

Invasive Species Issues & Honeysuckle ID and Control

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What are invasive species?

Invasive species are defined under NR40, Wisconsin's Invasive Species Rule as causing:

- Economic harm
- Ecological harm
- Human Health hazards

Invasive Species – Economic Harm

Examples

- Agricultural damage: harm to crops, livestock, fisheries, and reduced yields
- Forestry impacts: reduction in timber production due to either competition or disease
- Infrastructure damage: plants like Japanese knotweed can directly damage building foundations
- Increased costs to manage invasive species
- Recreation and tourism: Impacts to sport fisheries, hunting opportunities, and parks.

Invasive Species – Ecological Harm

Examples

- Displace native species, reduces biological diversity
- Impair habitat for other species: impacts to pollinators, habitat, food webs
- Impact ecosystem structure and function: changes in nutrient and water cycles, fire regimes
- Pathogens, parasites, and diseases

Invasive Species – Human Health Hazards

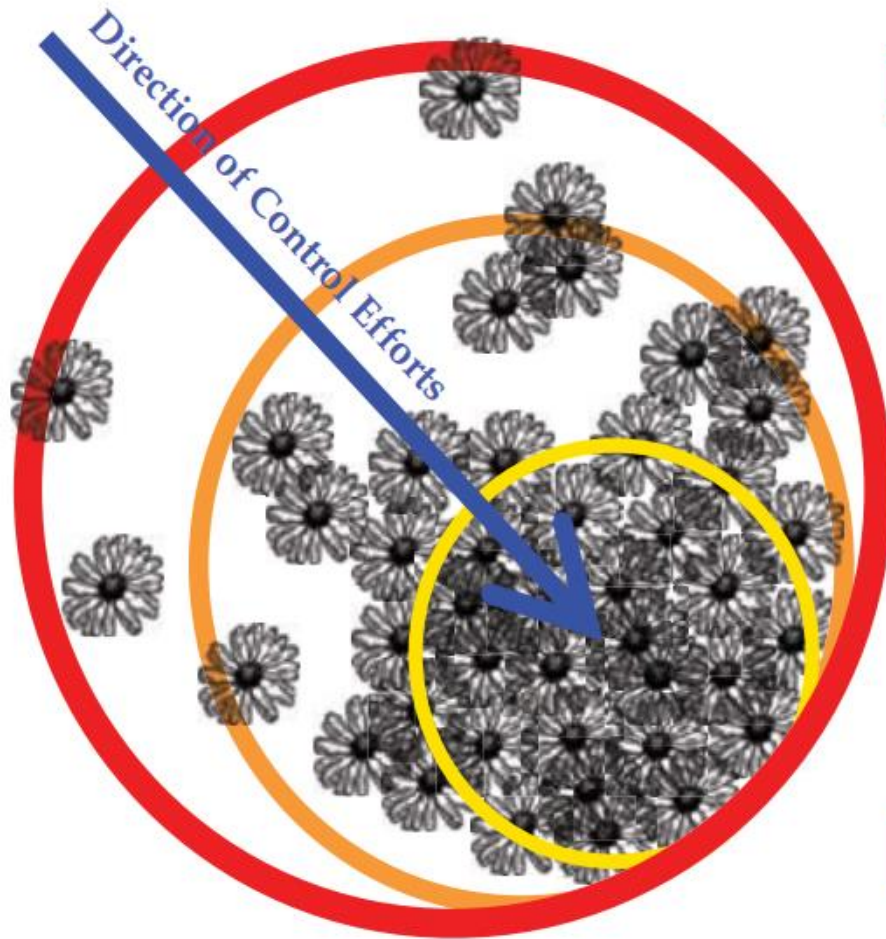
Examples

- Habitat for disease causing organisms: Japanese barberry can be habitat for ticks which can carry Lyme Disease
- Phytophotodermatitis: Wild parsnip has chemicals that can cause chemical burns after exposure to sunlight
- Direct toxicity: hemlock species
- Allergies and other respiratory issues: Ragweed species

Invasive Species in Dane County

- Dane County is host to several invasive species; across terrestrial, wetland, and aquatic environments
- There are some species that can be addressed by management at the local level.
 - Management will be an ongoing issue.
 - Many of these invasives are common.
 - Eradication for many species is not plausible.

Prioritizing Control Efforts for a Single Species by Density of Infestation



Note: Effective control may require the use of multiple control methods. Control efforts must be followed up by monitoring for new plants, regrowth, and flowering, generally within the same growing season. Monitoring should be done annually.

Outliers – Highest priority

- Lowest density of infestation
- Goal = eliminate small, isolated infestations
- Prevent the reproduction and survival of outliers
- Monitor annually beyond the known infestation for new outliers
- Lowest level of commitment, resources and effort needed

Advancing Front

- Goal = control the advancing front and perimeter of core infestations
- Prevent the expansion of the core infestation

Core – Lower priority

- Highest density of infestation
- Goal = suppress the interior of core infestations
- Highest level of commitment, resources and effort needed

Honeysuckle species

- Honeysuckle species are a common woody invasive plant.
- 3 **Restricted** (in Dane County) honeysuckle species:
 - Amur honeysuckle (*Lonicera maackii*)
 - Morrow's honeysuckle (*Lonicera morrowii*)
 - Tatarian honeysuckle (*Lonicera tatarica*)
 - Hybrid Bell's honeysuckle (*Lonicera x bella*):
 - Restricted Species: Can't "transport, transfer, or introduce"
- 1 **Prohibited** honeysuckle species:
 - Japanese honeysuckle (*Lonicera japonica*)
 - The DNR (NR40) and Noxious Weeds statute in Municipal Code (CH66.0407) **can require control.**

Common Shrub Honeysuckle Features:



Amur honeysuckle:

Plant: upright, deciduous shrub up to 15-20 ft. high; pith of mature stems is hollow and white or tan (in contrast to solid white pith of native shrub honeysuckle species).

Leaves: opposite, ovate with a tapered tip, lightly pubescent, and up to 3½ in. long.

Flowers, fruits and seeds: flowers paired, tubular, white to pinkish, fading to yellow, less than 1 in. long, borne from leaf axils, five petals, upper 4 fused; fruits are red to orange-red berries produced in late summer and persist through the winter.



Morrow's honeysuckle:

Morrow's honeysuckle is a multi-stemmed, deciduous shrub, growing to 8 feet tall. It can be easily confused with similar species like Bell's, Tatarian or Amur honeysuckles, all distinguished by slight differences in flower color and leaf pubescence.

Leaves are opposite, 1- 2 inches long, oblong, hairy on the underside, and grayish-green. Leaf-out is slightly earlier in spring than native species and leaf-drop is slightly later in the fall.

Flowers are paired, borne along the stem at leaf axils, and white to pale yellow. Bloom time is mid- to late spring.

Fruits are paired, spherical, red to orange berries, each containing several seeds.

The root system is shallow and woody.

Mature stems are hollow. Bark is light brown, somewhat shaggy, with long grooves. Young stems are often pubescent.



Tatarian honeysuckle:

Tatarian honeysuckle is a multi-stemmed, deciduous shrub, growing to 10 feet tall. It can be easily confused with similar species like Bell's, Morrow's or Amur honeysuckles, all distinguished by slight differences in flower color and leaf pubescence.

Leaves are opposite, oval, smooth, 1.5- 2.5 inches long, and blue-green. Leaves may be hairless or downy. Leaf-out is slightly earlier in spring than native species and leaf-drop is slightly later in the fall.

Flowers are tubular, paired, borne along the stem at leaf axils, and usually **pink to red**, rarely white. Bloom time is May to June. Fruits are paired, spherical, red to orange berries, each containing several seeds.

The root system is shallow and fibrous. Mature stems are hollow. Bark is light gray, and shaggy or peeling. Young stems are slightly hairy and light brown.



Bell's Honeysuckle: Hybrid

Bell's honeysuckle is a multi-stemmed deciduous shrub, reaching a height of 20 feet. It can be easily confused with similar species like Morrow's, Tatarian or Amur honeysuckles, all distinguished by slight differences in flower color and leaf pubescence.

The leaves are opposite and oval, with smooth edges. They may be hairless or downy, and green to green-blue. Leaf-out is slightly earlier in spring than native species and leaf-drop slightly later in the fall.

Flowers are fragrant, **pink, fading to yellow**, tubular, and arranged in pairs. Bloom time is mid- to late spring.

Fruits are red or orange spherical berries, occurring in pairs at leaf axils, each containing many seeds.

Roots are fibrous, shallow, and readily produce suckers. Bark is shaggy and peeling, stems are often hollow between the nodes. The young stems are slightly hairy and light brown.





Left to Right: Morrow's Honeysuckle, Bell's Honeysuckle (hybrid), Tatarian honeysuckle

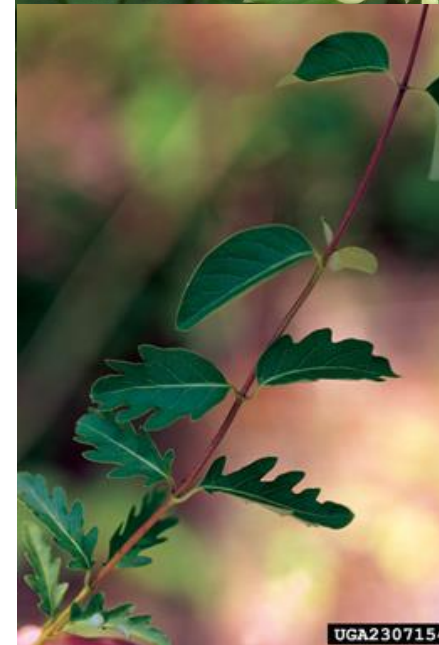
Japanese honeysuckle:

Plant. Semievergreen to evergreen **woody vine, high climbing** and trailing to 80 feet (24 m) long, branching and often forming arbors in forest canopies and/or ground cover under canopies and forming long woody rhizomes that sprout frequently.

Stem. Slender woody vine becoming stout to 2 inches (5 cm) in diameter, with cross section round and opposite branching. Brown and hairy becoming tan barked, fissured, and sloughing with age. Rooting at low nodes.

Leaves. Opposite, broadly ovate to elliptic to oblong, base rounded, tips blunt-pointed to round. Length 1.6 to 2.6 inches (4 to 6.5 cm) and width 0.8 to 1.5 inches (2 to 4 cm). **Margins entire but often lobed in early spring.** Both surfaces smooth to rough hairy, with undersurface appearing whitish.

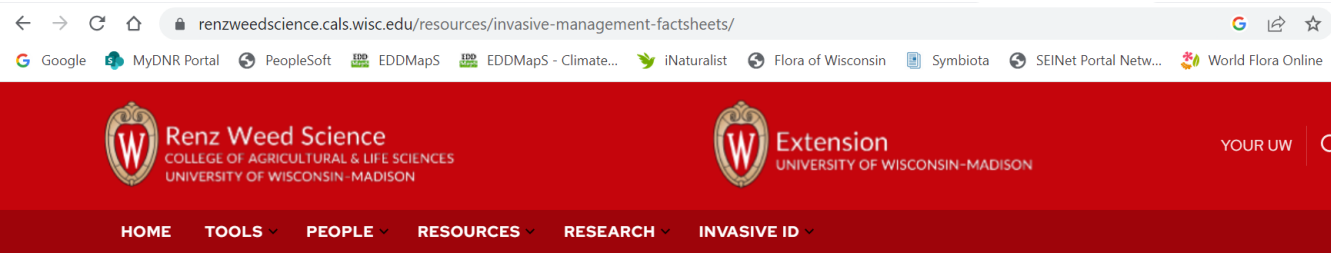
Flowers. April to August. Axillary pairs, each 0.8 to 1.2 inches (2 to 3 cm) long, on a bracted stalk. White (or pink) and pale yellow. Fragrant.



Control methods: Renz Weed Science Lab at UW-Madison

Invasive Species Fact Sheets:

<https://renzweedsience.cals.wisc.edu/resources/invasive-management-factsheets/>



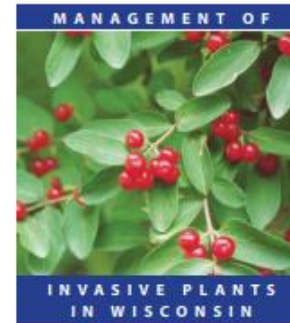
INVASIVE PLANT MANAGEMENT FACTSHEETS

The Renz Lab has created a series of factsheets discussing the identification and control of many common invasive plant species problematic to natural areas. Mechanical, cultural, and chemical control methods are discussed in detail, including effectiveness of the control method and appropriate rates and timings of chemical control applications.

Show entries

Search:

Scientific Name	Common Name	Factsheet
Lonicera spp.	Amur Honeysuckle	A3924-03
	Bell's Honeysuckle	
	Morrow's Honeysuckle	
	Tartarian Honeysuckle	



Brendon Panke and Mark Renz

Invasive plants can thrive and aggressively spread beyond their natural range, disrupting ecosystems. The *Management of Invasive Plants in Wisconsin* series explains how to identify invasive plants and provides common management options. Management methods recommend specific timings for treatment, as well as expected effectiveness. For more information, go to: fyi.uwex.edu/weedsci/category/invasive-plants-of-wisconsin.



A3924-03

Bush honeysuckles (*Lonicera* spp.)

Bush honeysuckles are dense, multi-stemmed shrubs, 6–12' tall. Older stems may have shaggy, peeling bark and are often hollow.

Legal classification in Wisconsin:

- **Amur** honeysuckle (*Lonicera maackii*): Prohibited/restricted
 - **Bell's** honeysuckle (*Lonicera x bella*): Restricted
 - **Morrow's** honeysuckle (*Lonicera morrowii*): Restricted
 - **Tartarian** honeysuckle (*Lonicera tatarica*): Restricted
- Leaves:** Opposite, simple, oval, and margins do not have teeth or lobes (entire). Leaves expand earlier in spring and remain on shrubs longer in fall than native bush species.
- **Amur:** Dark green, sharply pointed leaves with hairs along the underside veins.
 - **Bell's:** Hybrid between the Tartarian and Morrow's. Shows characteristics of both.
 - **Morrow's:** Covered in soft hairs.
 - **Tartarian:** Smooth and hairless with bluish-green leaves.

Flowers: Middle to late spring. Fragrant, tubular flowers where leaf attaches to stem (axil).

- **Amur:** White, yellowing with age, two flowers per leaf axil.
- **Bell's:** Hybrid between the Tartarian and Morrow's. Shows characteristics of both.
- **Morrow's:** White, yellowing with age, two flowers per leaf axil.
- **Tartarian:** Pink to dark red.

Fruits and seeds: Red, orange, or yellow fruit containing many seeds. Found on plants late into the winter.

Roots: Shallow fibrous roots extending from a woody crown.

Similar species: Native *Lonicera* shrubs have shorter, more open growth forms and solid stems. Native *Diervilla* species have yellow flowers and grow in dry or rocky sites. Native species develop leaves 1–2 weeks later and leaves fall earlier in the fall.

Ecological threat:

- Invades a broad range of plant communities; especially susceptible sites are sunny upland habitats like forest edges, roadsides, pastures, and old fields.
- Also invades fens, bogs, and lakeshores.
- Most natural communities are susceptible to invasion by one or more of the species; both disturbed and non-disturbed sites are susceptible.
- Common in urban areas.



Control methods: Weed Wrench



Removal

Effectiveness in season: 90–100%

Season after treatment: 50–70%

Plants can be removed any time of the year as long as the entire root crown is removed. Small to medium honeysuckles can be pulled or dug by hand, while larger bushes will require using a leverage tool. Larger plants may necessitate removal of soil near the plant to facilitate removal. If fruiting, avoid moving off the site unless material can be transported without spreading fruit to other locations.

Control methods: Mowing and Prescribed Burning



Mowing

Effectiveness in season: 70–90%
Season after treatment: < 50%

Immediately after leaf or flower formation is the most effective time to mow. Cut the main stem of the plant within 2" of the ground. This method induces sprouting and should be followed with mowing or herbicide application to resprouts later in the season. Mowing is most effective with small populations in shaded habitats. The number of seasons it will take for control using mowing exclusively is not known.

Prescribed burning

Effectiveness in season: 50–70%
Season after treatment: < 50%

Spring burns can kill germinating seedlings and can suppress above-ground growth of established plants, depending on fire intensity. After the fire, established plants will quickly resprout and invade areas. Burning in consecutive years will reduce honeysuckle cover and crown volume, but the number of years necessary for control is not known. A handheld propane torch can be effective for treating seedlings.

Control methods: Foliar Herbicide Application

- Glyphosate 90% to 100% effectiveness
- Others up to 90%
- Dicamba not effective, and causes volatilization problems



Foliar

Apply directly to individual plants or broadcast across an infested area. Broadcasted foliar applications are typically the most cost-effective treatment in dense infestations. Use lower rates on smaller plants and less dense populations and higher rates on larger plants and denser populations. Immediately after leaf and flower formation is the most effective timing for control. If infestations are mixed with desirable vegetation, herbicide applications without soil activity in the early spring or late fall can reduce injury to desirable plants since honeysuckles leaf out earlier and drop leaves later than most desirable vegetation.

glyphosate*

Effectiveness in season: 90–100%

Season after treatment: 90–100%

Common name: Roundup

Control methods: Cut-Stump treatment

Cut stump

Cut a stem of a plant near the base and apply herbicide to the cut surface that remains rooted in the ground. Apply as soon as possible after cutting, but no later than one hour after cutting. Do not use this method if there is heavy sap flow or snow is covering the cut surface. Use lower rates on smaller plants and higher rates on larger plants.



imazapyr*

Effectiveness in season: 90–100%
Season after treatment: 90–100%

Common name: Stalker

picloram*

Effectiveness in season: 90–100%
Season after treatment: 90–100%

Common name: Tordon K

triclopyr*

Effectiveness in season: 90–100%
Season after treatment: 90–100%

Common name: Garlon

Control methods: Basal Bark



Basal bark

Apply herbicide in a ring around the entire stem. Applications should be made at least 6" wide (6–18") to the base of a woody stem. Ideal for stems ≤ 6 " in diameter. Do not use this method if there is heavy sap flow or if snow is covering the application area. Use lower rates on smaller plants and higher rates on larger plants.

triclopyr*



Effectiveness in season: 90–100%


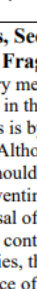
Season after treatment: 90–100%

Common name: Garlon

Invasive Species Disposal

https://extension.unh.edu/sites/default/files/migrated_unmanaged_files/Resource000988_Rep1720.pdf

Woody Plants	Method of Reproducing	Methods of Disposal
Norway maple (<i>Acer platanoides</i>) European barberry (<i>Berberis vulgaris</i>) Japanese barberry (<i>Berberis thunbergii</i>) autumn olive (<i>Elaeagnus umbellata</i>) burning bush (<i>Euonymus alatus</i>) Morrow's honeysuckle (<i>Lonicera morrowii</i>) Tatarian honeysuckle (<i>Lonicera tatarica</i>) showy bush honeysuckle (<i>Lonicera x bella</i>) common buckthorn (<i>Rhamnus cathartica</i>) glossy buckthorn (<i>Frangula alnus</i>)	 <p>Fruit and Seeds</p>	<p>Prior to fruit/seed ripening Seedlings and small plants</p> <ul style="list-style-type: none"> ▪ Pull or cut and leave on site with roots exposed. No special care needed. <p>Larger plants</p> <ul style="list-style-type: none"> ▪ Use as firewood. ▪ Make a brush pile. ▪ Chip. ▪ Burn.
		<p>After fruit/seed is ripe Don't remove from site.</p> <ul style="list-style-type: none"> ▪ Burn. ▪ Make a covered brush pile. ▪ Chip once all fruit has dropped from branches. ▪ Leave resulting chips on site and monitor.
oriental bittersweet (<i>Celastrus orbiculatus</i>) multiflora rose (<i>Rosa multiflora</i>)	 <p>Fruits, Seeds, Plant Fragments</p>	<p>Prior to fruit/seed ripening Seedlings and small plants</p> <ul style="list-style-type: none"> ▪ Pull or cut and leave on site with roots exposed. No special care needed. <p>Larger plants</p> <ul style="list-style-type: none"> ▪ Make a brush pile. ▪ Burn.
		<p>After fruit/seed is ripe Don't remove from site.</p> <ul style="list-style-type: none"> ▪ Burn. ▪ Make a covered brush pile. ▪ Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.

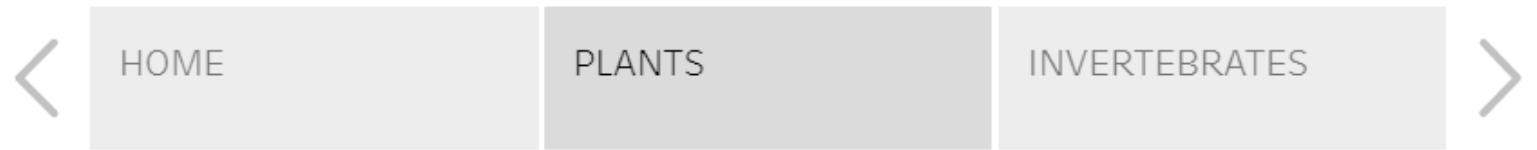
Non-Woody Plants	Method of Reproducing	Methods of Disposal
garlic mustard (<i>Alliaria petiolata</i>) spotted knapweed (<i>Centaurea maculosa</i>) ▪ Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling. black swallow-wort (<i>Cynanchum nigrum</i>) ▪ May cause skin rash. Wear gloves and long sleeves when handling. pale swallow-wort (<i>Cynanchum rossicum</i>) giant hogweed (<i>Heracleum mantegazzianum</i>) ▪ Can cause major skin rash. Wear gloves and long sleeves when handling. dame's rocket (<i>Hesperis matronalis</i>) perennial pepperweed (<i>Lepidium latifolium</i>) purple loosestrife (<i>Lythrum salicaria</i>) Japanese stilt grass (<i>Microstegium vimineum</i>) mile-a-minute weed (<i>Polygonum perfoliatum</i>)	 <p>Fruits and Seeds</p>	<p>Prior to flowering Depends on scale of infestation</p> <p>Small infestation</p> <ul style="list-style-type: none"> ▪ Pull or cut plant and leave on site with roots exposed. <p>Large infestation</p> <ul style="list-style-type: none"> ▪ Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting). ▪ Monitor. Remove any re-sprouting material.
		<p>During and following flowering Do nothing until the following year or remove flowering heads and bag and let rot.</p> <p>Small infestation</p> <ul style="list-style-type: none"> ▪ Pull or cut plant and leave on site with roots exposed. <p>Large infestation</p> <ul style="list-style-type: none"> ▪ Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting). ▪ Monitor. Remove any re-sprouting material.
common reed (<i>Phragmites australis</i>) Japanese knotweed (<i>Polygonum cuspidatum</i>) Bohemian knotweed (<i>Polygonum x bohemicum</i>)	 <p>Fruits, Seeds, Plant Fragments</p>	<p>Small infestation</p> <ul style="list-style-type: none"> ▪ Bag all plant material and let rot. ▪ Never pile and use resulting material as compost. ▪ Burn. <p>Large infestation</p> <ul style="list-style-type: none"> ▪ Remove material to unsuitable habitat (dry, hot and sunny or dry and shaded location) and scatter or pile. ▪ Monitor and remove any sprouting material. ▪ Pile, let dry, and burn.

January 2010

Wisconsin Invasive Species Calendar at Wisconsin First Detectors Network (Renz Weed Science Lab)

<https://fyi.extension.wisc.edu/wifdn/tools/wisconsin-invasive-species-calendar/>

Wisconsin Invasive Species Calendar



Use the dropdown lists to...

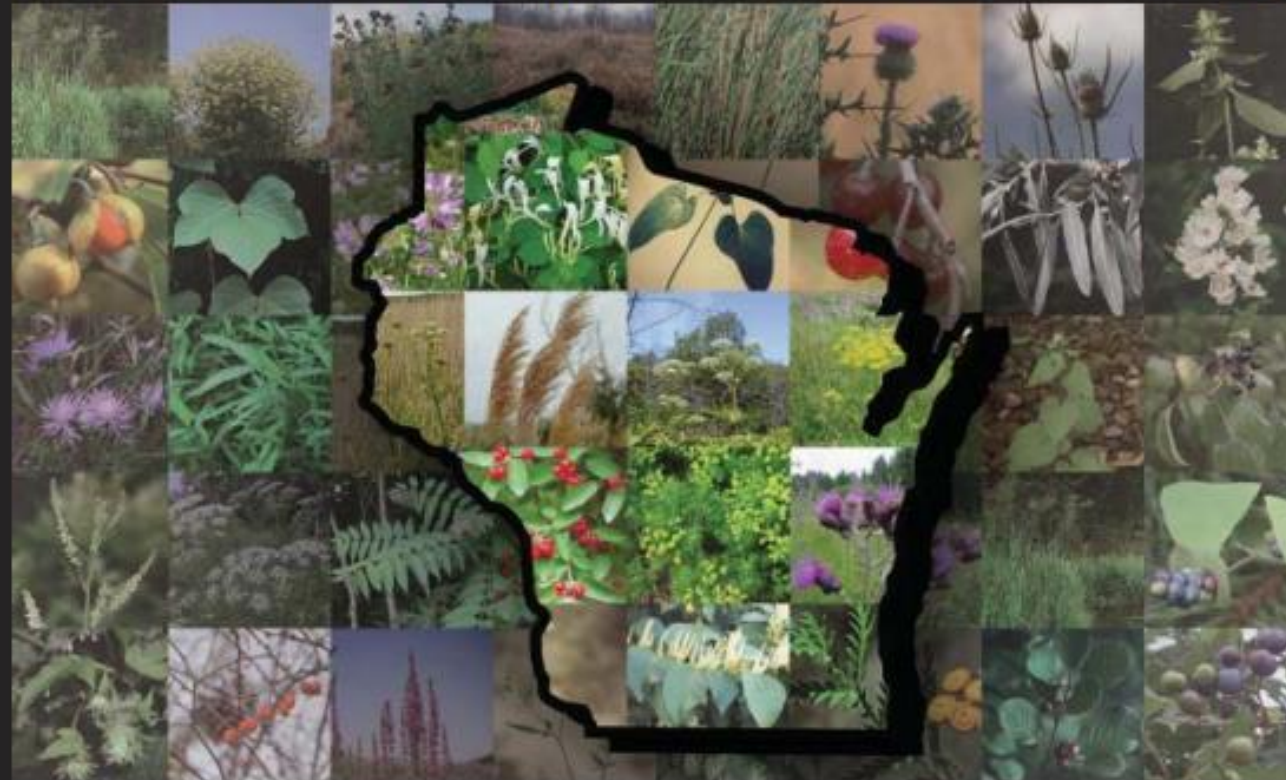
Habitat ▼ Form ▼ Detectability ▼ Life Stage ▼ Month ▼ Scientific N... (▼) Common N... (▼)

Scientific Name	Common Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<i>Hydrochorus morsus-ra..</i>	European frog-bit	○	○	○	○	◐	◑	●	●	●	◐	○	○
<i>Iris pseudacorus</i>	yellow iris	○	○	○	◐	●	●	◐	◐	◐	◐	○	○
<i>Linaria dalmatica</i>	dalmation toadflax	○	○	○	◐	◑	●	●	●	◐	◐	○	○
<i>Lonicera spp.</i>	bush honeysuckles	◑	◑	●	●	●	●	◑	◐	◐	◐	●	◑

Invasive Species Identification Tools:

<https://dnr.wi.gov/topic/invasives/documents/wi%20inv%20plant%20field%20guide%20web%20version.pdf>

A FIELD GUIDE TO TERRESTRIAL INVASIVE PLANTS IN WISCONSIN



Edited by: Thomas Boos, Kelly Kearns, Courtney LeClair,
Brendon Panke, Bryn Scriver, & Bernadette Williams

Invasive Species Identification Tools:

<https://fyi.extension.wisc.edu/wifdn/learn/invasive-species-i-d-and-impacts/>

University of Wisconsin-Madison | Explore Extension: Agriculture Community Development Families & Finances

Terrestrial Plants

Common Name	Scientific Name	Video	Fact Sheet
Biennial thistles		-	fact sheet
Bird's-foot trefoil	<i>Lotus corniculatus</i>	-	fact sheet
Black locust	<i>Robinia pseudoacacia</i>	-	fact sheet
Black swallow-wort	<i>Vincetoxicum nigrum</i>	video	fact sheet
Buckthorns		-	fact sheet
Bush honeysuckles	<i>Lonicera sp.</i>	video	fact sheet
Canada thistle	<i>Cirsium arvense</i>	video	fact sheet
Common tansy	<i>Tanacetum vulgare</i>	video	fact sheet
Creeping bellflower	<i>Campanula rapunculoides</i>	video	fact sheet



Bush Honeysuckles, identification of the Wisconsin Invasive Species *Lonicera* spp.

<https://www.youtube.com/watch?v=CU5w8S4ZyGQ&list=PLF35785BFF9AE7921&index=10>

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"WILD WISCONSIN:
OFF THE RECORD"