



INVASIVE ALIEN SPECIES

Flowering Rush (*Butomus umbellatus*)

aka Grassy rush, Water gladiolus

SK Provincial Designation:
Prohibited

Overview:

Flowering rush is a cattail-like perennial of freshwater wetlands. It is native to Africa, Asia and Europe¹ and was likely introduced to North America as an ornamental plant. It is the only member of the *Butomaceae* family and is able to reproduce both by seed and vegetatively (rhizomatous roots form bulblets which separate from the parent plant³). Flowering rush infestations can displace native vegetation and result in reduced water quality which may disrupt valuable fish and wildlife habitat. Dense stands in irrigation ditches can reduce water availability, and in lakes can interfere with boat propellers and swimming.³ Plants flower summer to fall.¹ Flowers are hermaphroditic (contain both male and female organs) and are pollinated by bees, flies and butterflies.²



ABOVE: Flowering rush flower close-up (photo by Debbie Nordstrom)
LEFT: Flowering rush plant (photo by Chet Neufeld)

Habitat:

Flowering rush can grow on water margins or as a submerged plant with flexible leaves suspended in deeper water (3-6 m).³ It is widely tolerant of soil types (sandy to clay) and soil acidity, but does require wet soil and full sun.⁴ It is hardy to Zone 2 in Canada.²

Identification:

Stems: Stems are erect and triangular near the base. Plants grow to 150 cm¹. Flowering stems are round.

Leaves: Leaves are green and sword-shaped,⁵ originate from base of plant,² and are triangular in cross-section, twisted toward the tip, and feel spongy when compressed.³ The base of the plant where the leaves attach is reddish coloured.

Flowers: Flowers are 2-2.5 cm wide with 3 sepals and 3 petals.³ Twenty to fifty pink through white flowers are borne on umbrella shaped clusters³. Anthers are pink to red.⁵ There are 9 stamens arranged in an inner whorl of 3 and outer whorl of 6.³

Seed: Seeds are elongated, ribbed and approximately 0.5 mm wide by 2 mm long.

Prevention:

Do not use in water gardens – talk to your local nursery about non-invasive alternatives. Flowering rush can spread by seed or root fragments so care must be taken with attempts to remove existing plants. It has been observed to invade aquatic areas with existing vegetation more slowly³ – maintain existing stands and prevent disturbance.



continued next page



INVASIVE ALIEN SPECIES

Flowering Rush (continued)

Control:

Mechanical: Cutting below the water surface can suppress plants but will need to be repeated. Hand digging is feasible with small infestations but care must be taken to remove all parts of the plant - root fragments can drift with water movement and result in new infestations². All plant matter should be removed and disposed of in landfill-bound garbage.

Chemical:¹ Currently no selective herbicides are registered for use on flowering rush. Also, herbicide application over water in Canada is prohibited and no aquatic herbicides are currently registered in Canada, although work is being done that may change this in the future, so contact your local Certified Pesticide Dispenser for the latest information. Herbicide applications near water bodies require specific applicator certification and permits from the provincial (and potentially federal) government. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pesticide Management Regulatory Agency. Consult your local agricultural representative or Certified Pesticide Dispenser for more information.

Biological: None researched to date.

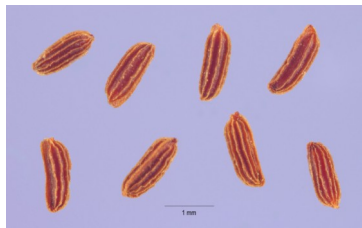
¹ Flora of North America. *Butomus umbellatus* www.eFloras.org

² Global Invasive Species Database. *Butomus umbellatus*. www.issg.org

³ Montana State University Extension. Flowering Rush. <http://msuextension.org/publications/AgandNaturalResources/EB0201.pdf>

⁴ USDA Forest Service. Weed of the Week, Flowering Rush. www.na.fs.fed.us/fhp/invasive_plants

⁵ Hitchcock and Cronquist. Flora of the Pacific Northwest. 1973. University of Washington Press. p 557.



Photos (clockwise from top left)

1. **Flowering rush seeds, scale bar is 1 mm** (photo by Steve Hurst, USDA NRCS PLANTS Database, Bugwood.org)
2. **Creeping rootstock and reddish-coloured base** (photo by Chet Neufeld)
3. **Sword-like leaves of flowering rush** (photo by Chet Neufeld)
4. **Flowering rush bulblet** (photo by Chet Neufeld)
- 5 and 6. **Mature seed capsules** (photo by Chet Neufeld)

¹ Always follow the product labels. Pesticides should only be applied by certified pesticide applicators. The use of pesticides in any manner not published on the label or registered under the *Minor Use of Pesticides* regulation constitutes an offence under both the *Federal Pest Control Products Act* and provincial acts in Saskatchewan. For the latest information on pesticides for agricultural use in Saskatchewan, please consult the provincial *Guide To Crop Protection*, produced annually by the Saskatchewan Ministry of Agriculture.