

Ohio Invasive Plant Assessment Protocol - 2015

Botanical Name: *Ligustrum obtusifolium*
 Common Name: Border Privet, European Privet Step I Outcome: **Continue**
 Family Name: Oleaceae Step II Score: **30**
 Assessment conducted by: ion Mastalerz, Theresa CuStep II Outcome: **Not Known to be Invasive**

Team Score

Notes

References

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

Step I

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? Yes. Place on invasive plant list, no further investigation needed. **STOP**
 No. Continue on to question 3.

X

Species has been detected in natural areas in all 5 regions, but numbers of individuals in populations is not provided. 1,2

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
No
Unknown

X

3: "can be highly aggressive, often forming nuisance thickets". 8: forms thickets that outcompete native understory plants, including wildflowers. 1,2,3,8

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?^{b,c}

Yes
No
Unknown

X

4: Listed on IN "Most Wanted List" but not on official state list; 7: listed as invasive in PA. 4,5,6,7

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 persist 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

8,9.

2. State Distribution^a

- 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)

4

In 4 regions (although scarce in some) according to BONAP map.

1,2

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)

1

7: Plant reported to be invasive in PA; 10: Plant has escaped in IN, near Bloomington

4,5,6,7,10

Step II: Biological Characters

4. Vegetative Reproduction

- no vegetative reproduction (0 pts.)
- reproduces readily within the original site (1 pt.)

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<ul style="list-style-type: none"> - 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) 	0		no evidence
<p>5. Sexual Reproduction</p> <ul style="list-style-type: none"> - 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) 	1	One event/year. No information found on variation in seed production.	3,8,9
<p>6. Number of Viable Seeds or Propagules per Plant</p> <ul style="list-style-type: none"> - few (0-10) (1 pt.) - moderate (11-1,000) (3 pts.) - prolific (>1,000) (5 pts.) - Information unknown (U) 	U		no evidence
<p>7. Flowering Period</p> <ul style="list-style-type: none"> - 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	3: June-July	3,8,9
<p>8. Dispersal Ability</p> <ul style="list-style-type: none"> - 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) 	5	Dispersed by birds, small mammals	3,8,9
<p>9. Generation Time</p> <ul style="list-style-type: none"> - 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) 	U		
<p>10. Establishment</p> <ul style="list-style-type: none"> - 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	3: "In an old field in IL, privet averaged 2,400 plants per acre. Once established, privets can produce sprouts from roots that are underground or near the surface, or from stumps."	3,8,9
Step II: Ecological Importance			
<p>11. Impact on Ecosystem Processes</p> <ul style="list-style-type: none"> - 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.) 	0	Can change community composition (but decreasing native species richness), but this is not a process.	3,8,9
<p>12. Impact on Rare Organisms</p> <ul style="list-style-type: none"> - 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		no evidence
<p>13. Impact on Native Animals</p> <ul style="list-style-type: none"> - no known negative impact on animals (0 pts.) <p>- documented direct or indirect negative effects on animal taxa (3 pts.)</p>	0	NOTE: Border privet's close relative, Chinese privet, has been shown to reduce bee species richness and abundance in southeastern US. 12: border privet might have a chemical defense against herbivores. 13: This paper tested preference of periodical cicadas on native vs. non-native shrubs - <i>Ligustrum</i> was not preferred by cicadas.	12,13

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

3

Can change community composition (decreasing native species richness).

8,9

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.)

0

no evidence

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.)

4

3: In a field in IL, privet averaged over 2,400 plants per acre; 8,9: Creates dense thickets; 11: "Blunt-leaved privet, *L. obtusifolium* (Sieb. and Zucc.), was found invading an old field succession site in Illinois. The field had an average of more than 6,082 plants per ha (2.5 acres)." [note that this reference talks about privet in general and this is the only mention of *L. obtusifolium* specifically]

3,8,9,11

- 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.)

1

Species is able to invade disturbed areas (and habitats further along in succession) but its ability to alter successional trajectories is unclear.

8,9

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.)

1

Forests

8,9,10

Total Score:

30

Number of Unknowns:

2

Outcome:

Not Known to be 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