



Last Updated 30-04-2011

# Yellow Flag Iris (*Iris pseudacorus*)

aka Pale-yellow iris, Water flag, Yellow iris, Yellow flag

**Provincial Designation:** Prohibited Noxious

## Overview:

Yellow flag iris is a perennial monocot (parallel veins) forb which thrives in temperate climates. Native to Africa, Asia, and Europe, it was introduced to North America and New Zealand as a pond ornamental plant.<sup>1</sup>

It has tuberous roots - modified plant structures that are enlarged to store nutrients - usually 10-20 cm long but can be up to 30 cm.<sup>1</sup> They are used by plants to survive the winter or dry months and provide energy and nutrients for re-growth during the next growing season.

It reproduces both by seed and vegetatively by pink, freely branching rhizomes, 2-3 cm in diameter.<sup>2</sup> These fast spreading rhizomes can outcompete other plants for space, forming thickets like native cattails.<sup>1</sup> This rhizome mat creates improved habitat for further infestation by *Iris pseudacorus* by compacting soils and elevating topography, creating a habitat that is drier with increased siltation and sedimentation.<sup>1</sup> It is generally a wetland plant but rhizomes can survive being dry for at least 3 months.<sup>3</sup>

In Canada yellow flag iris dies back over winter, re-grows in the spring, and flowers late spring/early summer.<sup>1</sup> It is cross fertilizing and is pollinated by bees.<sup>3</sup>

Yellow flag iris is typically used as an ornamental but has also been used for erosion control and for making dyes and fibre.<sup>1</sup> It may be confused with cattails or other irises when not in bloom.

## Habitat:

Yellow flag iris grows in wetlands, margins of water bodies, and tidal freshwater or brackish areas. It requires continuously high soil-water content but does not need to be submerged. It can grow in water up to 25 cm deep.<sup>1</sup> It can grow in peats (acidic) and permanently submerged organic (high nutrient) or inorganic/sandy soils at edge of water bodies. It requires full sun to partial shade.<sup>3</sup>

## Identification:

**Stems:** Stems are 40-150 cm tall, one to several, and usually shorter than or equaling the leaves.<sup>3</sup>

**Leaves:** Leaves are dark green, 50-100 cm long and 10-30 mm wide, with a raised midrib, and come to a fine point.<sup>1</sup>

They are erect at first and then recurved.<sup>2</sup> Leaves occur about 10 per ramet (individual clumps of a clonal plant.)<sup>1</sup> Basal leaves are deciduous.<sup>2</sup>

**Flowers:** Flowers are pale yellow (varying from pale yellow to almost orange), 8-10 cm diameter. Inflorescences contain 4-12 flowers.<sup>2</sup> Flowers have 6 clawed segments including 3 large downward-spreading sepals and 3 smaller erect petals; on each flower sepal (yellow, large and petal-looking) are patterns of delicate light-brownish to purple veins or flecks.

**Seeds:** Seed capsules are 4-8 cm and elliptic, seeds are dark brown, smooth and highly



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variable in size, closely packed in 3 rows and disc-like in form.<sup>1</sup> Seeds have a hard seed coat, beneath which there is a gas space allowing seeds to float in water.<sup>3</sup>

## Prevention:

Yellow flag iris is sold through garden centers and the internet. Do not purchase or grow this plant. Rhizome fragments can drift to new habitats and form new infestations. Flooding disturbance plays key role in establishment, and water dispersed seeds are often deposited along the high water mark. Not much is known about seedbank persistence.<sup>3</sup>

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# Yellow Flag Iris (continued)

## Control:

Control efforts are most likely to succeed when patches are small and manageable. Use an integrated approach of monitoring for seedlings and re-growth and control efforts.

**Grazing:** Yellow flag iris is generally unpalatable and is also poisonous to grazing animals.<sup>1</sup> Cattle experience gastroenteritis and acute diarrhea after eating hay containing yellow flag iris.<sup>3</sup>

**Cultivation:** Remediate riparian disturbance in areas at risk to yellow flag iris invasion with desirable vegetation.

**Mechanical:** Pulling/cutting yellow flag iris repeatedly over several years can eventually kill plant. Digging is effective but can fragment rhizomes which can produce new plants, so be sure to remove as much plant debris as possible. The disturbance associated with digging can facilitate seed germination. Dead heading prevents seed production but does not affect the plants.<sup>1</sup> Be sure to wear long sleeves and gloves as yellow flag iris causes skin irritation.<sup>1</sup>

**Chemical:**<sup>5</sup> Since yellow flag iris grows near water, chemical control would require aquatic labeled herbicides and special use permits. 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 Fieldman or Certified Pesticide Dispenser for more information.

**Biological:** No biological control agents are currently available.



PHOTO: Nancy Loewenstein, Auburn University, Bugwood.org



Seeds

PHOTO: Steve Hurst, USDA NRCS PLANTS Database, Bugwood.org



Infestation

PHOTO: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org



Roots

PHOTO: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

## REFERENCES

- 1 Global Invasive Species Database [www.issg.org](http://www.issg.org)
- 2 Flora of North America [www.eFloras.org](http://www.eFloras.org)
- 3 Fire Effects Information System [www.fs.fed.us/database/feis/plants/forb/iripse/all.html](http://www.fs.fed.us/database/feis/plants/forb/iripse/all.html)
- 4 Center for Aquatic and Invasive Plants, University of Florida. <http://plants.ifas.ufl.edu/node/205>
- 5 Always follow the product labels. 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 *Alberta's Environmental Protection and Enhancement Act*.