

Preventing the introduction of aquatic invasive alien species

Jesica Goldsmit

Ministère de l'Environnement, de la Lutte contre les changements
climatiques, de la Faune et des Parcs

Hunting, Fishing and Trapping Coordinating Committee

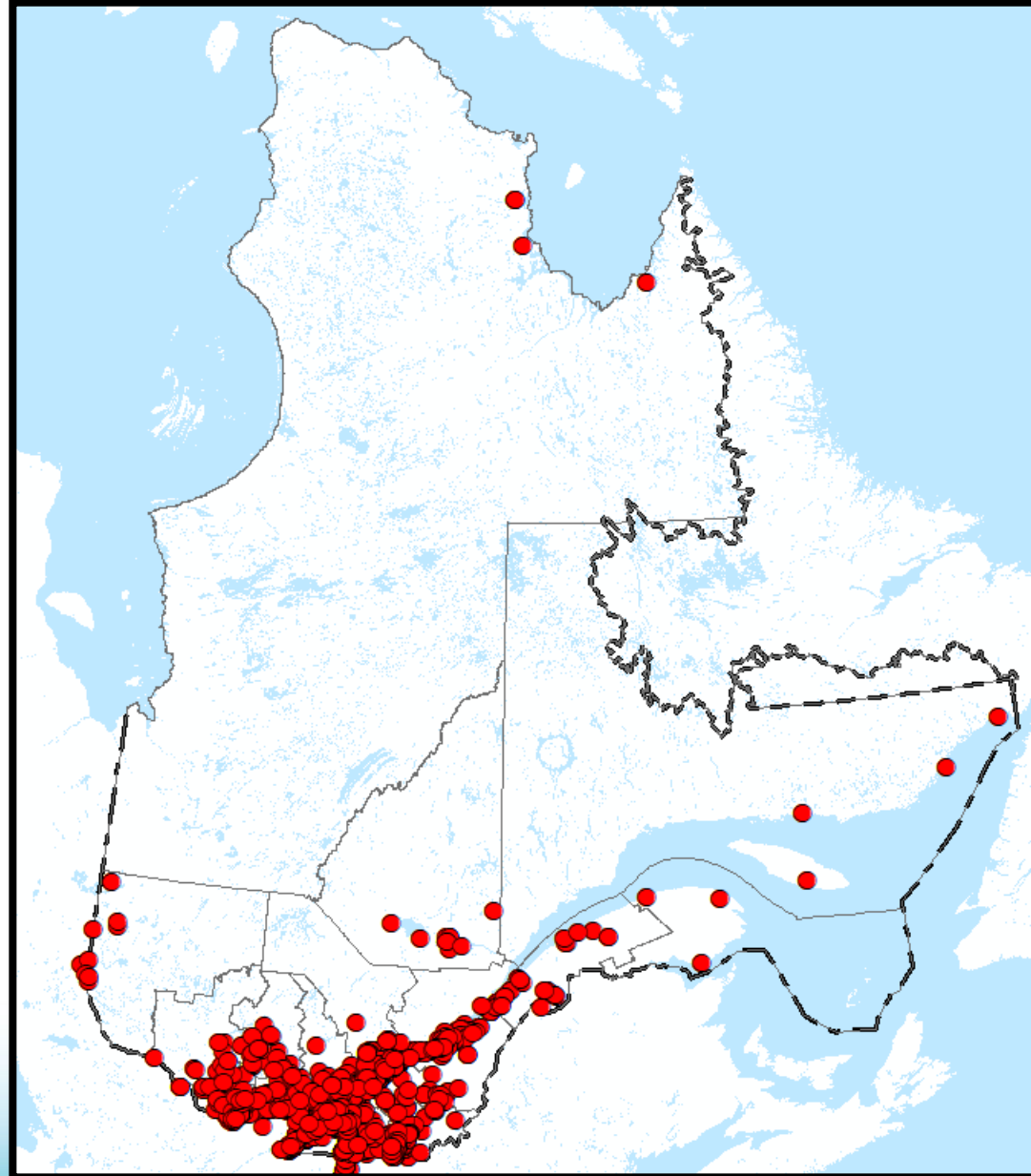
March 20th-21st 2024

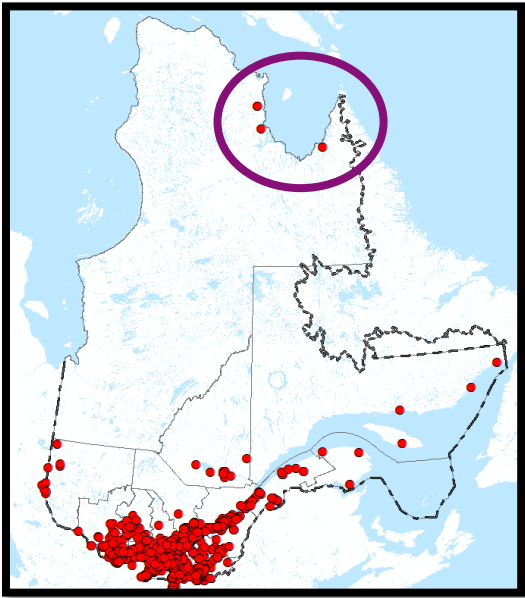
Votre
gouvernement 

Québec 

Aquatic invasive alien species in Quebec

More than 30
species
present!





WANTED



PINK SALMON

ONCORHYNCHUS GORBUSCHA
PINK SALMON

Colouring: Pink salmon are silver in colour, with a blue or blue-green back. During reproduction, the colour changes to pale grey with red sides embellished with large brown-green spots.

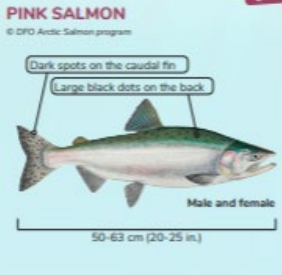
Maximum size: Specimens measure between 50 and 63 cm (20-25 in.) and weigh between 1.6 and 2.3 kg (3.5-5 lb.).

Pink salmon is an exotic salmon species in eastern North America that risks becoming invasive in Québec. Introduced into northwestern Russia in the late 1950s, it subsequently dispersed throughout northern Europe and has recently migrated westward. Its natural distribution area is in the North Pacific.

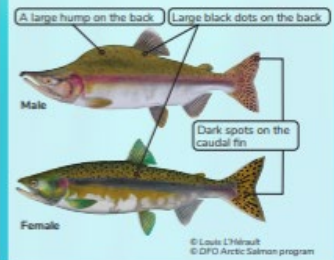
The Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs (MELCCFP) is seeking your help to detect this aquatic invasive species. Should you catch or sight one or more pink salmon:

1. Make note of the number of specimens, their size, the date, and the sector where they were caught (include GPS coordinates, if available).
2. Take a picture, when possible.
3. If you can preserve your catch:
 - a. preserve the entire head in the freezer, if possible, for analysis by the MELCCFP;
 - b. preserve the flesh for consumption.
4. Contact MELCCFP customer service to submit your information:
Email: services.clientele@mffp.gouv.qc.ca
Telephone: 1 877 346-6763

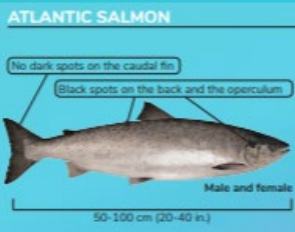
SALTWATER STAGE
(persists for several days after entering the river)



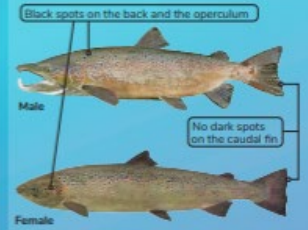
FRESHWATER STAGE
(most likely to be caught by anglers)



SALTWATER STAGE



FRESHWATER STAGE



RAINBOW TROUT



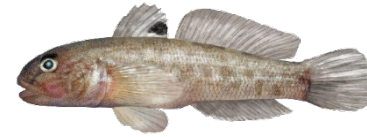
Aquatic invasive alien species of greatest concern in Quebec



Tench



Red roach



Round bogy



Rusty crayfish



Zebra mussel



Quagga mussel



Chinese mystery snail



Banded mystery snail



Eurasian water milfoil



Water chestnut



Spiny waterflea



Fishhook waterflea

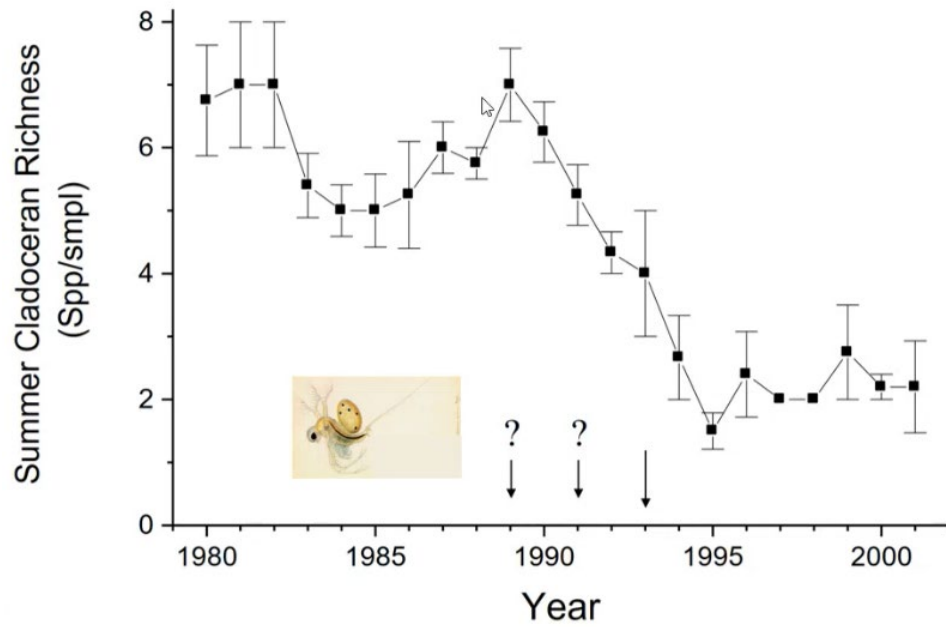
Spiny waterflea



Not yet widespread in Quebec, but present in the Great Lakes, Lake Champlain and over 100 other lakes in Ontario.

Spiny waterflea impacts

Decrease in zooplankton diversity and abundance

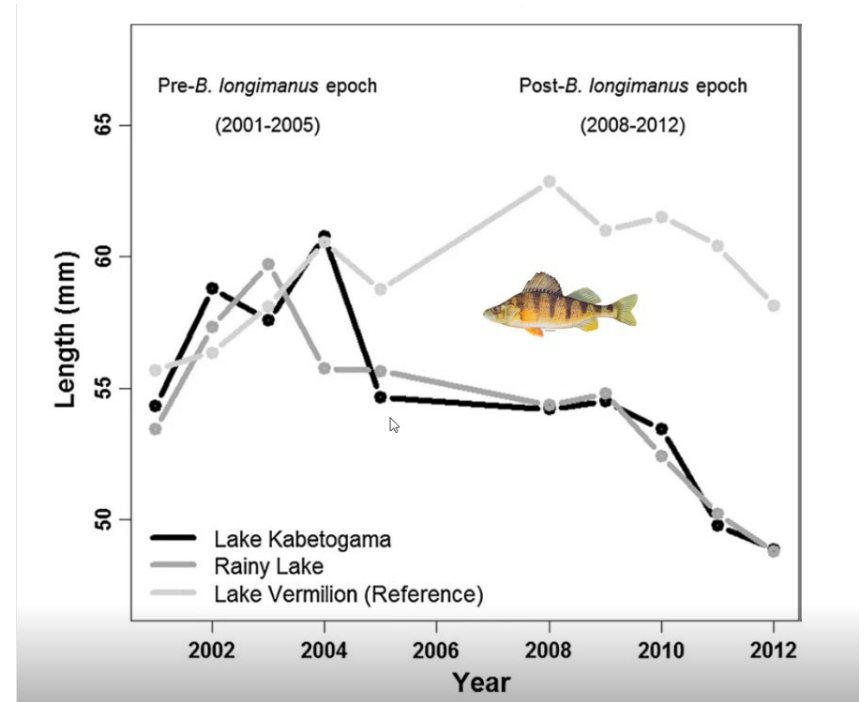


Walsh et al. 2018 Limnol.Oceanogr.



The spiny water flea reduces fishing quality by competing with fish.

Reduced fish growth



Staples et al. 2017 Biol. Invasions

What you need to know to prevent their introduction

Several activities can encourage the spread of aquatic invasive species.



Recreational boating



Sport fishing from a boat



Various water sports



Watercrafts



Waterfowl hunting



Various water sports



Diving



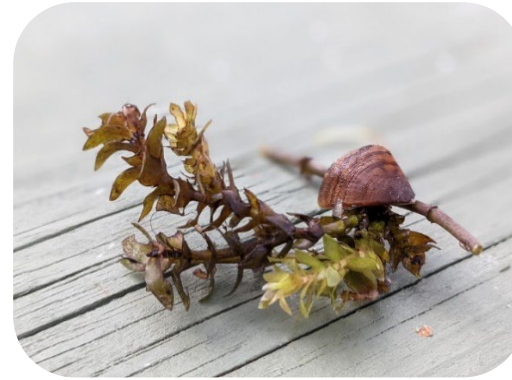
Wade fishing

What you need to know to prevent their introduction

Boating activities can promote dispersion through the transport of debris, residual water and dirt on boats and equipment.



Plant fragments



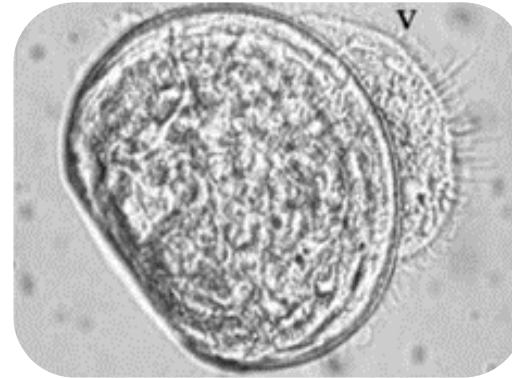
Zebra mussel on vegetation



Zebra mussel on boat propeller



Clusters of spiny water flea on fishing line



Zebra mussel larvae

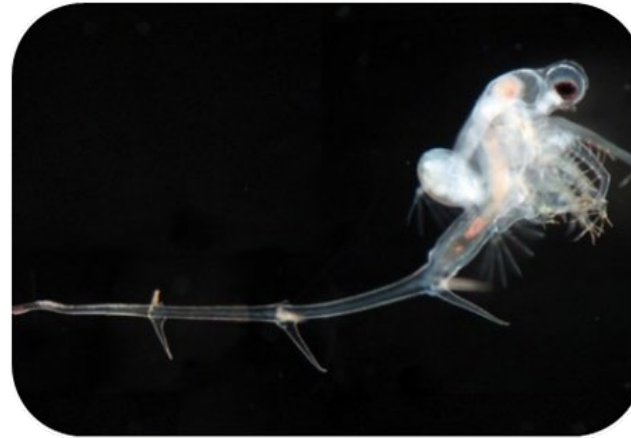


Residual water

What you need to know to prevent their introduction

Invasive species are **VERY** resistant.

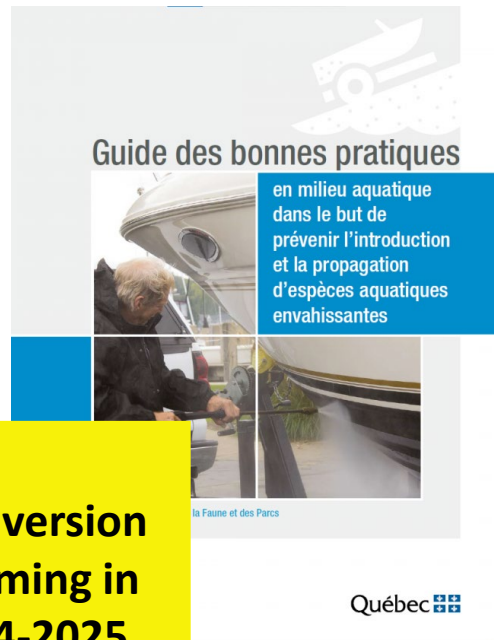
Spiny water flea eggs survive digestion by fish and several years buried in sediment.



What can you do?

Clean boats and equipment entering controlled operating areas :

- 1) Apply best practices.
- 2) Making cleaning stations available to users.



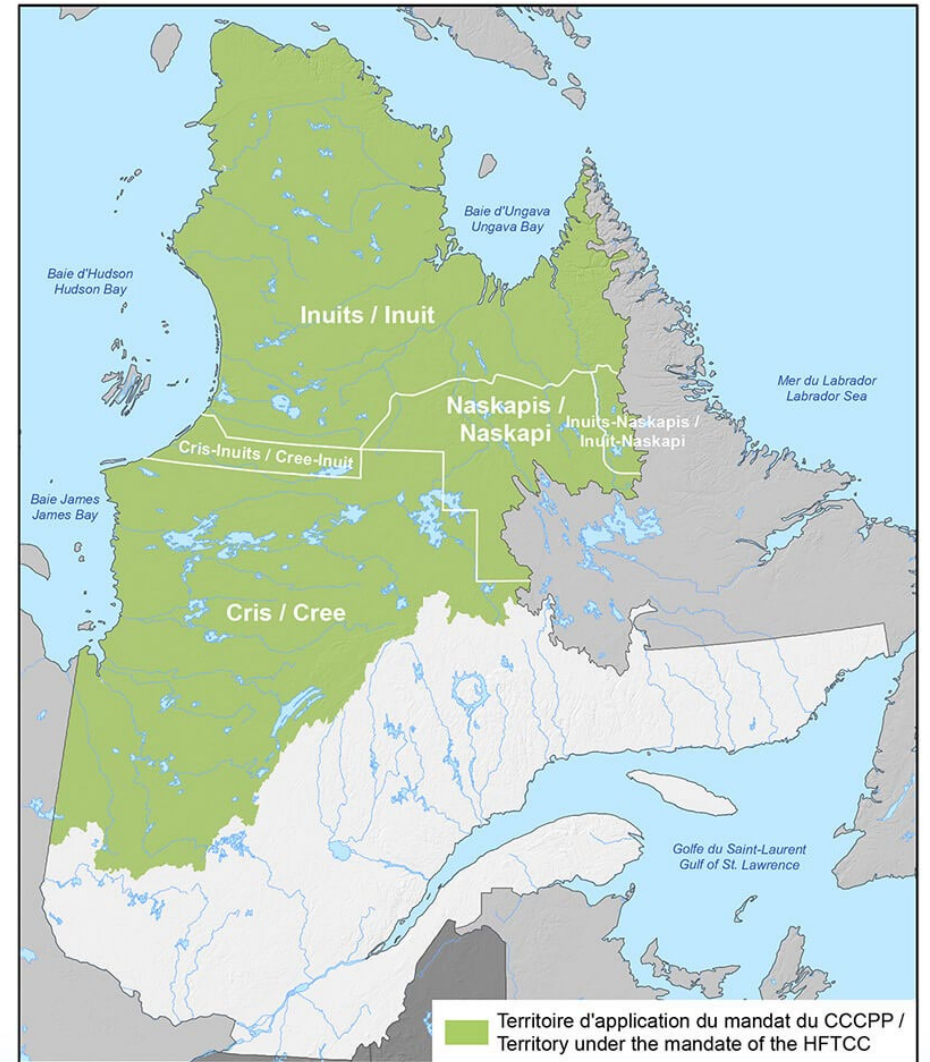
**New version
coming in
2024-2025**

**Boat cleaning
stations program
2023-2028**



Boat cleaning stations program 2023-2028

- The aim of the program is to set up or improve fixed or mobile boat cleaning stations to help preventing the introduction of aquatic invasive alien species or pathogenic organisms of aquatic fauna.
- It includes support for financing new boat cleaning stations or refurbishment of existing ones.
- First nations communities recognized by the Quebec National Assembly are eligible entities to apply to the program.



Boat cleaning stations program 2023-2028

- Projects are financed up to 80% of total eligible expenses, to a maximum of \$30,000 per project.

« The cost of a boat cleaning station may vary between \$20 k and \$45 k, depending on the need to install an energy-independent system, an automated opening device or to undertake excavation work to accommodate the water flow. »



Contacts and links

- [Programme Stations de nettoyage d'embarcations 2023-2028 | Gouvernement du Québec \(quebec.ca\)](#)
- Write your questions to StationsEAE@mffp.gouv.qc.ca for more information

Programme Stations de nettoyage d'embarcations 2023-2028

Le programme contribue à la lutte contre les espèces aquatiques envahissantes (EAE) et les organismes pathogènes de la faune aquatique. Il encourage l'installation ou la réfection de stations de nettoyage d'embarcations.

Dans cette page :

[Financement](#)

[Conditions d'admissibilité](#)

[Déposer une demande d'aide financière](#)

[Date d'échéance](#)

[Remplir le rapport final de projet](#)

Questions or
comments?

*Environnement,
Lutte contre
les changements
climatiques,
Faune et Parcs*

Québec



StationsEAE@mffp.gouv.qc.ca
observations_eae@mrnf.gouv.qc.ca