

NAME OF SPECIES: <i>Lonicera japonica</i> Thunb., [including the cultivar <i>Lonicera japonica</i> var. <i>halliana</i> (1)].	
Synonyms: <i>Lonicera japonica</i> Thunb. var. <i>aureo-reticulata</i> (T. Moore) G. Nicholson; <i>Lonicera japonica</i> Thunb. var. <i>chinensis</i> (P. Watson) Baker; <i>Nintooa japonica</i> (Thunb.) Sweet; (2)(3)	
Common Name: Japanese honeysuckle [and the cultivar Hall's honeysuckle (1)].	
<b>A. CURRENT STATUS AND DISTRIBUTION</b>	
I. In Wisconsin?	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	2. <u>Abundance</u> : 2 locations, probably cultivated occurrences (3)
	3. <u>Geographic Range</u> : Milwaukee County, Village of Shorewood (Estabrook Park and Grant Park Nursery) (3)
	4. <u>Habitat Invaded</u> : Disturbed Areas <input checked="" type="checkbox"/> Undisturbed Areas <input type="checkbox"/>
	5. <u>Historical Status and Rate of Spread in Wisconsin</u> : First collected in 1939, the 4 other specimens are from 1961-1963 (3).
	6. <u>Proportion of potential range occupied</u> : <10%
II. Invasive in Similar Climate Zones	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	<u>Where (include trends)</u> : Midwest (IL, IN, KS, MI, MO, NE, OH) (1). Southern New England and Southern Ontario (4).
III. Invasive in Similar Habitat Types	1. Upland <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Dune <input type="checkbox"/> Prairie <input type="checkbox"/> Aquatic <input type="checkbox"/> Forest <input checked="" type="checkbox"/> Grassland <input type="checkbox"/> Bog <input type="checkbox"/> Fen <input type="checkbox"/> Swamp <input type="checkbox"/> Marsh <input type="checkbox"/> Lake <input type="checkbox"/> Stream <input type="checkbox"/>
	Other: Forest edges, old fields, shrub thickets, bottomland forests (1)(4).
IV. Habitat Affected	1. <u>Soil types favored or tolerated</u> : Favors a variety of soils, but is "noticeably absent" on coarse sands and poor peat soils (4).
	2. <u>Conservation significance of threatened habitats</u> : These are speculative since the species is not currently widely distributed in WI (4). Potential habitats include bottomland forests and other forests that may encounter some disturbance: Floodplain Forest G3?, S3; Forested Seeps GNR, S2; Mesic Floodplain Terrace GNR, S2; White Pine-Red Maple Swamp G3-G4, S2; Southern Dry Forest G4, S3; Southern Dry-Mesic Forest G4, S3; Southern Mesic Forests G3?, S3; possibly Central Sands Pine-Oak Forest G3, S3 (5).
V. Native Habitat	1. <u>List countries and native habitat types</u> : East Asia, including Japan and Korea, where it is part of understory in later successional forests (1).
VI. Legal Classification	1. <u>Listed by government entities?</u> Class B noxious weed: VT; banned invasive: CT; prohibited: MA; prohibited invasive species: NH (2). "Severe potential threat": MN (1).
	2. <u>Illegal to sell?</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: CT, NH, VT (2). Starting 1987, IL (6). Starting in 2009, MA (7).
<b>B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS</b>	
I. Life History	1. <u>Type of plant</u> : Annual <input type="checkbox"/> Biennial <input type="checkbox"/> Monocarpic Perennial <input type="checkbox"/> Herbaceous Perennial <input type="checkbox"/> Vine <input checked="" type="checkbox"/> Shrub <input type="checkbox"/> Tree <input type="checkbox"/>
	2. <u>Time to Maturity</u> : In open grown conditions 3 years, in shade grown conditions 5 years (4).

	<p>3. <u>Length of Seed Viability</u>: Indirect evidence suggests low potential for persistent seed bank (4).</p> <p>4. <u>Methods of Reproduction</u>: Asexual <input checked="" type="checkbox"/> Sexual <input checked="" type="checkbox"/>  <u>Notes</u>: Fruits produce 2-3 seeds each. In full sun plants can produce up to 222 g of seed vs. 11g of seed in shady conditions. Plants can sprout from root crowns or cuttings, as well as root at nodes or in response to cambium damage (1)(4).</p> <p>5. <u>Hybridization potential</u>: N/A</p>
II. Climate	<p>1. <u>Climate restrictions</u>: Northern range limit coincides with maximum 30-yr temperatures of -25°C. Short growing seasons and late spring frosts also limit northern expansion. Greatest infestation occurs where annual precipitation averages 100-120 cm/yr and 30-yr winter lows of -8 to -15°C. Drought and heavy shade can also limit seedling survival (1)(4). This invasive is of marginal hardiness (8).</p> <p>2. <u>Effects of potential climate change</u>: It may spread up to 400 km north if global temperature increases 3°C (1).</p>
III. Dispersal Potential	<p>1. <u>Pathways - Please check all that apply</u>:</p> <p><u>Unintentional</u>: Bird <input checked="" type="checkbox"/> Animal <input checked="" type="checkbox"/> Vehicles/Human <input type="checkbox"/>  Wind <input type="checkbox"/> Water <input type="checkbox"/> Other:</p> <p><u>Intentional</u>: Ornamental (rarely) <input checked="" type="checkbox"/> <b>Forage/Erosion control</b> <input checked="" type="checkbox"/>  Medicine/Food: wildlife food Other:</p> <p>2. <u>Distinguishing characteristics that aid in its survival and/or inhibit its control</u>: Evergreen or semi-evergreen characteristics result in a longer photosynthesis period. The ability to sprout from the root crown, nodes, and cuttings makes it difficult to control using fire or mechanical methods. Root wads can be up to 3 m across and up to 1 m deep (1)(4).</p>
IV. Ability to go Undetected	1. HIGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> LOW <input checked="" type="checkbox"/>
<b>C. DAMAGE POTENTIAL</b>	
I. Competitive Ability	<p>1. <u>Presence of Natural Enemies</u>: None known.</p> <p>2. <u>Competition with native species</u>: Very competitive and smothers native species due to its extended growing season, rapid growth rate, wide seed dispersal, ability to capture resources both above- and below-ground, wide habitat adaptability, and lack of natural enemies (1).</p> <p>2. <u>Rate of Spread</u>:  -changes in relative dominance over time:  -change in acreage over time:  HIGH (1-3 yrs) <input type="checkbox"/> MEDIUM (4-6 yrs) <input checked="" type="checkbox"/> LOW (7-10 yrs) <input type="checkbox"/>  Notes: Any disturbance, including windthrow or silvicultural thinning, can release and encourage <i>Lonicera japonica</i> (4).</p>
II. Environmental Effects	1. <u>Alteration of ecosystem/community composition?</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

	Notes: <i>Lonicera japonica</i> can create monocultures by shading out forest native understory plants, as well as tree and shrub seedlings (1)(4).
	2. <u>Alteration of ecosystem/community structure?</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Changes forest structure by climbing trees <4-in dbh, outcompeting them for aboveground resources, and physically destroying them through sheer weight, as well as inhibiting tree regeneration (1)(4). Changes to canopy and understory may alter bird assemblages (1). It may facilitate other invasive species (1).
	3. <u>Alteration of ecosystem/community functions and processes?</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Can alter succession in a forest or oldfield patch, creating a "disturbance climax" system (1)(4). In areas where it has no structure to climb it will create mats up to 5 ft deep (1)(4).
	4. <u>Allelopathic properties?</u> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Notes:

#### D. SOCIO-ECONOMIC EFFECTS

I. Positive aspects of the species to the economy/society:	Notes: In other states, highway departments have planted <i>Lonicera japonica</i> for erosion control and bank stabilization. It has been planted as wildlife food (fruit for small mammals and birds, and winter deer forage). Hall's honeysuckle is a popular horticultural variety, and is available online for sale (1)(4).
II. Potential Socio-Economic Effects of Requiring Controls:	Positive: Negative:
III. Direct and indirect Socio-Economic Effects of Plant :	Notes: Can interfere with forest regeneration or smother silvicultural plantings, reducing timber yields.
IV. Increased Costs to Sectors Caused by the Plant::	Notes: Increased forest plantation costs.
V. Effects on human health:	Notes: N/A
VI. Potential socio-economic effects of restricting use:	Positive: No future losses to forestry sector. Negative: Costs to replace this species will be borne the horticultural industry. Replacement species for the above uses will need to be found and developed for commercial availability.

#### E. CONTROL AND PREVENTION

I. Costs of Prevention (please be as specific as possible):	Notes: Prevention requires education of horticulturalists, gardeners, wildlife managers, forest managers, and road managers.
II. Responsiveness to prevention efforts:	Notes: If intentional planting can be avoided in WI, then the only vector would be birds from Illinois.
III. Effective Control tactics:	Mechanical <input checked="" type="checkbox"/> Biological <input type="checkbox"/> Chemical <input checked="" type="checkbox"/> Times and uses: Foliar herbicide spray within 2 d of first killing frost is most effective (1). Fire that topkills the plant followed by herbicide is also effective (4).
IV. Minimum Effort:	Notes: Treatment and monitoring over years is required due to its sprouting ability (1) (4).

V. Costs of Control:	Notes: Depending on the size of infestation, spraying would require several crew members. Burning and spraying would be costly in terms of time, labor, and money.
VI. Cost of prevention or control vs. Cost of allowing invasion to occur:	Notes: Considering the current very limited distribution in WI and the potential loss of timber production and forest habitat, prevention and control are less costly than allowing the spread of <i>Lonicera japonica</i> .
VII. Non-Target Effects of Control:	Notes: Herbicides can negatively affect native plant species.
VIII. Efficacy of monitoring:	Notes: Early detection of new infestations is economically effective.
IX. Legal and landowner issues:	Notes: N/A

#### F. REFERENCES USED:

- UW Herbarium
- WI DNR
- TNC
- Native Plant Conservation Alliance
- IPANE
- USDA Plants

Number	Reference
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8	Ed Hasselkus, UW Emeritus Horticulture Professor. Comments on Invasive Plant Classification 2007.

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