

Yellow Flag Iris (*Iris pseudacorus*)

Designation: Provincial Noxious Weed; Regional Category 2



Figure 1: a) Flower, b) Residential water garden c) *Iris pseudacorus* removal, d) Flower.
Photo Credit: a-d) Juliet Craig

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Overview: Yellow flag iris is a “wet-footed” iris, growing in ponds, ditches, wetlands and other riparian areas. It is a perennial forb which is native to Africa, Asia and Europe. It is an introduced ornamental water garden plant.

Habitat: Yellow flag iris thrives in temperate climates. It requires continuously high soil-water content but does not need to be submerged. It can grow in water up to 25 cm deep and can grow in full sun to partial shade.

Reproduction: These fast spreading rhizomes out-compete other plants for space, forming dense thickets of yellow flag iris.

Dispersal: Seeds can float and can be carried downstream. Seeds are also moved by water fowl to remote sites away from the original infestation. Root fragments can also produce new plants.

Regional Distribution: Limited distribution throughout the region: Creston Valley Wildlife Management Area, Kootenay Lake, Nancy Greene Lake, Erie Lake, Meldeanna Lake, Arrow Lake, Nelway, and Pend D’Oreille River.

Provincial Distribution: Found throughout southern BC and is currently spreading in the southern Interior.

Identification^{1,2,3,4}

Flowers: Resemble common garden iris with three large (downward facing) sepals and three smaller upward pointing petals. They are pale yellow in colour and are about 8-10 cm in diameter. Blooms from May to July.

Stem: Between 40-150 cm tall and may be in bunches of one to several.

Leaves: Dark green in colour, 50-100 cm long, stiff erect sword-shaped with a central ridge on both the top and underside of the leaf.

¹ <http://www.fs.fed.us/database/feis/plants/forb/iripse/all.html>

² <http://plants.ifas.ufl.edu/node/205>

³ www.eFlora.org

⁴ www.issg.org

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Seeds: Seed capsules look like bunches of short green bananas and contains around 120 seeds. Seeds can float on water.

Similar Native Species

Cattail (*Typha latifolia*)

Bur-reed (*Sparganium* spp.)

Impacts

Ecological: Yellow flag iris colonizes in large numbers, forming very dense stands. It outcompetes other plants, displacing native species and altering habitat. Studies in Montana show that yellow flag iris can reduce stream width by up to 10 inches per year by trapping sediment, creating a new bank and then dominating the new substrate with its seedlings, creating still more sediment retention⁵.

Social: Yellow flag iris is generally unpalatable and is also poisonous to grazing animals. Cattle experience gastroenteritis and acute diarrhea after eating hay containing yellow flag iris.

Integrated Pest Management (IPM)^{6,7}

IPM is a decision making process that begins with the identification and inventory of invasive plant populations, assessment of the risks that they pose, and development of well-informed management options from monitoring to site treatment.

Prevention and Early Detection:

- Select a non-invasive alternative, such as western blue iris (*Iris missouriensis*) instead of yellow flag iris for your restoration project or water garden. Additional options can be found by downloading the Invasive Species Council of BC's *2011 Grow Me Instead* booklet from: www.bcinvasives.ca/resources/outreach-materials.

⁵ <http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/yellow-flag-iris-control.pdf>

⁶ http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96483_01

⁷ Invasive Species Council of BC (ISCBC), 2012, www.bcinvasives.ca

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- Avoid accidentally introducing non-native plants to surrounding water bodies by installing water gardens a safe distance away. Ensure water gardens are not allowed to overflow to wetlands, streams or rivers.
- Properly dispose of garden and yard waste by double bagging and disposing of it at your local landfill.
- Prevent plants from spreading from existing populations by washing vehicles, boots and animals that have been in infested areas.
- Report plants infestations found in remote locations to 1-888-WEEDSBC or 250.352.1160.

Mechanical Control: Small infestations of yellow flag iris can be controlled through hand digging, but caution must be exercised to ensure fragmentation does not occur. Fragmented rhizomes can produce new plants. Seed heads can also be cut and bagged to prevent seed production. Hand digging and dead heading will be required over several years to ensure efficacy. Wear gloves and long sleeved shirts, as this plant can cause skin irritation.

Chemical Control: Visit the Integrated Pest Management Program website at www.env.gov.bc.ca/epd/ipmp/ prior to completing any chemical treatments.

Biological Control: No biological control agents are currently available.

Restoration Substitutes

Oregon Iris (*Iris tenax*)

Japanese Water Iris (*Iris laevigata*)

Japanese Iris (*Iris ensata*)

Western Blue Iris (*Iris missouriensis*)

Butter and Sugar Iris (*Iris 'Butter and Sugar'*)

Legislation and Regulations

There is a growing network of partnerships and collaborations among all levels of government, industry, regional invasive plant committees, and concerned individuals to address unwanted aquatic invasive plants.⁸ In addition, there is numerous legislation and regulations that pertain to aquatic invasive plants.

⁸ Invasive Species Council of BC (ISCBC), 2012

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Federal: The *Fisheries Act*⁹ specifies that it is an offence to harmfully alter, disrupt, or destroy fish habitat, including streamside vegetation. It is also an offence to move or introduce aquatic organisms (including plants) to new habitats. The purpose of the *Fisheries Act* is to conserve and protect Canada's fisheries resources, including fish habitat. It applies to all Canadian fisheries waters, including ditches, channelized streams, creeks, rivers, marshes, lakes, estuaries, coastal waters and marine offshore areas. It also applies to seasonally wetted fish habitat such as shorelines, stream banks, floodplains and intermittent tributaries and privately owned land. It is an offence to damage fish habitat or put harmful substances such as pesticides into water frequented by fish, including includes pesticide drift. Fisheries and Oceans Canada (DFO) and Environment Canada administer this legislation.

The *Migratory Birds Convention Act*¹⁰ prohibits the deposit of any substance harmful to migratory birds to any area frequented by migratory birds. This includes pesticides deposited on water and land. The Canadian Wildlife Service of Environment Canada administers this legislation.

Provincial: In BC, invasive plant management on all lands (Crown and non-Crown) is regulated by the BC *Weed Control Act*¹¹, and the management of specific Crown lands is regulated by the *Forest and Range Practices Act*¹², the *Community Charter*¹³, and the *Integrated Pest Management Act*¹⁴.

In addition, in BC the ownership of water is vested in the Crown as stated in the *Water Act*¹⁵, the primary provincial statute regulating water resources.

Section 9 of the *Water Act* requires that a person may only make "changes in and about a stream" under an Approval; in accordance with Part 7 of the Water Regulation, including Notification where required; or under a Water Licence or Order. Notifications are typically used for works that do not involve any diversion of water, may be completed within a short period of time and will have minimal impact on the environment or third parties. Notifications are the responsibility of the Environmental Stewardship Division of the Ministry of Forests, Lands and Natural Resource Operations. Contact Front Counter BC for more information at www.frontcounterbc.gov.bc.ca/contact/

⁹ <http://laws.justice.gc.ca/en/F-14/>

¹⁰ <http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>

¹¹ <http://www.agf.gov.bc.ca/cropprot/noxious.htm>

¹² <http://www.for.gov.bc.ca/code/legislation.htm>

¹³ http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/03026_00

¹⁴ http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_03058_01

¹⁵ http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96483_01

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Useful Links

- Alberta Invasive Plant Council: www.invasiveplants.ab.ca
- Central Kootenay Invasive Plant Committee: www.ckipc.ca
- E-Flora BC, Electronic Atlas of the Plants of BC: www.eflora.bc.ca
- Invasive Species Council of BC: www.bcinvasives.ca
- Ministry of Forests and Range Invasive Alien Plant Program: www.for.gov.bc.ca/hra/plants/index.htm
- Ministry of Agriculture: www.agf.gov.bc.ca/cropprot/weedguid/weedguid.htm
- Society for Ecological Restoration BC Chapter: www.serbc.ca
- Tipi Mountain Native Plants: www.tipimountain.com
- Weeds BC: www.weedsbc.ca

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