

<b>NAME OF SPECIES:</b> <i>Filipendula ulmaria</i>	
<b>Synonyms:</b> <i>Filipendula ulmaria</i> (L.) Maxim. ssp. <i>denudata</i> (J. Presl & C. Presl) Hayek, <i>Spiraea ulmaria</i> , <i>Ulmaria pentapetala</i> .	
<b>Common Name:</b> Queen-of-the-meadow, Meadowsweet	<b>Cultivars?</b> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
<b>A. CURRENT STATUS AND DISTRIBUTION</b>	
I. In Wisconsin?	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	2. <u>Abundance:</u> This plant is not widely spread; it has been found to be abundant in scattered populations.
	3. <u>Geographic Range:</u> This plant has been found in three counties in northern Wisconsin, primarily in wetlands in the Lake Superior watershed.
	4. <u>Habitat Invaded:</u> Records show that populations (of various sizes) have been found along a creek and roadside, in a grassy ditch far from houses, on a boggy side slough, vacant lot and (abundant) in a moist meadow (2) One report was of thousands of plants in a slough (2) Disturbed Areas <input type="checkbox"/> Undisturbed Areas <input checked="" type="checkbox"/>
	5. <u>Historical Status and Rate of Spread in Wisconsin:</u> It was first observed in 1981 at Bayfield, and then again in 1993 at Taylor. <i>Filipendula Ulmaria</i> is "apparently spreading and could become a troublesome wetland weed" (2)
	6. <u>Proportion of potential range occupied:</u> There are many habitats that resemble the habitats where this plant has been found and this plant has clearly not occupied its potential range in WI.
II. Invasive in Similar Climate Zones	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	<u>Where (include trends):</u> This plant is prominent in cold, moist climates. It has been observed in New England States, NY, MN, and MI. It has also spread through NE Canada (Quebec, New Brunswick, and Ontario) (3)
III. Invasive in Which Habitat Types	1. Upland <input type="checkbox"/> Wetland <input checked="" type="checkbox"/> Dune <input type="checkbox"/> Prairie <input checked="" type="checkbox"/> Aquatic <input type="checkbox"/> Forest <input type="checkbox"/> Grassland <input type="checkbox"/> Bog <input checked="" type="checkbox"/> Fen <input checked="" type="checkbox"/> Swamp <input checked="" type="checkbox"/> Marsh <input checked="" type="checkbox"/> Lake <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Other: Wet woods and meadows, wet rock ledges and by rivers(1)
IV. Habitat Affected	1. <u>Soil types favored or tolerated:</u> The plant can grow in light (sandy), medium (loamy) and heavy (clay) soils.. The plant also prefers neutral and basic (alkaline) soils. (1)
	2. <u>Conservation significance of threatened habitats:</u> This plant is not yet known to threaten any native plant or animal in the United States yet. It was found that in parts of Europe this plant easily overcrowds moist areas rapidly.
V. Native Range and Habitat	1. <u>List countries and native habitat types:</u> Queen of the meadow ( <i>Filipendula ulmaria</i> ) is native to Europe and is found as an introduced plant in the northeastern region of the United States.(5)
VI. Legal Classification	1. <u>Listed by government entities?</u> This plant is not restricted by any government entities (7)
	2. <u>Illegal to sell?</u> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Notes: (?)
<b>B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS</b>	

I. Life History	<p>1. <u>Type of plant</u>: Annual <input type="checkbox"/> Biennial <input type="checkbox"/> Monocarpic Perennial <input type="checkbox"/> Herbaceous Perennial <input checked="" type="checkbox"/> Vine <input type="checkbox"/> Shrub <input type="checkbox"/> Tree <input type="checkbox"/></p> <p>2. <u>Time to Maturity</u>: The reproductive stage of this plant is occasionally reached after 4 years. (13) <i>F. ulmaria</i> blooms from June to August (4), its seeds ripen from August to September (6) and it normally germinates in 2 - 10 weeks. Under normal growing conditions, <i>F. ulmaria</i> live many years, dying back to the ground each winter. They quickly establish themselves in a few growing seasons (9) Seedling survival is positively correlated to the plants' height. Furthermore, low levels of water in an area make seedling survival rate very low. (13)</p> <p>3. <u>Length of Seed Viability</u>:</p> <p>4. <u>Methods of Reproduction</u>: Asexual <input checked="" type="checkbox"/> Sexual <input checked="" type="checkbox"/> <u>Notes</u>: This plant spreads by seed and by lateral spread of rhizomatous rootstock. (13)</p> <p>5. <u>Hybridization potential</u>: This plant has been observed to form a hybrid with a plant named <i>F. stepposa</i>. (10) It is uncertain if <i>F. ulmaria</i> can hybridize with other species.</p>
II. Climate	<p>1. <u>Climate restrictions</u>: Hardiness zone 3-8, and it needs part sun, part shade in order to grow properly, and it is not frost tender (4) (1)</p> <p>2. <u>Effects of potential climate change</u>: Global warming could minimize this plant's spread, since this plant requires moist semi-shade climates in order to survive.</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 type="checkbox"/> Vehicles/Human <input type="checkbox"/> Wind <input type="checkbox"/> Water <input checked="" type="checkbox"/> Other: Pollen-foraging insects.</p> <p><u>Intentional</u>: Ornamental <input checked="" type="checkbox"/> Forage/Erosion control <input type="checkbox"/> <u>Medicine/Food</u>: This plant is widely used as a traditional medication. It has been used to treat symptoms of the common cold, stomach complaints, inflammatory conditions, ulcers and heartburn (5) Other:</p> <p>2. <u>Distinguishing characteristics that aid in its survival and/or inhibit its control</u>: Spreading roots and seed set.</p>
IV. Ability to go Undetected	<p>1. HIGH <input type="checkbox"/> MEDIUM <input checked="" type="checkbox"/> LOW <input type="checkbox"/> Note: This plant has very distinctive white flowers from June to August. However, it is not a very large plant.</p>
<b>C. DAMAGE POTENTIAL</b>	
I. Competitive Ability	<p>1. <u>Presence of Natural Enemies</u>: <i>F. ulmaria</i> has three known natural enemies. The first one is a rust fungus, <i>Triphragmium ulmariae</i>. The other two are leaf beetles, <i>Altica engstroemi</i> J. Sahlberg and <i>G. tenella</i> (L.) (13)</p> <p>2. <u>Competition with native species</u>: <i>F. ulmaria</i> spreads aggressively by vegetative means, forming clonal patches. These patches competitively displace planted or native plants(14)</p> <p>2. <u>Rate of Spread</u>:: <i>Colonization process of young islands is characterized by slow start, which after 20-30 years is followed</i></p>

	<p><i>by a sudden, dramatic increase in population densities. (13)</i>  <i>-change in acreage over time:</i>  HIGH(1-3 yrs) <input type="checkbox"/> MEDIUM (4-6 yrs) <input checked="" type="checkbox"/> LOW (7-10 yrs) <input type="checkbox"/>  Notes:</p>
II. Environmental Effects	<p>1. <u>Alteration of ecosystem/community composition?</u>  YES <input type="checkbox"/> NO <input type="checkbox"/>  Notes:</p> <p>2. <u>Alteration of ecosystem/community structure?</u>  YES <input type="checkbox"/> NO <input type="checkbox"/>  Notes:</p> <p>3. <u>Alteration of ecosystem/community functions and processes?</u>  YES <input type="checkbox"/> NO <input type="checkbox"/>  Notes:</p> <p>4. <u>Allelopathic properties?</u> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  Notes: N/A</p>
<b>D. SOCIO-ECONOMIC EFFECTS</b>	
I. Positive aspects of the species to the economy/society:	<p>Notes: Queen of the meadow has been used in traditional medicine to treat symptoms of the common cold, stomach complaints, and inflammatory conditions, ulcers and heartburn. (5)  A black dye is obtained from the roots. A yellow dye is obtained from the plant tops. An essential oil obtained from the flower buds is used in perfumery since it is strongly aromatic (1)</p> <p>Based on the 2011 WNA Economic Impact Survey, the following information was reported for this plant. Out of the 204 nurseries responding, 13 reported selling this plant. 11 reported it comprised &lt;1% of their gross plant sales. 2 reported it comprised 1 – 2.9% of their gross plant sales. The estimated total dollar amount contributed to Wisconsin's economy by this plant is \$37,225. It ranks 27th among the 63 taxa surveyed. The estimated wholesale value of plants in production is \$6,500. The majority of respondents said it took &lt;6 months to produce this plant. The trend for the 2011 season was to remain unchanged (18).</p>
II. Potential Socio-Economic Effects of Requiring Controls:	<p>Positive: Controlling plants that are catalogized as invasive can maintain regular crop production rates.  Negative: Requiring control of this plant would require landowners to spend money and time removing <i>F. Ulmaria</i> from their territory.</p>
III. Direct and indirect Socio-Economic Effects of Plant :	Notes: None
IV. Increased Costs to Sectors Caused by the Plant::	Notes: No incidents have been reported. This plant has not increased costs to sectors yet since it has only been found in undisturbed areas.
V. Effects on human health:	Notes: There is no known or documented toxicity of Queen of the meadow, however excessive astringency may occur due to the plants high quantity of tannins which may cause irritation (15)
VI. Potential socio-economic effects of restricting use:	This plant grows as a weed here. It is not used in any way by land-owners of farmers. Therefore, its restriction would only prevent this plant from starting to be use in any way.
<b>E. CONTROL AND PREVENTION</b>	
I. Costs of Prevention (please be	Notes:

as specific as possible):	
II. Responsiveness to prevention efforts:	Notes: (?) No exact cost found
III. Effective Control tactics:	Mechanical <input checked="" type="checkbox"/> Biological <input type="checkbox"/> Chemical <input type="checkbox"/> Times and uses: Mechanical: Includes prescribed burning, mowing, cutting, girdling, and other methods that physically remove the target species. (17)
IV. Costs of Control:	Notes: (?) No exact cost found.
V. Cost of prevention or control vs. Cost of allowing invasion to occur:	Notes: The most effective, economical, and ecologically sound approach to managing invasive plants is to prevent them from invading.(17)
VI. Non-Target Effects of Control:	Notes:
VII. Efficacy of monitoring:	Notes: Monitoring an area can prevent invasion of <i>F.ulmaria</i> . This plant can be easily detected during blooming season and it can be removed then.
VIII. Legal and landowner issues:	Notes: (?)
<b>F. HYBRIDS AND CULTIVARS</b>	
I. Known hybrids? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Name of hybrid: <i>Filipendula ulmaria</i> x <i>stepposa</i> (10)
	Names of hybrid cultivars:
II. Species cultivars or varieties	Names of cultivars or varieties and any information about the invasive behaviors of each: <i>Filipendula ulmaria</i> 'Aurea' (Golden Queen-of-the-Meadow) <i>Filipendula ulmaria</i> 'Plena' (Double Queen-of-the-Meadow) <i>Filipendula ulmaria</i> 'Variegata' -Propagated by dividing clumps in spring and this plant freely self-seeds, as well. More compact growth than its parent plant (11) Not really being used in WI any more according to nursery representatives in SAG pre-screening meeting. Of thirteen growers responding to the nursery survey, one reported growing Variegata. Another reported growing Rubra, which is likely <i>F. rubra</i> , the native species. Three reported growing the straight species, one of which reported seeing seedlings from the plant. (19)
	Notes:

### G. REFERENCES USED:

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

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