



Aquatic Invasive Species – Flowering Rush

Nicole Kimmel

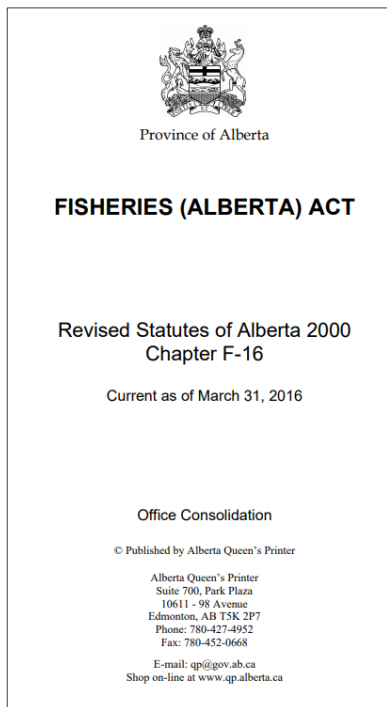
Aquatic Invasive Species Specialist

CLFOA AGM October 2023

Alberta Aquatic Invasive Species Program



Policy & Legislation



2015

- Prohibited Species List
- Mandatory Inspection Stations
- Enhanced authority & quarantine provisions

2016

- Pull the Plug
- Mandatory reporting of AIS

2018

- Specified Penalties -
 - **\$324** Bypassing an OPEN Watercraft Inspection Station and **\$180** for Failing to Pull the Plug



Education & Outreach



**CLEAN + DRAIN + DRY
YOUR GEAR**



**PULL
the
PLUG**

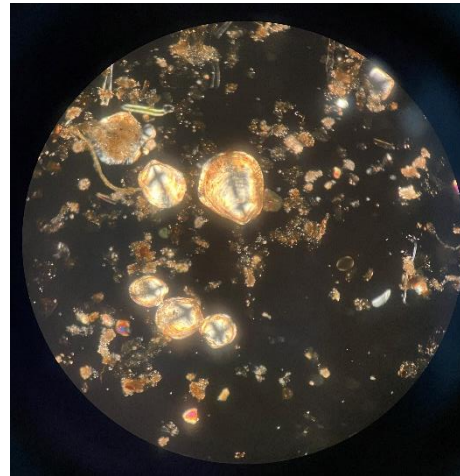


Monitoring

- Collaboration with partners to monitor AIS across Alberta
- Citizen science reports through AIS Hotline & EDDMapS app

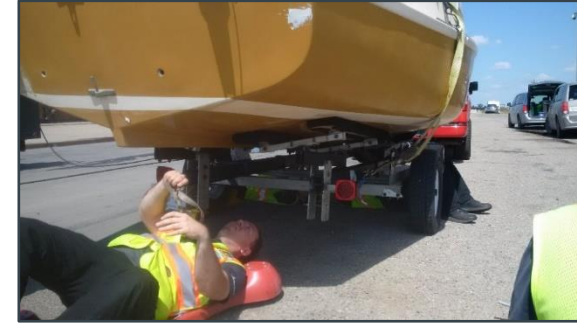


EDDMapS
find • map • track



Watercraft Inspections

Year	# of Inspections	Fouled Boat Interceptions	# of Stations
2013	395	1	1
2014	3,740	14	4
2015	21,449	11	9 (+3 Roving)
2016	19,028	17	9 (+2 Roving)
2017	30,957	19	11 (+2 Roving)
2018	31,799	15	11 (+2 Roving)
2019	10,819	19	8
2020	7,276	30	3
2021	7,871	22	4
2022	8,032	19	5

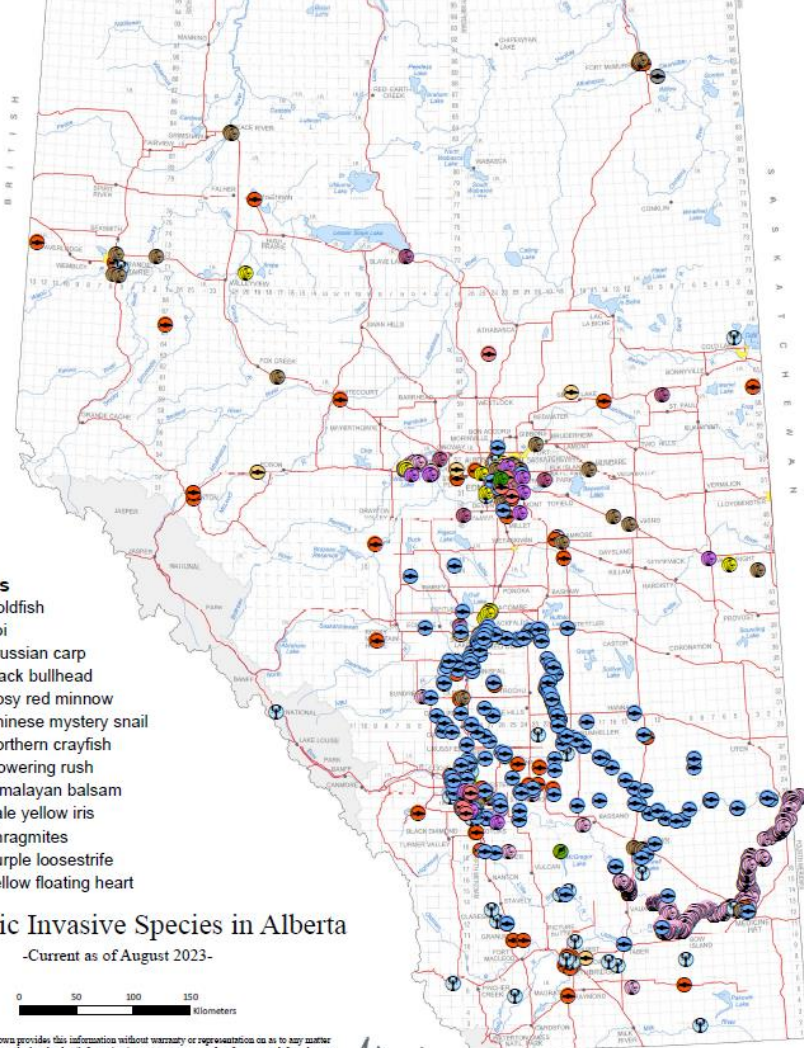
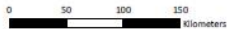


Known Alberta Aquatic Invasive Species Locations

- Species**
-  Goldfish
 -  Koi
 -  Prussian carp
 -  Black bullhead
 -  Rosy red minnow
 -  Chinese mystery snail
 -  Northern crayfish
 -  Flowering rush
 -  Himalayan balsam
 -  Pale yellow iris
 -  Phragmites
 -  Purple loosestrife
 -  Yellow floating heart

Aquatic Invasive Species in Alberta

-Current as of August 2023-



Flowering Rush



Identification

Flowering Rush (*Butomus umbellatus*)



- Aquatic perennial plant
- Linear, sword-like leaves
- Showy umbel of pink flowers



Flowering Rush (*Butomus umbellatus*)



Flowering Rush (*Butomus umbellatus*)



Flowering Rush (*Butomus umbellatus*)

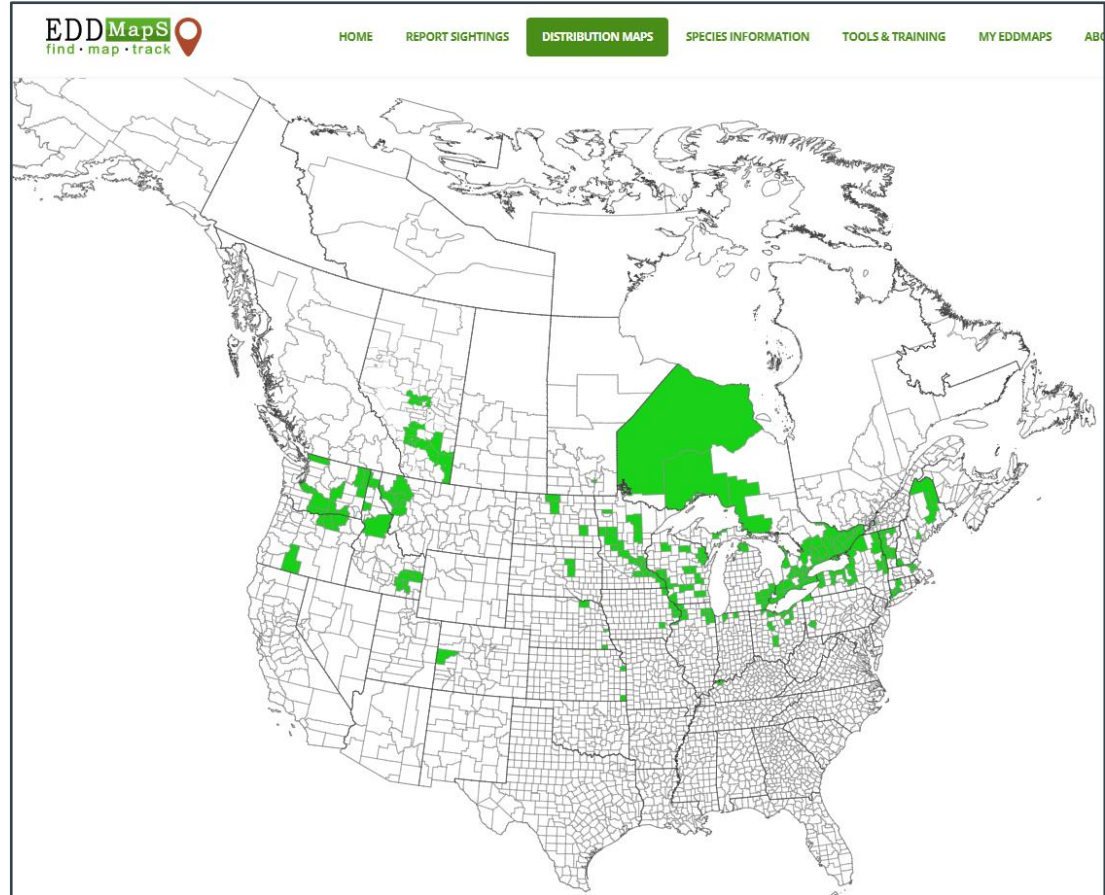


Flowering Rush



Challenges

Origins



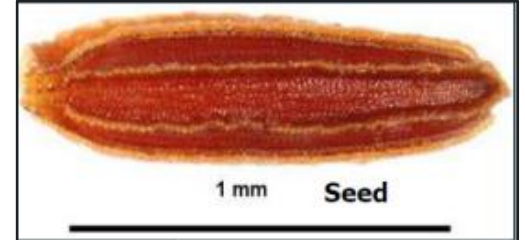
How was it introduced?

Common plant for water gardens

Commonly obtained through horticulture trade



Vigorous Aquatic Perennial



Rhizome fragments



- Large carbohydrate reserves
- Buoyancy
- Preformed roots



Growth Depth



- Max depth reported is 4.5 meters
- Grows in submerged or emergent forms



Displaces Beneficial Plants



Grows Early in Spring - April



Disturbances encourages growth



Potential Problems

- Decrease abundance and diversity of plants and animals naturally found in area
- Decrease open fish spawning habitat
- Promote deposition of sediment
- Slow or stop water movement
- Limit water access and use
- Promote habitat of intermediate host of swimmer's itch parasite (e.g. great pond snail *Lymnaea stagnalis* L.)

Flowering Rush

Response Efforts in Alberta

Clipping Flower Heads



Photos courtesy of Red Deer County



Cutting By Hand



Digging By Hand





Steaming



Photos courtesy of Red Deer County



Mechanical Dredging



Photos courtesy of Rocky View County

Alberta

Mechanical Weed Harvester



Diver Assisted Suction Harvesting



Herbicides Applied in/near Water



Alberta Flowering Rush Potential













THANK YOU! Questions?

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