

Aquatic Plant		Graceful cattail; Narrow-leaved European cattail; Laxman's bulrush
I. Current Status and Distribution		<i>Typha laxmannii</i>
a. Range	Global/Continental	Wisconsin
Native Range Temperate Asia, Bulgaria, Romania, Ukraine, Russia, Turkey, Iran ^{1,2,3}	Not recorded in the United States ⁴	Not recorded in Wisconsin
Abundance/Range Widespread: Locally Abundant: Sparse:	Undocumented Czech Republic, Slovakia, Poland, Germany, France, Slovenia, Italy, Austria, British Isles, Hungary, Spain, Switzerland, Croatia, Greece ^{2,3,5,6} Undocumented	Not applicable Not applicable Not applicable
Range Expansion Date Introduced: Rate of Spread:	Species regarded as a kenophyte ² Fast-spreading ⁵	Not applicable Not applicable
Density Risk of Monoculture: Facilitated By:	Can form monospecific stands ^{2,7} Undocumented	Undocumented Undocumented
b. Habitat	Ponds, quarries, ditches, canals, swamps, marshes, rivers, reservoirs, lakes, rice fields ^{2,3}	
Tolerance	Environmental tolerances undocumented	
Preferences	Shallow waters ³ ; anthropogenic habitats ³ ; sun to partial shade ⁷	
c. Regulation		
Noxious/Regulated:	<i>Not regulated</i>	
Minnesota Regulations:	<i>Not regulated</i>	
Michigan Regulations:	<i>Not regulated</i>	
Washington Regulations:	<i>Not regulated</i>	
II. Establishment Potential and Life History Traits		
a. Life History	Perennial emergent plant ⁷	
Fecundity	Undocumented	
Reproduction Importance of Seeds: Vegetative:	Undocumented Undocumented	
Hybridization	<i>Typha x smirnovii (T. latifolia x T. laxmannii)</i> ⁸	
Overwintering Winter Tolerance: Phenology:	Undocumented Undocumented	
b. Establishment		
Climate Weather: Wisconsin-Adapted: Climate Change:	Can survive very cold temperatures (USDA Zone 3) ⁹ Likely Warming climate may increase spread and distribution ³	

Taxonomic Similarity Wisconsin Natives: Other US Exotics:	High; <i>T. latifolia</i> High; <i>T. angustifolia</i> , <i>T. x glauca</i>
Competition Natural Predators: Natural Pathogens: Competitive Strategy: Known Interactions:	Undocumented Undocumented Undocumented Undocumented
Reproduction Rate of Spread: Adaptive Strategies:	Undocumented Undocumented
Timeframe	Undocumented

c. Dispersal

Intentional:	Ornamental ⁹
Unintentional:	Escape from cultivation ⁵ ; possibly introduced with rice cultivation ³ ; canal construction ¹⁰
Propagule Pressure:	Low; fragments relatively easily accidentally introduced but source populations not near the United States



Figure 2: Courtesy of Kurt Stueber¹¹

Figure 3: Courtesy of Robert Vidéki, Doronicum Kft., Bugwood.org¹²

III. Damage Potential

a. Ecosystem Impacts	
Composition	Can outcompete native plant communities ²
Structure	Undocumented
Function	Undocumented
Allelopathic Effects	Undocumented
Keystone Species	Undocumented
Ecosystem Engineer	Undocumented
Sustainability	Undocumented
Biodiversity	Can reduce biodiversity ²
Biotic Effects	Undocumented
Abiotic Effects	Undocumented
Benefits	Undocumented

b. Socio-Economic Effects	
Benefits Caveats	Edible plant ⁷ ; plant utilized for thatching, paper making, insulation ⁷ Risk of release and population expansion outweigh benefits of use
Impacts of Restriction	Increase in monitoring, education, and research costs
Negatives	Undocumented
Expectations	Undocumented
Cost of Impacts	Undocumented
“Eradication” Cost	Undocumented
IV. Control and Prevention	
a. Detection	
Crypsis:	Confused with other <i>Typha</i> spp. ¹³
Benefits of Early Response:	Undocumented
b. Control	
Management Goal 1	
Tool:	Control Regular mowing, flooding or drying ¹⁴
Caveat:	Only feasible in artificial waterbodies ¹⁴
Cost:	Undocumented
Efficacy, Time Frame:	Undocumented

¹ USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. Retrieved September 21, 2011 from: <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?40801>

² Baryla, J., E. Broz, A. Czylok, A. Michalewska, A. Nickel, M. Nobis, R. Piwowarczyk, A. Poloczek. 2005. *Typha laxmannii* Lepech. the new, expansive kenophyte in Poland: distribution and taxonomy. *Acta Societatis Botanicorum Poloniae* 74(1):25-28.

³ Nobis, M., A. Nobis, A. Nowak. 2006. *Typhetum laxmannii* (Ubrizsy 1961) Nedelcu 1968 – the new plant association in Poland. *Acta Societatis Botanicorum Poloniae* 75(4):325-332.

⁴ United States Department of Agriculture, Natural Resource Conservation Service. 2011. The PLANTS Database. National Plant Data Center, Baton Rouge, LA, USA. Retrieved September 21, 2011 from: <http://plants.usda.gov/java/profile?symbol=TYPHA>

⁵ Manual of the Alien Plants of Belgium. 2011. *Typha laxmannii*. Retrieved September 21, 2011 from: <http://alienplantsbelgium.be/content/typha-laxmannii>

⁶ DAISIE. 2011. *Typha laxmannii*. Retrieved September 21, 2011 from: <http://www.europe-aliens.org/speciesFactsheet.do?speciesId=2726>

⁷ Plants for a Future Database. 2010. *Typha laxmannii* – Lepech. Retrieved September 21, 2011 from: <http://www.pfaf.org/user/Plant.aspx?LatinName=Typha+laxmannii>

⁸ Mavrodiev E.V. 2000. *Typha X smirnovii* E. Mavrodiev (*T. latifolia* L. S. Str. X *T. laxmannii* Lepechin) and some other cattails from Russian Southeast. *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody Otdel Biologicheskii* 105(4):65-69.

⁹ Dave’s Garden. 2011. Graceful Cattail, Narrow-leaved European Cattail, *Typha laxmannii*. Retrieved September 21, 2011 from: <http://davesgarden.com/guides/pf/go/62381>

¹⁰ Balashev, L.S., N.A. Parakhonskaja. 1977. Extension of *Typha laxmannii* Lepech. area of distribution in the south of the Ukrainian SSR in connection with construction of large canals. *Ukrain'skyi Botanichnyi Zhurnal* 34(6):612-616.

¹¹ Stueber, K. 2003. Retrieved September 21, 2011 from: <http://www.biolib.de/>

¹² Vidéki, R. 2009. Retrieved September 21, 2011 from: Bugwood.org

¹³ Hamdi, S., M. Assadi, A. Iranbakhsh. 2010. Micromorphological studies on leaf, fruit and pollen of four species from Typhaceae (*Typha laxmannii*, *T. azerbaijanensis*, *T. minima* and *T. lugdunensis*) from Iran, and their thematic significance. *Acta Biologica Szegediensis* 54(2):117-125.

¹⁴ EPPO Reporting Service. 2011. Current status of management actions on invasive alien plants in Poland. Retrieved September 21, 2011 from: <http://archives.eppo.org/EPPORreporting/2011/Rse-1105.pdf>