bittercress

*Cardamine impatiens*

Herbaceous Annual or Biennial

**Origin:** native to Europe.

**Leaves:** basal rosette, pinnate with 3 – 11 lobed leaflets.

**Flowers:** white flowers from May through August develop into a thin, narrow capsule, called a siliqua that explodes when seeds are mature.

**Stem:** succulent, second year flowering stalk has longitudinal ridges and a clasping auricle at the base of each leaf.

**Size:** grows to 2' tall.

**Reproduction & Dispersal:**  
seed carried on mammals, people, and birds.

Photo credits: IPANE



## Cypress Spurge

*Euphorbia cyparissias*

Herbaceous to Semi-woody Perennial

**Origin:** found from England to Siberia, though the actual native range of this plant in Eurasia is not known.

**Flowers:** actually bracts, develop in May and can be showy through August.

**Sap:** exudes white latex that can be irritating to the skin.

**Size:** 6" – 12" tall.

**Reproduction & Dispersal:** some seeds, mostly rhizomes. Some populations are sterile.



Photo credits: IPANE



# Giant Hogweed

*Heracleum mantegazzianum*  
Herbaceous Monocarpic Perennial

**Origin:** native to Caucasus Mountains, southwest Asia.

**Leaves:** palmately compound with deeply lobed leaflets, up to 5' across.

**Flowers:** white clusters in June – July, flower heads up to 2.5' across.

**Stems:** hollow, with stiff white hairs, green with burgundy red stripping.

**Size:** can grow up to 20' tall.

**Reproduction & Dispersal:** seed, gardeners sharing plants.

**WARNING: sap of this plant is TOXIC.**

Photo credits: IPANE; CAES, Rose Hiskes

Giant Hogweed

Cow Parsnip



## Japanese Knotweed

*Polygonum cuspidatum, Fallopia japonica*  
Herbaceous Perennial



**Origin:** native to Asia.

**Leaves:** alternate, egg-shaped, up to 6" long with a pointed tip.

**Stems:** hollow between nodes. Bamboo-like.

**Flowers:** white, in mid-late summer.

**Size:** grows to 10' or more in an ever expanding clump that dies in the center with age.

**Reproduction & Dispersal:** mainly rhizomes, plant fragments in soil, some seed.

Photo credit: Jenn Forman Orth





## Garden Heliotrope

*Valeriana officinalis*  
Herbaceous Perennial

**Origin:** native to most of Europe, as well as parts of Western Asia, Japan, Korea and China.

**Leaves:** Both the basal and the stem leaves are oppositely arranged and pinnately divided into 11-21 lanceolate segments.

**Stems:** hairy, especially at the nodes.

**Flowers:** white (pink in bud), fragrant, umbel-like inflorescence, blooms from June through August.

**Size:** 1.5' – 4' tall.

**Reproduction & Dispersal:**  
wind dispersed seed, aerial stolons.



Photo credits: IPANE





## Mile a Minute Vine

*Polygonum perfoliatum, Persicaria perfoliata*  
Herbaceous Annual Vine

**Origin:** native to Eastern Asia.

**Leaves:** alternate, up to 3" equilateral triangle, pale green, recurved barbs on lower midrib, petiole attaches on the backside of the blade (as in nasturtium leaves). A skirt-like structure, ocrea, encircles the stem at each node.



**Stems:** wiry, thin, weakly rooted, white to green in color with tinges of red. Recurved barbs allow the plant to climb up and over shrubs and trees.

**Fruit:** white terminal flowers begin in June and mature to bright blue fruits July through November. The ripe fruit cluster resembles grape hyacinth.

**Size:** can grow up to 26' in one season.

**Reproduction & Dispersal:** birds eat the fruit and disperse the seeds when they defecate.

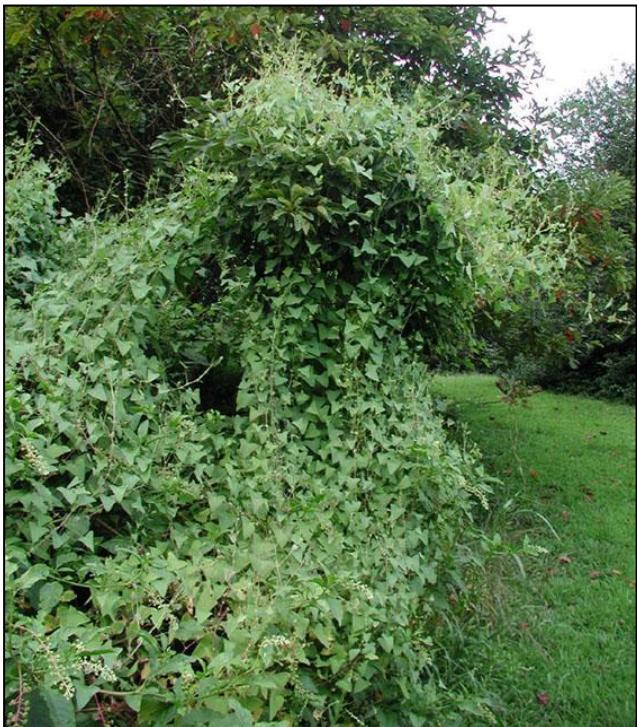


Photo credits: IPANE





## Japanese Honeysuckle

*Lonicera japonica*

Deciduous to Semi-evergreen Vine

**Origin:** native to China, Japan and Korea.

**Leaves:** opposite leaves, entire, some young leaves are lobed.

**Flowers:** very fragrant, white to yellow, paired in leaf axils.

**Fruits:** black spheres, in pairs.

**Size:** vine, to 30'.

**Reproduction & Dispersal:**  
birds eat the fruit and disperse the seed when they defecate, runners will root.



Photo credits: IPANE; James Miller, Bugwood



UGA2307154





# Oriental Bittersweet, Asiatic Bittersweet

*Celastrus orbiculatus*  
Deciduous Woody Vine

**Origin:** native to Eastern Asia: Japan, Korea and China

**Leaves:** alternate, toothed, spiral evenly around the stem, ovate to round.

**Fruits:** dioecious, so female plants develop fruits in axils all along the stem. The yellow ovary wall encases 3 fleshy, red arils. The fruits split open at maturity revealing the arils that contain the seeds.

**Stems:** twining stems of this botanical python have dark brown to brown striated, almost coky, bark with many lenticels.

**Size:** Vines can grow up to 60' tall and 4" in diameter.

**Reproduction & Dispersal:** fruit is eaten by birds and dispersed when they defecate.



Photo credits: IPANE; CAES Rose Hiskes





## Japanese Barberry

*Berberis thunbergii*  
Deciduous Shrub



**Origin:** native to Asia: introduced from Japan via Russia in the 1870's.

**Leaves:** clusters of 2 - 5 spatulate, entire, up to 1.25" long leaves alternate on the stem. Color can be green, burgundy, yellow, or variegated burgundy & white.

**Flowers & Fruits:** pale yellow, perfect, clustered flowers in May develop into bright red, oblong berries 1/3" long in October.

**Stems:** reddish brown, ridged stems have a single spine at each node. Inner stem is bright yellow. Roots also bright yellow.

**Size:** straight species can get 6' – 8' tall by 7' – 15' wide.

**Reproduction & Dispersal:** by seed. Wild turkeys and other birds eat the fruits and disperse seed throughout forested and disturbed areas.

**CAUTION:** Deer ticks are present in high numbers in the humid environment found in Japanese barberry thickets.



European barberry, also present in forests, can cross with Japanese barberry to form a hybrid.

## Russian Olive

*Elaeagnus angustifolia*  
Deciduous Shrub

**Origin:** native Southern Europe through the Himalayas.

**Leaves:** alternate leaves silvery, hairy on both surfaces, lance-shaped.

**Flowers:** fragrant, yellow in May to June in leaf axils.

**Berries:** yellow with silver scales, edible.

**Bark:** darker than autumn olive, younger stems have thorns.

**Size:** up to 35' tall and 20' spread.

**Reproduction & Dispersal:** birds eat the fruit and disperse the seeds when they defecate.



Photo credits: IPANE



## Autumn Olive

*Elaeagnus umbellata*

Deciduous Shrub



**Origin:** Eastern Asia.

**Leaves:** simple, elliptical to oval, yellow-green leaves are silvery underneath.

**Flowers:** creamy white, fragrant flowers in May attract bees.

**Fruit:** red, speckled fruit, high in lycopene, with a pit, ripen in September.

**Stems:** young stems are rusty red, older stems silver-brown with large thorns.

**Size:** up to 20' – 30' tall and wide, forming thick stands.

**Reproduction & Dispersal:** This plant fixes nitrogen and can produce berries prolifically. Birds eat the berries and defecate the seed wherever they happen to be perched.



## Burning Bush

*Euonymus alatus*  
Deciduous Shrub



**Origin:** Eastern Asia.

**Leaves:** opposite to subopposite, simple, 1" – 3" long, yellow green leaves are oval, tapered to the base and coming to a point at the tip.

**Stem:** straight species has green to brown stems with 4 longitudinal corky wings on one year wood. Cultivars may have faint lines in place of corky wings.

**Flowers & Fruits:** four petaled, creamy white, perfect flowers in May are nondescript. Clusters of red, oblong, 1/3" long fruits ripen in September.

**Reproduction & Dispersal:** birds eat the berries and disperse seeds when they defecate.

**Size:** can get 15' – 20' tall and wide.



Photo credits:  
IPANE; CAES, Rose  
Hiskes





## Border Privet

*Ligustrum obtusifolium*  
Deciduous Shrub

**Origin:** native to Japan.

**Leaves:** opposite, dark green leaves are up to 2" long by 1" wide.

**Flowers:** clustered white, in June, fragrant or smelly to some, attract bees.

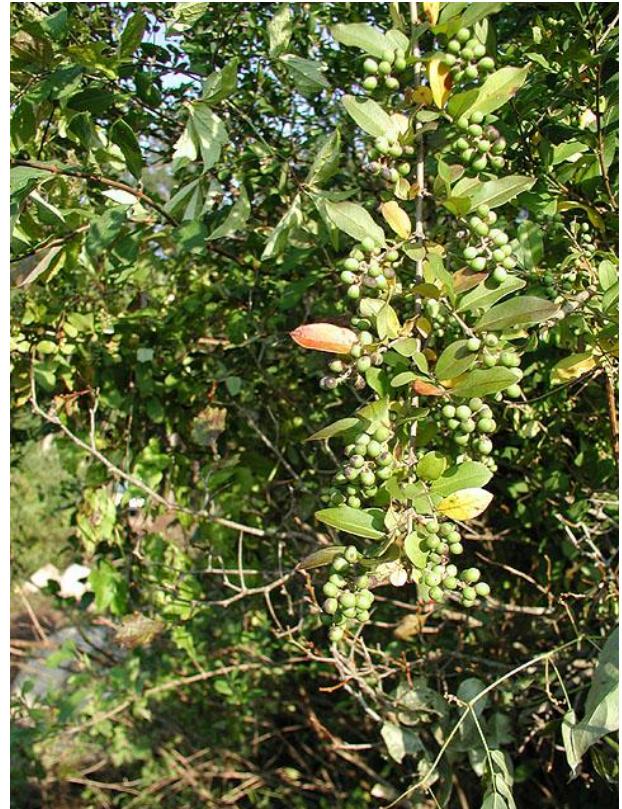
**Berries:** black, ripen in fall.

**Size:** up to 10' tall.

**Reproduction & Dispersal:** birds eat berries and disperse seeds when they defecate.

There are three privets on the Connecticut invasive plant list. Border privet is the only one that is prohibited. Identification of the different privets is very difficult, even when in flower. Chinese privet is very problematic south of Connecticut.

Photo credits: IPANE





## Shrub Honeysuckles

*Lonicera* spp.

Deciduous Shrub

### Origin:

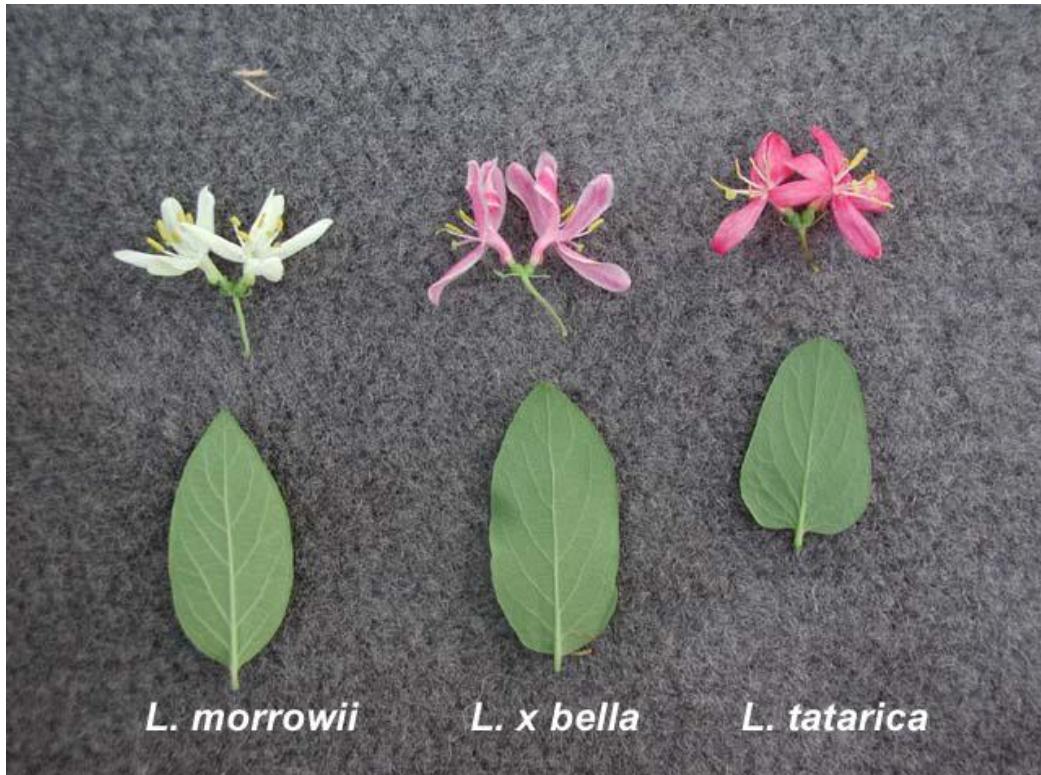
*morrowii* native to Japan, *tatarica* Central Asia and Southern Russia.

### Leaves:

opposite, up to 2.25" long.

**Stems:** pith is hollow, natives have filled pith, bark exfoliates in vertical strips.

**Fruits:** red spheres, borne in pairs in leaf axils.



*L. x bella* is a hybrid of *L. morrowii* and *L. tatarica*.

**Size:** grows 8' to 10' tall.

**Reproduction & Dispersal:** fruit is eaten by birds and seeds are dispersed when they defecate.





## Amur & Dwarf Honeysuckle

*Lonicera maackii, xylosteum*

Deciduous Shrub

**Origin:** *maackii* native to China, Korea and Japan; *xylosteum* native to Europe

**Leaves:** *maackii* opposite, tapered at the tip, up to 3 in. long; *xylosteum* opposite, obovate, up to 3 in. long.

**Stems:** *maackii* & *xylosteum* pith is hollow, natives have filled pith, bark exfoliates in vertical strips.

**Flowers:** *maackii* white, late May to early June; *xylosteum* yellow to white in May and June paired in leaf axils.



Amur honeysuckle, *L. maackii*

**Fruit:** paired, dark red spheres that ripen in late fall.

**Size:** *maackii* grows to 16 ft. tall; *xylosteum* to 7 ft. tall.

**Reproduction & Dispersal:** fruit is eaten and dispersed by birds and possibly small mammals.

Dwarf Honeysuckle, *Lonicera xylosteum*



Photo  
credits:  
Bark: Will  
Cook,  
Flowers:  
Steven  
Baskauf





## Multiflora Rose

*Rosa multiflora*  
Deciduous Shrub



**Origin:** Eastern Asia. Introduced in late 1700s as an ornamental, living fence.

**Leaves:** alternate, pinnately compound, toothed leaves with 9 – 11 leaflets. Stipule margins fringed with hair-like, glandular tipped segments.

**Flowers:** One inch, lightly fragrant, single perfect white flowers in clusters in June

**Fruit:** Red, egg shaped hips color in August and last through winter. Viable for up to 20 years in soil.

**Stems:** Smooth, green, arching canes have paired spines.

**Size:** Can grow up to 15' tall by 15' wide. Quickly invades abandoned pastures and fields.

**Reproduction & Dispersal:** Mammals and birds eat the hips and disperse the seeds when they defecate.

Photo credits: IPANE; CAES Rose Hiskes



## Norway Maple

*Acer platanoides*

Deciduous Tree



**Origin:** Continental Europe.

Photo credits: CAES, Rose Hiskes

**Leaves:** opposite, simple, 5 lobed, dark green leaves are 4" -7" wide and long. Petiole with milky sap is 3" – 4" long. Leaves emerge before those of sugar maple.

**Flowers:** clusters yellow-green, perfect flowers as leaves open in April as leaves emerge.

**Fruit:** Large numbers of horizontally paired, winged, 1.5" – 2" long samaras mature in September to October.

**Stems:** smooth, shiny, olive-green stems have many lenticels.

**Size:** can grow up to 80' tall by 70' wide.

**Reproduction & Dispersal:** Wind carries large numbers of samaras to landscape beds and forest edges where they grow without cultivation.





## Sycamore Maple

*Acer pseudoplatanus*

Deciduous Tree

**Origin:** Europe, Western Asia.

**Leaves:** opposite, up to 6" across, toothed with 3 large lobes, leathery. Fall foliage brown to some yellow.

**Seeds:** samara that ripens and falls in September and October.

**Size:** grows to 60' tall by 60' wide.

**Reproduction & Dispersal:**  
Seed.



There are three maples on the invasive plant list. Only sycamore maple is prohibited.



Photo credits: IPANE





## Tree of Heaven

*Ailanthus altissima*

Deciduous Tree



Top leaf is Tree of Heaven, bottom leaf is sumac.

**Origin:** native to China. Introduced in 1784, now naturalized in most of the US.

**Leaves:** alternate, pinnate up to 48" long leaves have 11 – 41 elongate dark green leaflets with one lobe near the short petiole. Smell of rotten peanut butter when crushed.

**Stems:** thick, yellowish, downy stems also smell when crushed.

**Flowers & Seeds:** dioecious, female trees have whitish upright panicles of small flowers in June. Seed is a single winged 1 ½" long samara that turns reddish late summer.



**Reproduction & Dispersal:** spreading underground rhizomes usually result in a thicket of trees. Wind dispersal of seed from female plants allows seedlings to establish in landscapes, wooded edges and disturbed areas.

Photo credits: CAES, Rose Hiskes



A new invasive insect, **spotted lanternfly** adults congregate on Tree of Heaven in fall.



## Black Locust

*Robinia pseudoacacia*  
Deciduous Tree



**Origin:** native to the Southeast and north to PA, WV, s. IN, IA and OK. Invasive in the Northeast.

**Leaves:** alternate, pinnately compound 6" – 14" long, with 7 – 19 elliptical leaflets, 1" – 2" long each.

**Stems:** slender brittle, green to brown, ridged stems have two spines at each node.

**Flowers & Fruits:** legume shaped white flowers in drooping clusters in June. Fragrant. Nectar source for bees. Brown pods up to 4" long with up to 10 seeds each mature in fall.

**Size:** can grow up to 70' tall by 50' wide.

**Reproduction & Dispersal:** spreading underground rhizomes create thickets. Seed coat impermeable.

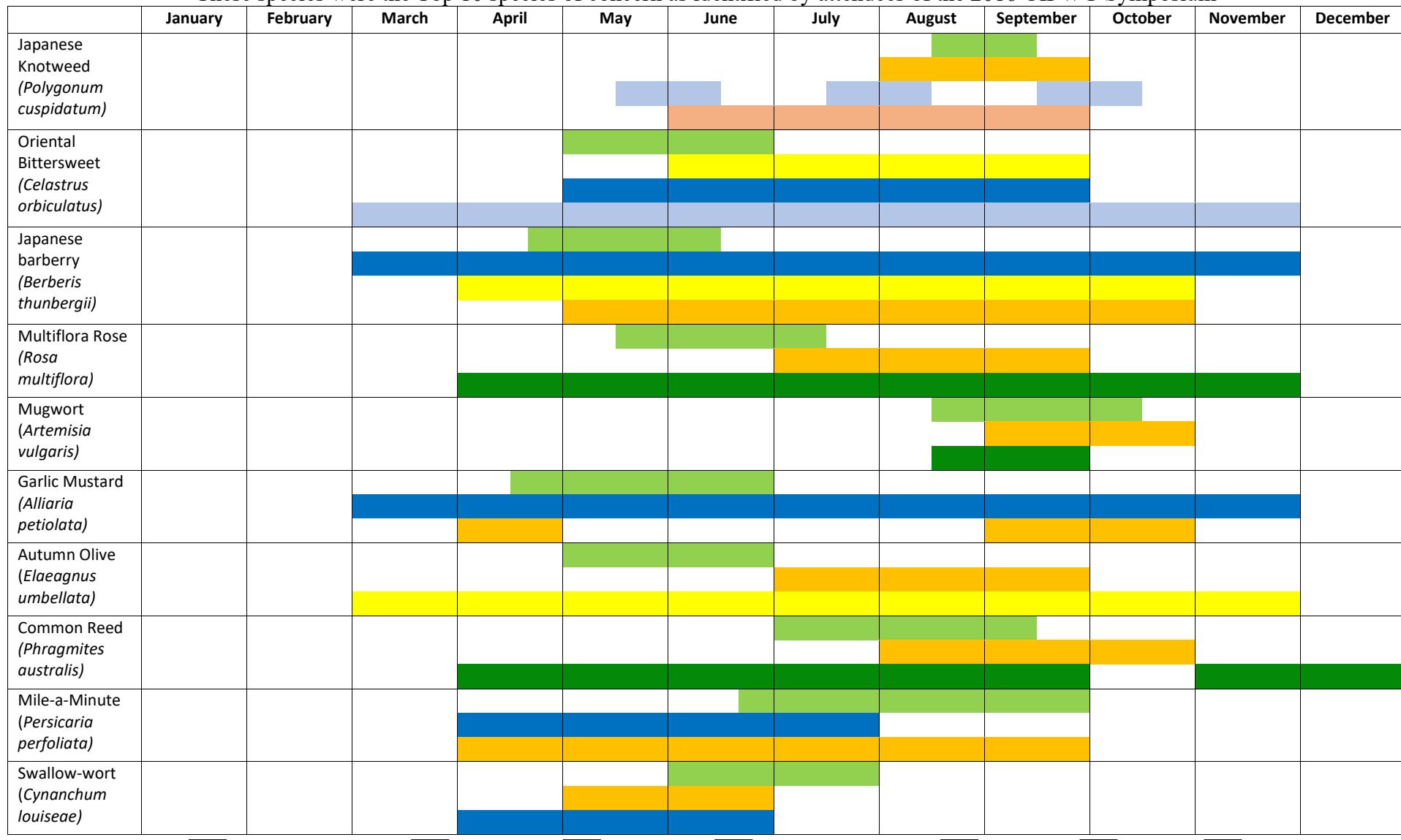




## Connecticut Invasive Plant Management Calendar

Created by Emmett Varricchio and members of The Connecticut Invasive Plant Working Group

These species were the Top 10 species of concern as identified by attendees of the 2016 CIPWG Symposium



Flowering Period    Chemical: Foliar    Cut/Paint    Injection    Mechanical: Cut    Pull    Mow   

Note this calendar serves as a working draft of best management practices for managing invasive plants in Connecticut.

Please use proper safety practices when working with herbicides and equipment.

### **Japanese Knotweed, *Polygonum cuspidatum***



## Oriental Bittersweet, *Celastrus orbiculatus*



## Japanese Barberry, *Berberis thunbergii*



## Multiflora Rose, *Rosa multiflora*



# Connecticut's TOP TEN **INVASIVE PLANTS** with management options

### **Garlic Mustard, *Alliaria petiolata***



### **Common Reed, *Phragmites australis***



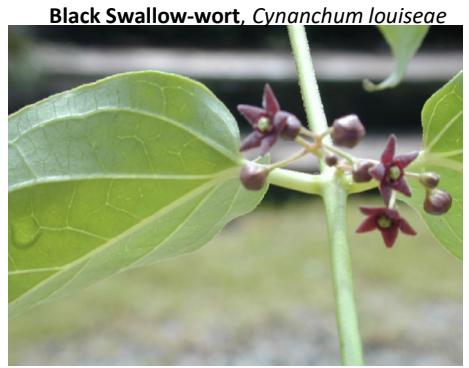
### **Mile-a-Minute, *Persicaria perfoliata***



### **Autumn Olive, *Elaeagnus umbellata***



Photo Credits: IPANF Todd Mervosh, CAES: Jatinder Aulakh, Rose Hiske



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