

**Ohio Invasive Plant Assessment Protocol - 2015**

Botanical Name: *Lonicera morrowii*  
 Common Name: Morrow honeysuckle  
 Family Name: Caprifoliaceae  
 Assessment conducted by: Allison Mastalerz, Theresa Culley

Step I Outcome: **Invasive**  
 Step II Score: **63**  
 Step II Outcome: **Invasive**

**Team Score**

**Notes**

**References**

**Step I**

*Directions: Place an "X" in the Score column next to the selected answer to each of the four questions.*

**1. Is this plant known to occur in the state and listed as "noxious" on any federal or Ohio Department of Agriculture plant list?** Yes. *Place on invasive plant list, no further investigation needed. STOP*  
 No. *Continue on to question 2.*

x

**2. Has this plant demonstrated widespread dispersion and establishment (i.e. high numbers of individuals forming dense stands) in natural areas across two or more regions in Ohio?<sup>a</sup>** Yes. *Place on invasive plant list, no further investigation needed. STOP*  
 No. *Continue on to question 3.*

x

Species occurs in all 5 regions, but information on individual populations is lacking.

1,7

**3. Does this plant form self-replicating populations outside of cultivation in Ohio and is it documented to alter the composition, structure, or normal processes or functions of a natural ecosystem?**

Yes

x

No

This is based on land managers' reports.

Unknown

**4. Is the plant listed as invasive in an adjoining state or a nearby state east of the Mississippi within the USDA Plant Hardiness zones 5-6?<sup>b,c</sup>**

Yes

x

No

PA, IN, MI, WV

1,2,3,4,5,6

Unknown

*If the answer was yes for both questions 3 and 4, the plant is placed on the invasive plant list and no further research is needed. Stop here. If the answer is no for both questions 3 and 4, the plant is not considered invasive and no further investigation is warranted. Otherwise, proceed to Step II.*

**Step II: Invasion Status**

*Directions: Place the appropriate numerical score (or "U") in the Score column next to the selected answer to each of these 18 questions.*

**1. Current Invasion in Ohio**

- plant is not found in natural areas (0 pts.)
- plant is found in natural areas but only because it persists from previous planting in that location (e.g. old home sites) (0 pts.)
- plant is only expanding from sites of previous planting (1 pt.)
- plant occurs in natural areas away from site of planting (3 pts.)
- Information unknown (U)

3
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8,11

**2. State Distribution<sup>a</sup>**

- plant is not naturalized in any region of Ohio (0 pts.)
- plant is naturalized in only one region in Ohio (1 pt.)
- plant is naturalized in two regions in Ohio (2 pts.)
- plant is naturalized in three regions in Ohio (3 pts.)
- plant is naturalized in four regions in Ohio (4 pts.)
- plant is naturalized in five regions in Ohio (5 pts.)
- Information unknown (U)

5
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Species occurs in all 5 regions, but information on individual populations is lacking.

1,7

**3. Regional/US Distribution**

- plant is not considered to be a problem in any other state (0 pts.)
- plant has been reported as a widespread problem in another non-neighboring state within the USDA Plant Hardiness Zones 5-6 (1 pt.)
- plant has been reported to be a widespread problem in 1-2 adjoining states (3 pts.)
- plant has been reported to be a widespread problem in 3 or more adjoining states (5 pts.)
- plant has been reported to be a widespread problem in similar habitat outside the US (1 pt.)
- Information unknown (U)

5
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PA, IN, MI, WV

1,2,3,4,5,6

**Step II: Biological Characters**

**4. Vegetative Reproduction**

- no vegetative reproduction (0 pts.)
- reproduces readily within the original site (1 pt.)
- has runners or spreading rhizomes that root easily (3 pts.)
- fragments easily and fragments can be easily dispersed (4 pts.)
- has runners or spreading rhizomes that root easily AND fragments easily and fragments can be easily dispersed (5 pts.)
- Information unknown (U)

U
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Could potentially reproduce asexually by root suckering and layering, as Bell's honeysuckle has been documented to do, but data are lacking.

11

Step II

**5. Sexual Reproduction**

- no sexual reproduction (0 pts.)
- infrequent sexual reproduction (1 pt.)
- frequent sexual reproduction, but high variation among years in seed production (3 pts.)
- frequent sexual reproduction (one or more events per year) (5 pts.)
- Information unknown (U)

5

11

**6. Number of Viable Seeds or Propagules per Plant**

- few (0-10) (1 pt.)
- moderate (11-1,000) (3 pts.)
- prolific (>1,000) (5 pts.)
- Information unknown (U)

5

Considered prolific, but no numerical data found - but it's hybrid progeny, Bell's honeysuckle, can consistently produce upward of 20,000 seeds per year, indicating that with more information, this answer could increase to the 5 point answer.

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**7. Flowering Period**

- one month or less per year (0 pts.)
- two months (1 pt.)
- three to five months (2 pts.)
- longer than five months (3 pts.)
- Information unknown (U)

1

May

11

**8. Dispersal Ability**

- low potential for long-distance seed/propagule dispersal (>1km) (0 pts.)
- medium potential for long-distance seed/propagule dispersal (3 pts.)
- high potential for long-distance seed/propagule dispersal (5 pts.)
- Information unknown (U)

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Dispersed by birds, potentially deer

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**9. Generation Time**

- long juvenile period (>5 or more years for trees, 3 or more years for other growth forms) (0 pts.)
- short juvenile period (<5 years for trees, <3 years for other forms) (3 pts.)
- Information unknown (U)

0

No information found

**10. Establishment**

- unable to invade natural areas (0 pts.)
- can only colonize certain habitat stages (e.g. early successional habitats) (1 pt.)
- aggressively colonizes and establishes in edge habitats (3 pts.)
- aggressively colonizes and establishes in intact and healthy natural areas (6 pts.)
- Information unknown (U)

6

8,9,11

**Step II: Ecological Importance**

**11. Impact on Ecosystem Processes**

- no known effect on ecosystem-level processes (0 pts.)
- moderate effects on ecosystem-level processes (e.g., changes in nutrient cycling)(3 pts.)
- causes long-term, substantial alterations in the ecosystem (e.g., changing fire regime of an area, changing hydrology of wetlands) (6 pts.)

3

10: Has been found to alter nutrient soil content. Species creates allelopathic chemicals which could produce moderate to long-term impacts on an area's long-term ecosystem processes, but more information regarding this particular species is needed.

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**12. Impact on Rare Organisms**

- no known negative impact on Ohio State-listed or federal-listed plants or animals (0 pts.)
- negatively impacts listed species, such as through displacement or interbreeding (3 pts.)

0

**13. Impact on Native Animals**

- no known negative impact on animals (0 pts.)

3

8: "negatively affect nesting songbirds, herpe to fauna, spider richness, and invertebrate biomass". 11: "Apparently Morrow's honeysuckle fruit contains the carotenoid rhodoxanthin, which causes normally yellow tail feather bands in cedar waxwings to appear orange. Similar yellow-to-orange changes in feather color have been described in Kentucky warblers and white-throated sparrows, perhaps also as a result of bush honeysuckle fruit consumption. While no definitive impact has yet been established as a result of this phenomenon, subtle differences in coloration within species may affect behavior such as mate selection" 13: Morrow honeysuckle acts as habitat for the white-footed mouse.

8,10,11,12,13

- documented direct or indirect negative effects on animal taxa (3 pts.)

**14. Impact on Native Plants**

- no known negative effects on native plants (0 pts.)
- negatively impacts some native plants (increasing their mortality and/or recruitment of certain taxa) (3 pts.)

6

8: "A strong correlation exists between exotic bush honeysuckle's [*Lonicera morrowii*] abundance and decreased herbaceous diversity,

8,10,11

- impacts native plants to such an extent that community structure is greatly altered (6 pts.)

**15. Hybridization**

- no known instances of hybridization with other plant species (0 pts.)
- can hybridize with native Ohio plants or commercially-available species, but seeds are inviable (1 pt.)

- can hybridize with native Ohio plants or commercially-available species, producing viable seed (3 pts.)

**16. Population Density**

- occurs only as small, sporadic populations or individuals (1 pt.)
- typically forms small, monospecific patches (3 pts.)
- is a dominant plant in area where population occurs (absolute cover 15-50%) (4 pts.)
- forms an extensive, monospecific stand (absolute cover >50%) (5 pts.)

**17. Role in Succession in Natural Areas**

- successional information is unknown (0 pts.)
- is an early successional species that temporarily invades a disturbed site but does not persist as the site matures (0 pts.)
- readily invades disturbed sites and persists, but does not interfere with succession (1 pt.)
- readily invades disturbed sites, persists and interferes with succession of native plants (4 pts.)

**18. Number of Habitats Invaded**

**Forestlands:** Floodplain forest, hemlock-hardwood forest, mixed mesophytic forest, beech-maple forest, oak-maple forest, oak-hickory forest.

**Grasslands:** Alvar\*, beach-dune community\*, bur oak savanna\*, slough-grass-bluejoint prairie\*, sand barren\*, big bluestem prairie, little bluestem prairie (xeric limestone prairie\*+), post oak opening\*+

**Wetlands:** Bog\*, fen\*, twigrush-wiregrass wet prairie\*, marsh, buttonbush swamp, mixed shrub swamp, hemlock-hardwood swamp\*, maple-ash-oak swamp, white pine-red maple swamp\*

\* Considered a rare plant community in Ohio by ODW's Biodiversity Database Program.

+ = xeric limestone prairies or cedar glades and post oak openings are unique to the Interior Low Plateau Region of Adams, Highland and Pike counties, and are not included in Schneider and Cochrane (1997).

- not found in any natural habitats in Ohio (0 pts.)
- only found in 1 broad category (1 pt.)
- found in 2 broad categories or 2 rare habitat types (3 pts.)
- found in 3 broad categories or 3 rare habitat types (4 pts.)
- found in 4 or more rare habitat types (5 pts.)

cover, and fitness."

3

\*\*Species successfully hybridizes with L. tatarica (there is a commercially available cultivar of L. tatarica ['Alba']) in the wild, so zero point answer is selected. HOWEVER, "hybrid species (Lonicera x bella) appears to be more successful in North America than either parent, as evidenced by the wide variety of habitats that the hybrid inhabits, its higher abundance relative to the parent species, and the high frequency of hybrid individuals that exhibit morphological traits intermediate to the parents."(Ref. 10)

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8,11

4

8: There are documented examples where this species has inhibited forest restoration.

8

4

woodlands, thickets, fields, hedgerows, streambanks, roadsides, railroads, lakeshores, riverbanks

8,11

**Total Score:**

63

**Number of Unknowns:**

1

**Outcome:**

Invasive

Total Points	Assessment Decision
4 or more U	Insufficient Data
0-34	Not Known to be Invasive
35-44	Pending Further Review
45-80	Invasive