

Aquatic Plant		European wand loosestrife
<b>I. Current Status and Distribution</b>		<i>Lythrum virgatum</i>
<b>a. Range</b>	<b>Global/Continental</b>	<b>Wisconsin</b>
<b>Native Range</b> Eurasia	 <p>Figure 1: U.S and Canada Distribution Map<sup>1</sup></p>	Not reported in Wisconsin
<b>Abundance/Range</b> Widespread: Locally Abundant: Sparse:	Undocumented Undocumented Several scattered populations reported	Not applicable Not applicable Not applicable
<b>Range Expansion</b> Date Introduced: Rate of Spread:	Undocumented Undocumented	Not applicable Not applicable
<b>Density</b> Risk of Monoculture: Facilitated By:	Undocumented, but likely high; similar to <i>L. salicaria</i> Undocumented	Undocumented Undocumented
<b>b. Habitat</b>		
<b>Tolerance</b>	Environmental tolerances undocumented but assumed to be very similar to that of <i>L. salicaria</i>	
<b>Preferences</b>	Preferences undocumented but assumed to be very similar to that of <i>L. salicaria</i>	
<b>c. Regulation</b>		
Noxious/Regulated <sup>1</sup> :	IA, MI, MN, MT, NE, NV, NC, ND, SD, TN, VA, WA; WI (was in Chapter 23.235, but taken out with passing of NR40) <sup>2</sup>	
Minnesota Regulations:	<i>Prohibited</i> ; One may not possess, import, purchase, sell, propagate, transport or introduce	
Michigan Regulations:	Cultivars developed and recognized to be sterile are not restricted	
Washington Regulations:	<i>Prohibited</i> ; Lythrum quarantine; State Wetland and Aquatic or Noxious Weed Quarantine List (Class B Noxious Weed)	
<b>II. Establishment Potential and Life History Traits</b>		
<b>a. Life History</b>	Emergent perennial herbaceous plant	
<b>Fecundity</b>	Undocumented; may depend on specific cultivar	
<b>Reproduction</b> Importance of Seeds: Vegetative:	Many cultivars of <i>L. virgatum</i> claim to be sterile, but current evidence shows that many are capable of producing viable seeds <sup>3,4,5</sup> Can reproduce vegetatively	

<b>Hybridization</b>	Some taxonomists do not consider <i>L. virgatum</i> a separate species from <i>L. salicaria</i> <sup>6,7,8</sup> ; can hybridize with non-native <i>L. salicaria</i> <sup>3,5,9,10</sup> ; can hybridize with native <i>L. alatum</i> <sup>3,10</sup> ; at least 10 cultivars developed <sup>9</sup>
<b>Overwintering</b> Winter Tolerance: Phenology:	Likely high Undocumented
<b>b. Establishment</b>	
<b>Climate</b> Weather: Wisconsin-Adapted: Climate Change:	Undocumented Yes Undocumented
<b>Taxonomic Similarity</b> Wisconsin Natives: Other US Exotics:	High; <i>Lythrum alatum</i> High; <i>L. salicaria</i> and several other <i>Lythrum</i> spp.
<b>Competition</b> Natural Predators: Natural Pathogens: Competitive Strategy: Known Interactions:	Undocumented <i>Harknessia lythri</i> and <i>Coniella fragariae</i> (fungi) <sup>11</sup> Undocumented Undocumented
<b>Reproduction</b> Rate of Spread: Adaptive Strategies:	Undocumented Undocumented
<b>Timeframe</b>	Undocumented
<b>c. Dispersal</b>	
Intentional: Unintentional: Propagule Pressure:	Ornamental trade Undocumented Undocumented
	
<p>Figure 2: Courtesy of University of Illinois, Urbana-Champaign<sup>12</sup></p> <p>Figure 3: Courtesy of Plant-Picutres.net<sup>13</sup></p>	
<b>III. Damage Potential</b>	
<b>a. Ecosystem Impacts</b>	
<b>Composition</b>	Undocumented
<b>Structure</b>	Undocumented

<b>Function</b>	Undocumented
<b>Allelopathic Effects</b>	Undocumented
<b>Keystone Species</b>	Undocumented
<b>Ecosystem Engineer</b>	Undocumented
<b>Sustainability</b>	Undocumented
<b>Biodiversity</b>	Undocumented
<b>Biotic Effects</b>	Undocumented
<b>Abiotic Effects</b>	Undocumented
<b>Benefits</b>	Undocumented
<b>b. Socio-Economic Effects</b>	
<b>Benefits</b>	Ornamental trade
Caveats	Risk of release and population expansion outweighs benefits of use
<b>Impacts of Restriction</b>	Undocumented
<b>Negatives</b>	Very similar to <i>L. salicaria</i> in morphology, habitat, and ecosystem impacts
<b>Expectations</b>	Undocumented
<b>Cost of Impacts</b>	Undocumented
<b>“Eradication” Cost</b>	Undocumented
<b>IV. Control and Prevention</b>	
<b>a. Detection</b>	
Crypsis:	Very high; plants that are actually <i>L. salicaria</i> are often sold as cultivars of <i>L. virgatum</i> <sup>9</sup>
Benefits of Early Response:	Undocumented
<b>b. Control</b>	
Undocumented; likely similar to those used for <i>L. salicaria</i>	

<sup>1</sup> United States Department of Agriculture, Natural Resource Conservation Service. 2011. The PLANTS Database. National Plant Data Center, Baton Rouge, LA, USA. Retrieved March 6, 2012 from: <http://plants.usda.gov/java/profile?symbol=LYVI3>

<sup>2</sup> Woods, B. 2012. Personal communication.

<sup>3</sup> Anderson, N.O., P.D. Ascher. 1993. Male and female fertility of loosestrife (*Lythrum*) cultivates. *Journal of the American Society for Horticultural Science* 118(6):851-858.

<sup>4</sup> Lindgren, C.J., R.T. Clay. 1993. Fertility of ‘Morden Pink’ *Lythrum virgatum* L. transplanted into wild stand of *L. salicaria* L. in Manitoba. *HortScience* 28(9):954.

<sup>5</sup> Ottenbriet, K.A., R.J. Staniforth. 1994. Crossability of naturalized and cultivates *Lythrum* taxa. *Canadian Journal of Botany* 72:337-341.

<sup>6</sup> Pierce County Noxious Weed Control Board. 2012. Wand Loosestrife (*Lythrum virgatum*). Retrieved March 6, 2012 from: <http://piercecounityweedboard.wsu.edu/wand.loosestrife.html>

<sup>7</sup> Strefeler, M.S., E. Darms, R.L. Becker, E.J. Katovich. 1996. Isozyme variation in cultivars of purple loosestrife (*Lythrum* sp.). *HortScience* 31(2):279-282.

<sup>8</sup> Rendall, J. 1989. The *Lythrum* story: a new chapter. *Minnesota Horticulturist* 117:22-24.

<sup>9</sup> Skinner, L. 1998. The low-down on loosestrife. *The Weedpatch Gazette*. Winter 1998:14-15. Retrieved March 6, 2012 from: [http://weedpatch.com/wp\\_media/pdf/skinner\\_w98.pdf](http://weedpatch.com/wp_media/pdf/skinner_w98.pdf)

<sup>10</sup> Strefeler, M.S., E. Darms, R.L. Becker, E.J. Katovich. 1996. Isozyme characterization of genetic diversity in Minnesota populations of purple loosestrife, *Lythrum salicaria* (Lythraceae). *American Journal of Botany* 83(3):265-273.

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<sup>11</sup> Farr, D.F., A.Y. Rossman. 2001. *Harknessia lythri*, a new species on purple loosestrife. *Mycologia* 93(5):997-1001.

<sup>12</sup> University of Illinois, Urbana-Champaign. 2012. *Lythrum virgatum* cultivars. Retrieved March 6, 2012 from:

<http://courses.nres.uiuc.edu/hort344/Perennials/Late%20Summer/Lythrum%20virgatum.htm>

<sup>13</sup> Plant Pictures. 2012. *Lythrum virgatum* – ‘Dropmore Purple’. Retrieved March 6, 2012 from: <http://www.plant-pictures.net/3-1403-lythrum-virgatum-picture.aspx>