

<b>NAME OF SPECIES:</b> <i>Pimpinella saxifraga</i> L.	
<b>Synonyms:</b> <i>Pimpinella saxifraga</i> ssp. <i>saxifraga</i> L.; <i>P. saxifraga</i> ssp. <i>nigra</i> (Mill.) Gaudin	
<b>Common Name:</b> Scarlett Pimpernel, Solid-stem Burnet-saxifrage, Burnet saxifrage, Lesser saxifrage	<b>Cultivars?</b> YES <input 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> Recorded in 9 counties in Wisconsin (1), but is likely underreported because of its similarity in appearance to Queen Anne's Lace.
	3. <u>Geographic Range:</u> Found mostly in northern Wisconsin (1, 2). Also widespread in Door County and there are new reports in Dane County(8)
	4. <u>Habitat Invaded:</u> Roadsides, pastures, grasslands Disturbed Areas <input checked="" type="checkbox"/> Undisturbed Areas <input type="checkbox"/>
	5. <u>Historical Status and Rate of Spread in Wisconsin:</u> Earliest herbarium specimen dates back to 1968 (1, 2). Populations in Door Co. have been observed for approx 30 years and have been steadily growing and spreading via roadsides.
	6. <u>Proportion of potential range occupied:</u> Probably only occupies a fraction of its potential range.
II. Invasive in Similar Climate Zones	1. YES <input type="checkbox"/> NO <input type="checkbox"/> <u>Where (include trends):</u>
III. Invasive in Which Habitat Types	1. Upland <input type="checkbox"/> Wetland <input type="checkbox"/> Dune <input type="checkbox"/> Prairie <input type="checkbox"/> Aquatic <input type="checkbox"/> Forest <input type="checkbox"/> Grassland <input checked="" type="checkbox"/> Bog <input type="checkbox"/> Fen <input type="checkbox"/> Swamp <input type="checkbox"/> Marsh <input type="checkbox"/> Lake <input type="checkbox"/> Stream <input type="checkbox"/> Other: Disturbed habitats, roadsides
IV. Habitat Affected	1. <u>Soil types favored or tolerated:</u> Prefers dry, well drained, calcareous soils (particularly chalk and limestone downs) other base rich soils and, occasionally, acidic sands (4).
	2. <u>Conservation significance of threatened habitats:</u> Remnant grasslands in these soils are quite rare. Not certain if any are impacted by pimpernel (8).
V. Native Range and Habitat	1. <u>List countries and native habitat types:</u> Native to Europe and Western Asia (3).
VI. Legal Classification	1. <u>Listed by government entities?</u>
	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	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"/>
	2. <u>Time to Maturity:</u> 12 months (5).
	3. <u>Length of Seed Viability:</u> Probably only a few years based on viability of the closely related carrot.
	4. <u>Methods of Reproduction:</u> Asexual <input type="checkbox"/> Sexual <input checked="" type="checkbox"/> Notes:

	5. <u>Hybridization potential:</u>
II. Climate	1. <u>Climate restrictions:</u> Temperate distribution (6).
	2. <u>Effects of potential climate change:</u>
III. Dispersal Potential	1. <u>Pathways - Please check all that apply:</u>  <u>Unintentional:</u> Bird <input type="checkbox"/> Animal <input checked="" type="checkbox"/> Vehicles/Human <input checked="" type="checkbox"/> Wind <input type="checkbox"/> Water <input type="checkbox"/> Other: Roadside mowing likely to cause most long distance spread.  <u>Intentional:</u> Ornamental <input type="checkbox"/> Forage/Erosion control <input type="checkbox"/> Medicine/Food: _____ Other: _____
	2. <u>Distinguishing characteristics that aid in its survival and/or inhibit its control:</u> Appears to behave similarly to Queen Anne's Lace. High seed production
IV. Ability to go Undetected	1. HIGH <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> LOW <input type="checkbox"/>
<b>C. DAMAGE POTENTIAL</b>	
I. Competitive Ability	1. <u>Presence of Natural Enemies:</u>
	2. <u>Competition with native species:</u>
	2. <u>Rate of Spread:</u> -changes in relative dominance over time: -change in acreage over time: HIGH(1-3 yrs) <input type="checkbox"/> MEDIUM (4-6 yrs) <input checked="" type="checkbox"/> LOW (7-10 yrs) <input type="checkbox"/> Notes:
II. Environmental Effects	1. <u>Alteration of ecosystem/community composition?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes:
	2. <u>Alteration of ecosystem/community structure?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes:
	3. <u>Alteration of ecosystem/community functions and processes?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes:
	4. <u>Allelopathic properties?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes:
<b>D. SOCIO-ECONOMIC EFFECTS</b>	
I. Positive aspects of the species to the economy/society:	Based on the 2011 WNA Economic Impact Survey, the following information was reported for this plant. Out of the 204 nurseries responding, 1 reported selling this plant. They reported it comprised <1% of their gross plant sales. The estimated total dollar amount contributed to Wisconsin's economy by this plant is \$8,750. It ranks 46th among the 63 taxa surveyed. The estimated wholesale value of plants in production is \$500. The respondent said it took <6 months to produce this plant. The trend for the 2011 season was to remain unchanged (10).

II. Potential Socio-Economic Effects of Requiring Controls:	Positive: Negative: Control would be difficult because of similarity of appearance with a ubiquitous species.
III. Direct and indirect Socio-Economic Effects of Plant :	Notes:
IV. Increased Costs to Sectors Caused by the Plant::	Notes:
V. Effects on human health:	Notes:
VI. Potential socio-economic effects of restricting use:	Positive: Negative:
<b>E. CONTROL AND PREVENTION</b>	
I. Costs of Prevention (please be as specific as possible):	Notes: Training in identification (distinguishing from Queen Anne's lace) is key to prevention, monitoring and control.
II. Responsiveness to prevention efforts:	Notes:
III. Effective Control tactics: (provide only basic info)	Mechanical <input checked="" type="checkbox"/> Biological <input type="checkbox"/> Chemical <input type="checkbox"/> Times and uses: In a field experiment, both simulated flower herbivory and grazing effectively suppressed current reproduction, whereas no statistically significant effects of previous-year treatments on growth or reproduction were found in the following year (7). Mowing prior to seed development should decrease, but not eliminate, seed set.
IV. Costs of Control:	Notes:
V. Cost of prevention or control vs. Cost of allowing invasion to occur:	Notes:
VI. Non-Target Effects of Control:	Notes:
VII. Efficacy of monitoring:	Notes:
VIII. Legal and landowner issues:	Notes:
<b>F. HYBRIDS AND CULTIVARS AND VARIETIES</b>	
I. Known hybrids?  YES <input type="checkbox"/> NO <input type="checkbox"/>	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:  One respondent to the nursery survey reports growing this plant. They provided no information on cultivars or invasiveness. (10)
	Notes: Very little is known about this species. It looks and behaves very similarly to Queen Anne's lace. It is assumed control methods would be similar. It is uncertain if it will be as weedy.

**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	Wisconsin State Herbarium. 2010. WISFLORA: Wisconsin Vascular Plant Species. Department of Botany, University of Wisconsin-Madison, WI 53706 USA. Accessed 03-29-2011. <a href="http://www.botany.wisc.edu/wisflora/">http://www.botany.wisc.edu/wisflora/</a> .
2	Robert W. Freckmann Herbarium. 2010. Plants of Wisconsin. University of Wisconsin-Stevens Point, WI 54481 USA. Accessed 03-29-2011. <a href="http://wisplants.uwsp.edu/">http://wisplants.uwsp.edu/</a> .
3	A. Vogel. Plant Encyclopedia: Pimpinella saxifraga L. Accessed 04-05-2011.
4	Emorsgate Seeds. Pimpinella saxifraga – Burnet-saxifrage. Accessed 04-05-2011. <a href="http://wildseed.co.uk/species/view/31">http://wildseed.co.uk/species/view/31</a> .
5	Design by Nature Wildflowers. Accessed 04-12-2011. <a href="http://www.wildflowers.ie/x_species/species_index_page.htm">http://www.wildflowers.ie/x_species/species_index_page.htm</a> .
6	Global Species. Pimpinella saxifraga (solidstem burnet saxifrage). Accessed 04-12-2011. <a href="http://www.globalspecies.org/ntaxa/854646">http://www.globalspecies.org/ntaxa/854646</a> .
7	Huja, A., et al. 2009. "Tolerance of a perennial herb, Pimpinella saxifraga, to simulated flower herbivory and grazing: immediate repair of injury or postponed reproduction?" Plant Ecology 201(2): 599-609.
8	WDNR Invasive Plant Database and personal communication
9	Lukes, Roy. Retired director of the Ridges Sanctuary. Personal communications.
10	Wiegrefe, Susan. 2011. Wisconsin Nursery Association Survey of the Economic impact of potentially invasive species in Wisconsin

**Author(s), Draft number, and date completed:** Emily St. Aubin, Draft 1, 04/26/11

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