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| NAME OF SPECIES: *Vincetoxicum nigrum* | | |
| Synonyms: Cynanchum louseae | | |
| Common Name: Black Swallow-Wort, dog strangling vine dog-strangling vine, black dog-strangling vine; Louise's swallow-wort | | |
| A. CURRENT STATUS AND DISTRIBUTION | | |
| I. In Wisconsin? | 1. YES ☒ | NO ☐ |
| | 2. Abundance: locally abundant | |
| | 3. Geographic Range: Waukesha, Walworth, Grant, Rock Counties | |
| | 4. Habitat Invaded: Invades disturbed areas and with then move on to undisturbed areas<br>Disturbed Areas ☒ Undisturbed Areas ☒ | |
| | 5. Historical Status and Rate of Spread in Wisconsin: First recorded in WI in 1970; recorded in USA in 1850 | |
| | 6. Proportion of potential range occupied: very small: range is rapidly expanding in N. America and is not near max. distribution, future growth is expected | |
| II. Invasive in Similar Climate Zones | 1. YES ☒ NO ☐<br>Where (include trends): NE United States and SE Canada, spreading westward | |
| III. Invasive in Similar Habitat Types | 1. Upland ☒ Wetland ☐ Dune ☐ Prairie ☐ Aquatic ☐<br>Forest ☒ Grassland ☒ Bog ☐ Fen ☐ Swamp ☐<br>Marsh ☐ Lake ☐ Stream ☒ Other: | |
| IV. Habitat Effected | 1. Soil types favored (e.g. sand, silt, clay, or combinations thereof, pH): generalist, tolerates wide array of soil types; particularly invades stream sides with spring floods | |
| | 2. Conservation significance of threatened habitats: high significance: has affected monarch butterfly populations and endangered and threatened plants in the NE USA – it is not clear yet whether this species has had a significant effect on monarch butterfly populations | |
| V. Native Habitat | 1. List countries and native habitat types: Western European Mediterranean: France, Italy, Portugal, Spain | |
| VI. Legal Classification | 1. Listed by government entities? Connecticut: invasive, banned; Massachusetts: prohibited; New Hampshire: prohibited; Vermont: class B noxious weed | |
| | 2. Illegal to sell? YES ☒ NO ☐<br>Notes: In Connecticut, Massachusetts, New Hampshire, Vermont | |
| B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS | | |
| I. Life History | 1. Type of plant: Annual ☐ Biennial ☐ Monocarpic Perennial ☐<br>Herbaceous Perennial ☒ Vine ☒ Shrub ☐ Tree ☐ | |
| | 2. Time to Maturity: 1 year under ideal conditions; usually several years | |
| | 3. Length of Seed Viability: unknown | |
| | 4. Methods of Reproduction: Asexual ☒ Sexual ☒<br>Please note abundance of propagules and and other important information: reproduces via rhizomes, seed or shoots from root | |

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| | crown. Seeds are polyembryonic, bimodal (some germinate in fall, some in spring); no dormancy required |
| | 5. Hybridization potential: can hybridize with congeners |
| II. Climate | 1. Climate restrictions: |
| | 2. Effects of potential climate change: |
| III. Dispersal Potential | 1. Pathways - Please check all that apply:<br>Intentional: Ornamental ☒ Forage/Erosion control ☐<br>Medicine/Food: Other:<br><br>Unintentional: Bird ☐ Animal ☐ Vehicles/Human ☒<br>Wind ☒ Water ☒ Other: main dispersal is by wind. Water dispersal would be very unusual. |
| | 2. Distinguishing characteristics that aid in its survival and/or inhibit its control: poisonous, sprouts from root crown or rhizomes, allelopathic facultative self-pollination |
| IV. Ability to go Undetected | 1. HIGH ☐ MEDIUM ☒ LOW ☐<br>Seedlings are shade tolerant and can establish and grow for many years below herb canopy without being easily detected |
| **C. DAMAGE POTENTIAL** | |
| I. Competitive Ability | 1. Presence of Natural Enemies: not in N America |
| | 2. Competition with native species: outcompetes native species |
| | 3. Rate of Spread:<br>HIGH(1-3 yrs) ☐ MEDIUM (4-6 yrs) ☒ LOW (7-10 yrs) ☐<br>Notes: actual rate unknown but spreads slower than most invasives that spread via sexual and asexual reproduction |
| II. Environmental Effects | 1. Alteration of ecosystem/community composition?<br>YES ☒ NO ☐<br>Notes: Can prevent tree, shrub and forb regeneration |
| | 2. Alteration of ecosystem/community structure?<br>YES ☒ NO ☐<br>Notes: Can prevent tree, shrub and forb regeneration |
| | 3. Alteration of ecosystem/community functions and processes?<br>YES ☐ NO ☐<br>Notes: |
| | 4. Allelopathic properties? YES ☒ NO ☐<br>Notes: allelopathy suspected by not clearly demonstrated |
| **D. SOCIO-ECONOMIC Effects** | |
| I. Positive aspects of the species to the economy/society: | Notes: None |
| II. Potential socio-economic effects of restricting use: | Notes: None, not used; populations in WI have spread here unitentionally |
| III. Direct and indirect effects : | Notes: negatively impacts tourism and natural beauty: forms |

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| | monocutltures and outcompetes native plants, reduces monarch butterfly populations, flowers smell like rotting meat significant effects on monarch butterfly populations not clearly demonstrated |
| IV. Increased cost to a sector: | Notes: |
| V. Effects on human health: | Notes: poisonous if eaten Not clearly demonstrated although likely. Experimental evidence of toxicity only available for V. rossicum |
| **E. CONTROL AND PREVENTION** | |
| I. Costs of Prevention (including education; please be as specific as possible): | Notes: monitor areas surrounding infestations and eradicate plants in areas of new growth quickly; education necessary for identification; in the very least seed pods of existing infestations should be destroyed to prevent long-distance spread |
| II. Responsiveness to prevention efforts: | Notes: prevention best method; removing individual plants as infestations occur will stop spread |
| III. Effective Control tactics: | Mechanical ☒ Biological ☐ Chemical ☒<br>Times and uses: dig up: root crowns must be completely removed; herbicides may be used and must be repeated to eliminate all plants; fire ineffective |
| IV. Minimum Effort: | Notes: Large scale infestations will require persistent effort and continuous yearly monitoring to control |
| V. Costs of Control: | Notes: |
| VI. Cost of prevention or control vs. Cost of allowing invasion to occur: | Notes: prevention of new infestations best method |
| VII. Non-Target Effects of Control: | Notes: Herbicides and digging up roots will have effects on other plants and digging roots will increase erosion |
| VIII. Efficacy of monitoring: | Notes: treated areas and neighboring areas must be monitored to locate new infestations so they can be eradicated before they spread |
| IX. Legal and landowner issues: | Notes: frequently occurs on private land (often downwind from invasion); cooperation with landowners necessary |
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## F. REFERENCES USED:

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

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| | Sheeley, S.E. and D.J. Raynal, 1996. The distribution and status of species of Vincetoxicum in eastern North America. Bulletin of the Torrey Botanical Club, 123(2):148-156. |
| | Robert W. Freckmann Herbarium-UW Stevens Point. http://wisplants.uwsp.edu |

Useful references to add:

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http://tncweeds.ucdavis.edu/moredocs/cynros01.pdf

Lawlor, F. 2002. Element Stewardship Abstract for *Vincetoxicum nigrum* (L.) Moench. & *Vincetoxicum rossicum* (Kleopov) Barbarich Swallow-wort.
http://tncweeds.ucdavis.edu/esadocs/documnts/vinc_sp.pdf

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