NAME OF SPECIES: *Knautia arvensis* (L.) J.M. Coult.		
Synonyms: *Scabiosa arvensis* L. (1)		
Common Name: Blue Buttons, Field Scabiosa, and Meadow Widow Flower, and Gypsy's Rose	**Cultivars?** YES ☐ NO ☒	
A. CURRENT STATUS AND DISTRIBUTION		
I. In Wisconsin?	1. YES ☒	NO ☐
	2. Abundance: Low	
	3. Geographic Range: Bayfield, Ashland, sawyer, and Dane counties (1)	
	4. Habitat Invaded: Disturbed Areas ☒ Undisturbed Areas ☒	
	5. Historical Status and Rate of Spread in Wisconsin: First appeared on 7/15/1962 in Ashland county, the most recent report was in Ashland county in July of 2008. The majority of the sightings have been found alongside roads or ditches. There has been a total of fifteen reports; seven in Ashland county, three in Bayfield county, three in Dane county, and two in Sawyer county. Only four reports have been made since 2000. (2)	
	6. Proportion of potential range occupied: Low	
II. Invasive in Similar Climate Zones	1. YES ☐ NO ☐ Where (include trends): Considered invasive in Canada – specifically British Columbia (5).	
III. Invasive in Which Habitat Types	1. Upland ☐ Wetland ☐ Dune ☐ Prairie ☒ Aquatic ☐ Forest ☐ Grassland ☒ Bog ☐ Fen ☐ Swamp ☐ Marsh ☐ Lake ☐ Stream ☐ Other: Roadsides and waste places (4)	
IV. Habitat Affected	1. Soil types favored or tolerated: Soil pH of 6.6 to 7.5 (neutral), 7.6 to 7.8 (mildly alkaline), or 7.9 to 8.5 (alkaline) is required. (3)	
	2. Conservation significance of threatened habitats: Invades prairies/grasslands. Wisconsin's tallgrass prairies are the most decimated and threatened natural community in the Midwest.	
V. Native Range and Habitat	1. List countries and native habitat types: Europe (4). Meadows, hedgerows, pastures, and grassy hills usually in dry soil especially limestone (6).	
VI. Legal Classification	1. Listed by government entities? No (1)	
	2. Illegal to sell? YES ☐ NO ☒ Notes:	
B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS		
I. Life History	1. Type of plant: Annual ☐ Biennial ☐ Monocarpic Perennial ☐ Herbaceous Perennial ☒ Vine ☐ Shrub ☐ Tree ☐	
	2. Time to Maturity: 1-2 years since perennial	
	3. Length of Seed Viability:	
	4. Methods of Reproduction: Asexual ☐ Sexual ☒ Notes:	
	5. Hybridization potential: Yes	

II. Climate	1. Climate restrictions: Blue Buttons survives USDA Zones 4a to 10b, this plant requires full sun. (3)
	2. Effects of potential climate change:
III. Dispersal Potential	1. Pathways - Please check all that apply: Unintentional: Bird ☒ Animal ☒ Vehicles/Human ☒ Wind ☐ Water ☐ Other: Nursery plants (soil of) Intentional: Ornamental ☒ Forage/Erosion control ☐ Medicine/Food: edible /folk medicine ☒ Other:
	2. Distinguishing characteristics that aid in its survival and/or inhibit its control: A single plant can produce up to 2000 seeds. (5)
IV. Ability to go Undetected	1. HIGH ☐ MEDIUM ☒ LOW ☐
C. DAMAGE POTENTIAL	
I. Competitive Ability	1. Presence of Natural Enemies:
	2. Competition with native species:
	2. Rate of Spread: -changes in relative dominance over time: -change in acreage over time: HIGH(1-3 yrs) ☒ MEDIUM (4-6 yrs) ☒ LOW (7-10 yrs) ☐ Notes:
II. Environmental Effects	1. Alteration of ecosystem/community composition? YES ☒ NO ☐ Notes: A single plant can produce up to 2000 seeds (5)
	2. Alteration of ecosystem/community structure? YES ☐ NO ☒ Notes:
	3. Alteration of ecosystem/community functions and processes? YES ☒ NO ☒ Notes: The plant is an important source of nectar and pollen for bees and lepidoptera (6).
	4. Allelopathic properties? YES ☐ NO ☒ Notes:
D. SOCIO-ECONOMIC EFFECTS	
I. Positive aspects of the species to the economy/society:	Notes: Sold as an ornamental and used medicinally.
II. Potential Socio-Economic Effects of Requiring Controls:	Positive: Negative:
III. Direct and indirect Socio-Economic Effects of Plant :	Notes:
IV. Increased Costs to Sectors Caused by the Plant::	Notes: Infestations result in significant declines in hay production and pasture carrying capacity (5).

V. Effects on human health:	Notes: The whole plant is astringent and mildly diuretic. An infusion is used internally as a blood purifier and externaly for treating cuts, burns, and bruises. The fresh or dried flowering plant can be used with or without the roots. It is used as a blood purifier and as a treatment for eczema and other skin disorders. (6)
VI. Potential socio-economic effects of restricting use:	Positive: Negative: Impact on nurseries and beekeepers
E. CONTROL AND PREVENTION	
I. Costs of Prevention (please be as specific as possible):	Notes:
II. Responsiveness to prevention efforts:	Notes:
III. Effective Control tactics: (provide only basic info)	Mechanical ☒ Biological ☐ Chemical ☒ : Mulching (2) Cut or mow before seed set. Field scabious is controlled by cultivation (5). Chemical: Escort (metsulfuron-methyl) at 20 gr/ha (8.0 gr/acre) provide excellent control. Escort should be applied to actively growing weeds up to the early flower bud stage (5).
IV. Costs of Control:	Notes: Chemicals and labor
V. Cost of prevention or control vs. Cost of allowing invasion to occur:	Notes:
VI. Non-Target Effects of Control:	Notes: damage to nearby vegetation from mowing or chemical application
VII. Efficacy of monitoring:	Notes:
VIII. Legal and landowner issues:	Notes:
F. HYBRIDS AND CULTIVARS AND VARIETIES	
I. Known hybrids? YES ☐ NO ☐	Name of hybrid: Names of hybrid cultivars:
II. Species cultivars and varieties	Names of cultivars, varieties and any information about the invasive behaviors of each:
	Notes:

G. REFERENCES USED:

☒ UW Herbarium (Madison or Stevens Point)
☐ WI DNR
☐ Bugwood (Element Stewardship Abstracts
☐ Native Plant Conservation Alliance
☐ IPANE
☒ USDA Plants

Number	Reference
1	United states Department of Agriculture. Natural Resources Conservation Service. Plants Database. Country Distribution. <http://plants.usda.gov/java/county?state_name=Wisconsin&statefips=55&symbol=KNAR>
2	Wisconsin Botanical Information Service. Wisconsin State Herbarium. Wisflora – Vascular Plant Species. Records. <http://www.botany.wisc.edu/cgi-bin/searchspecimen.cgi?SpCode=KNAARV>
3	Dave's Garden. Guides and Information. <http://davesgarden.com/guides/pf/go/1933/#b>
4	Connecticut Botanical Society. Connecticut Wildflowers. <http://www.ct-botanical-society.org/galleries/knautiaarve.html>
5	British Columbia. Ministry of Agriculture, Food and Fisheries, Plant Industry Branch, Crop Protection Program. Integrated Weed Management. <http://www.agf.gov.bc.ca/cropprot/scabious.pdf>
6	Plants for a future. <http://www.pfaf.org/user/Plant.aspx?LatinName=Knautia+arvensis.> Accessed 10-11-11

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