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FOREST INVASIVE PLANTS RESOURCE CENTER

EURASIAN BUSH HONEYSUCKLE

(*Lonicera* spp.)

Tatarian Honeysuckle
(*Lonicera tatarica*)
Morrow's Honeysuckle
(*Lonicera morrowii*)
Bella or Showy Honeysuckle
(*Lonicera x bella*)
Amur Honeysuckle
(*Lonicera maackii*)

Bush honeysuckles are widely planted as ornamental shrubs.

In addition to these four, many other bush honeysuckle *Lonicera* species and hybrids have escaped from cultivation, including Fragrant honeysuckle (*L. fragrantissima*), Standish's honeysuckle (*L. standishii*) and European fly honeysuckle (*L. xylosteum*).

Tartarian Honeysuckle

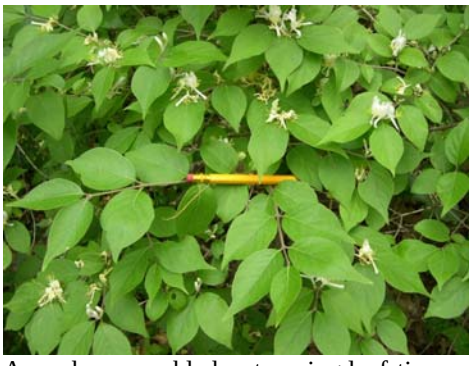
Morrow's Honeysuckle

Bella Honeysuckle

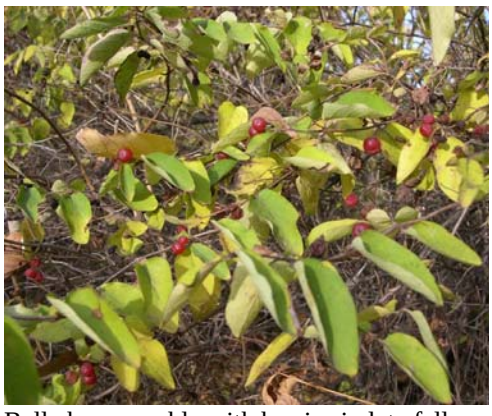
Amur Honeysuckle

IN BRIEF

Non-native bush honeysuckles create dense stands in temperate forests, savannas and grasslands. All are upright, shallow-rooted deciduous shrubs that displace native shrubs and herbaceous plants, and limit tree regeneration. Bush honeysuckles leaf out early and remain green late, deplete soil moisture and nutrients, and inhibit the growth of other nearby plants by releasing toxins.



Amur honeysuckle has tapering leaf-tips.



Bella honeysuckle with berries in late fall.

DISTINCTIVE FEATURES

Hollow pith in stems (native bush honeysuckles are uncommon and have solid pith)
Pale, shredding bark
Leaves appear early in spring, stay green late in fall
Fragrant flowers in pairs in leaf axils

Twigs and stems have a hollow pith.

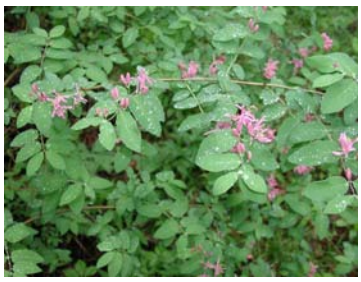
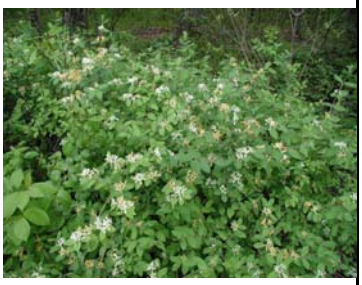
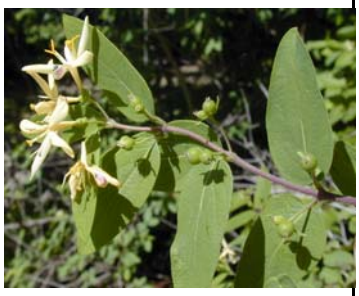
"Braided" bark of young branches.

DESCRIPTION

The various species of bush honeysuckles may be difficult to tell apart in the field. Distinguishing characteristics are subtle and species readily make hybrids. Look for differences in flower and fruit color, leaf shape and plant height. See illustrated table.

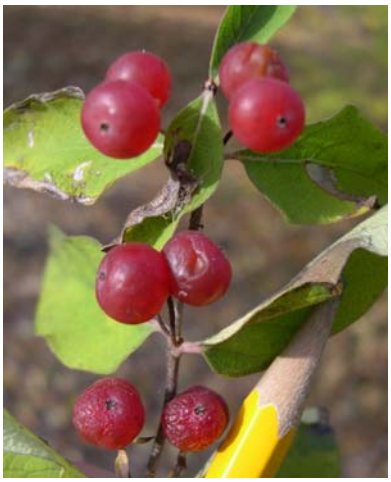
Note: Most land managers will not need to identify the exact species. ALL of these honeysuckles are invasive have the same deleterious ecological effects in a forest. Control methods are the same regardless of species.

Comparison of Bush Honeysuckle Species

Tatarian	Bella	Morrow's	Amur
			
Multi-stemmed shrub	Multi-stemmed shrub	Multi-stemmed shrub	Multi-stemmed shrub
Maximum height: 10 feet	Maximum height: 18 feet	Maximum height: 7 feet	Maximum height: 15 Feet
Stems light tan color with a braided-strand appearance; with age, stems appear shaggy.	Stem color ranges from light tan to gray; with age, stems appear shaggy.	Stem color is light tan with a braided-strand appearance; with age, stems appear shaggy.	Stem color is light tan with a braided-strand appearance; with age, stems appear shaggy.
Leaves opposite, smooth, hairless, bluish-green, egg-shaped to oblong. 1-2.5" long. 	Leaves opposite, elliptic to oblong or oval, undersides slightly hairy. 1-2.5" long. 	Leaves opposite, oblong to narrowly elliptic with a downy underside. 1-2.5" long. 	Leaves opposite, elliptic to oblong with a long point, 1.5-3.5" long. 
Blooms May - June	Blooms May - June	Blooms May - June	Blooms May - June
Flowers white to pink to purplish-red	Flowers pink, fading to yellow	Flowers white, fading to yellow	Flowers white, sometimes pink-tinged, fading to yellow
Fruit red, rarely yellow	Fruit red	Fruit red	Fruit red

Habitat

Eurasian bush honeysuckles are intolerant of deep shade, and most often occur in forest edges, abandoned fields, pastures, roadsides and other upland habitats. Woodlands, especially those that have been grazed or otherwise disturbed, may also be invaded by exotic bush honeysuckles. Open woods are most affected. Two species -- Morrow's and Bella -- have the greatest habitat breadth and are capable of invading bogs, fens, lakeshores, sandplains and other uncommon habitat types.


Flowers and berries occcur in pairs.

LOOK-ALIKES

There are several native honeysuckles of the *Lonicera* genus that grow as vines, not bushes. These include Grape honeysuckle (*L. reticulata*), Yellow honeysuckle (*L. flava*), Hairy honeysuckle (*L. hirsuta)* and Limber honeysuckle (*L. dioica*). The non-native Japanese honeysuckle (*L. japonica*), which is very invasive, grows as a climbing vine (see Japanese honeysuckle factsheet).

The Eurasian bush honeysuckles are tall, stout, erect shrubs with a hollow pith. (Note: Standish's honeysuckle, *L. standishii*, is the only Eurasian honeysuckle with a solid pith.) There are several native bush honeysuckles, however, which have a solid white pith and are shorter with sparser branching and foliage than their Eurasian cousins. These include Twin-berry honeysuckle (*L. involucrata*), American fly honeysuckle (*L. canadensis*), Swamp fly honeysuckle (*L. oblongifolia*) and Mountain fly honeysuckle (*L. villosa*). Unlike its relatives in the *Lonicera* genus, Northern bush honeysuckle (*Diervilla lonicera*) has serrated leaves and its fruit are capsules not berries.

Lonicera dioica

Lonicera canadensis

Diervilla lonicera

LIFE HISTORY AND INVASIVE BEHAVIOR

Eurasian bush honeysuckles reproduce primarily by seed. Their widespread distribution is aided by birds, which eat ripe fruit and disperse seeds over long distances via their droppings. Seedlings establish in sparse vegetation and are found under tall shrubs or trees as well as in open fields.

Vigorous growth and rapid spread of bush honeysuckles inhibits development of native tree, shrub, and groundlayer species. It may displace native species by shading the forest floor and depleting the soil of moisture and nutrients. Since bush honeysuckles leaf out early, spring ephemerals may not receive adequate light. Studies suggest that bush honeysuckles may produce a toxin that inhibits growth of competitors.

IMPACTS ON FORESTRY AND FORESTERS

On Forestry: Aggressively competes with local flora, often preventing the establishment and growth of tree species. Due to loss of tree recruitment, woodlands, forests and plantations gradually convert to invasive shrub thickets.

On Foresters: Hampers forest access by forming a tall, dense shrub layer and interferes with forestry-related operations such as surveying. Effective cutting and stump treating of these low-growing, multiple-stemmed shrubs is difficult and costly.

CONTROL METHODS

	Method	Timing
Manual & Mechanical	Uprooting plants	Spring, summer, fall
	Repeated cutting	Summer
	Prescribed burning	Spring, fall
Chemical	Foliar application (glyphosate or metsulfuron-methyl)	Spring
	Basal bark treatment (triclopyr with penetrating oil)	After fall frost but before spring leaf-out
Combined methods	Cut-stump treatment with herbicide (glyphosate or triclopyr)	Late summer through dormant season

Mechanical Control

Digging or pulling/prying by hand (using a Weed Wrench, Honeysuckle Popper or other tool) is appropriate for small populations or where herbicides cannot be used. It is most often done with seedlings and small- to

Multi-stemmed shrubs leafing out early in spring

medium-sized plants. But if enough force is applied even large plants can be pulled, thanks to their shallow root systems. A method called "Tug-A-Suckle" has been developed that is both effective and fun. One end of a stout rope is looped and hooked securely around the base of the plant, and the long end is tugged by a group of workers. With a sufficient number of people – even schoolchildren – large shrubs can be uprooted. Any portions of the root system that are not removed can resprout. Care should be taken not to disturb the soil any more than necessary.

Repeated clippings to ground level during the growing season eventually will result in mortality, especially in heavily-shaded forest habitats where bush honeysuckles tend to be less resilient. Cut during flowering and again later in summer when plant resources are mostly above-ground. Clipping should be done at least twice a year for 3 to 5 years because honeysuckles that are cut once and left to grow often form stands that are even more dense than before. If chemicals are not used, effective management requires a commitment to cut or pull plants for five years or more, or until no new seedlings or resprouts appear.

Burning

Prescribed burning has shown some promise for honeysuckles growing in habitats with sufficient fuel to carry fire. Repeated annual burns will kill new seedlings, and will top-kill shrubs and inhibit new shoot production, particularly if conducted during spring leaf-out when shrubs are actively growing. Because exotic bush honeysuckles readily resprout, it may be necessary to re-burn every year or every other year. Regular burns will be effective in suppressing the dominance of these invasive shrubs, if not killing them outright.

Herbicide

Established stands of exotic bush honeysuckles are often managed by cutting the stems at ground level and painting or spraying the stumps with glyphosate (20% active ingredient) or triclopyr (12.5% active ingredient) mixed with a non-toxic bark penetrating oil. Late summer and throughout the dormant season are the best times for treatment.

Tools of the honeysuckle trade. Hand loppers, a spray bottle containing 20% glyphosate with a red dye. Note dyed stump.

Seedlings of exotic bush honeysuckles can be controlled by foliar application of a 2% (active ingredient) glyphosate solution, sprayed or applied by sponge. A 2% solution of glyphosate also can be used for foliar treatments on larger plants and on resprouts. Metsulfuron-methyl plus a surfactant is also an effective foliar treatment. Application prior to the

emergence of native shrubs and ground flora is the safest time to spray without impacting desirable species. In wetlands, use glyphosate formulated for application over or near water.

***NOTICE**: Use pesticides wisely. Always read the product label carefully. Follow all mixing and application instructions and wear all recommended protective gear and clothing. Contact your state department of agriculture for any pesticide use requirements, restrictions or recommendations. Many states require individuals involved in the commercial application of pesticides be certified and licensed.*

Click Here for further information on herbicide use.

HISTORY AND LORE

The genus *Lonicera* was named for Adam Lonitzer, a 16th century German botanist and author. Species names *tatarica* (from the Tatar Mountains in Russia), *morrowii* (named for Dr. James Morrow, 19th century agriculturist on Commander Matthew Perry's expedition to Japan), *maackii* (named for Richard Maack, a 19th century Russian naturalist). Honeysuckles from Europe and Asia have been widely sold and planted as landscape ornamentals. They continue to popular in the plant nursery trade. Honeysuckle produces strongly scented flowers with large amounts of nectar, which attracts moths and other insects. Its name reflects its popularity with people, too, who can sip the sweet nectar from the tubular flowers. The berries, while eaten readily by birds, are reported to be poisonous to humans. In Shakespeare's time, the plant was called woodbine.

LINKS and REFERENCES

Websites

Weeds Gone Wild – Exotic honeysuckles factsheet
http://www.nps.gov/plants/alien/fact/loni1.htm

Wisconsin DNR – Honeysuckle factsheets
http://dnr.wi.gov/invasives/fact/honeysuckle_tart.htm
http://dnr.wi.gov/invasives/fact/honeysuckle_morrow.htm

Minnesota DNR – Exotic honeysuckles factsheet
http://www.dnr.state.mn.us/invasives/terrestrialplants/woody/exotichoneysuckles.html

Wisconsin State Herbarium – Links to *Lonicera* species
http://www.botany.wisc.edu/wisflora/scripts/SearchResults.asp?Genus=Lonicera

Invasive Plants Association of Wisconsin
http://www.ipaw.org/invaders/honeysuckle/

Virginia Tech Dendrology – Woody plant factsheets (type *Lonicera* in genus)

http://www.cnr.vt.edu/DENDRO/dendrology/factsheets.cfm

Missouri Vegetation Management Manual – Bush Honeysuckles
http://www.mdc.missouri.gov/nathis/exotic/vegman/six.htm

The Nature Conservancy -- Stewardship Abstract for Bush Honeysuckles
http://tncweeds.ucdavis.edu/esadocs/documnts/loni_sp.html

Books / Field guides

Invasive Plants Field & Reference Guide: An Ecological Perspective of Plant Invaders of Forests and Woodlands, by Cynthia D. Huebner, U.S. Forest Service, 2005.
(Also online -- http://www.fs.fed.us/r9/wildlife/nnis/invasive-species-field-guide.pdf)

Invasive Plants of the Upper Midwest: An Illustrated Guide to their Identification and Control, by Elizabeth J. Czarapata, University of Wisconsin Press, 2005.