

Flowering rush

Butomus umbellatus (Aka grassy rush, water gladiolus)

Provincial Designation:
Fisheries (Alberta) Act,
Weed Control Act



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Overview:

Flowering rush is a bur reed-like perennial of freshwater wetlands. It is native to Africa, Asia and Europe¹ and was likely introduced to North America as an ornamental plant for use in water gardens. It is the only member of the Butomaceae family and can reproduce both by seed and vegetatively (rhizomatous roots form bulbils which separate from the parent plant).³

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 Flowering primarily occurs in July and August.¹ The pink flowers are displayed in umbrella-shaped clusters (umbels), each flower has both male & female organs, and are pollinated by bees, flies and butterflies.² Once an area has been infested, mats of mud, rhizomes, and leaves can rise up off the lake or river bed and float elsewhere, spawning new infestations.

In Alberta, flowering rush mostly reproduces vegetatively, by rhizome or bulbils, rather than by seeds. Flowering rush has significant presence in the Bow River, South Saskatchewan River, and Lake Isle.

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 Flowering rush is hardy enough to survive through Alberta winters.

Identification:

Flowering rush can be confused with native sedge species when not in bloom but is generally far larger than sedges and is set apart by its bright pink flowers.³

Stems: Are erect and triangular near the base. Plants grow to 150 cm.¹

Leaves: Are long, green, and slender,⁵ originate from base of plant,² are triangular in cross-section, are twisted toward the tip, and feel spongy when compressed.³ The lower portions of the leaves often have red-maroon pigmentation.

Flowers: Around 2 cm wide with 3 sepals (green on the outside, pink on the inside) and 3 petals (both sides bright pink).³ Twenty to fifty pink through white flowers are borne on umbrella shaped clusters.³ Anthers are red.⁵ There are 9 stamens arranged in an inner whorl of 3 and outer whorl of 6.³

Prevention:

Simply do not grow it - talk to your local nursery about non-invasive alternatives. Areas with established native vegetation are invaded more slowly than manicured shorelines³ - maintain existing aquatic plant stands and prevent disturbance to limit spread.

Control:

Manual: 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 re-move all parts of the plant - root fragments can drift with water movement and result in new infestations.² All plant matter should be removed and disposed of in landfill-bound garbage.

Mechanical: Cutting below the water surface can suppress plants but will need to be repeated.

Chemical: Some diquat and imazapyr products are registered for use on flowering rush in lakes, ponds, irrigation canals and slow-moving streams. Herbicide applications near water bodies require specific applicator certification and permits from Alberta Environment. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Manag-

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ement Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: The weevil, *Bagous nodulosus*, is approved for use in Canada and the USA to combat flowering rush by feeding on the leaves and rhizomes. In 2024, it was released in British Columbia and Ontario, and permits for release in the USA were also granted.



Kallum McDonald, AISC



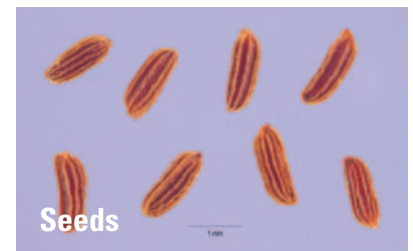
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Steve Hurst, USDA NRCS plants database, bugwood.org



REFERENCES

- 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.