





Invasive Species of the Cataraqui Region

Species	Photo	Distribution	Description	Impact
Aquatic Animal Invaders				
Zebra Mussel <i>Dreissena polymorpha</i>		First observed 1988 in Lake St. Clair and is now in all Great Lakes, St. Lawrence River, Trent-Severn and Rideau Canal. Native to Ponto-Caspian region of Eurasia.	2-4 cm in length. "D" shaped shell with white or yellow stripes or zig-zag patterns. Attach to hard substrates in freshwater systems up to 12m in depth. Reproduce at >10°C.	Filter feeder that heavily competes with other mussels for food and habitat. Increases water clarity and contaminants to higher food chain species.
Quagga Mussel <i>Dreissena bugensis</i>		First reported in 1989. Now in Lake Ontario, Huron, Simcoe, Rideau River and St. Lawrence River. Native to tributary of Black Sea, Ponto-Caspian region of Eurasia.	Up to 3cm in length with round or triangular cross-section. Lives in freshwater areas (shallow, warm or deep, cold) and attaches to hard surfaces. Reproduces at 4-9°C.	High intensity filter feeder reduces food sources, increases water clarity, and competes for habitat. Food source of Round Goby (another invasive species).
Spiny Waterflea <i>Bythotrephes longimanus</i>		Found in all Great Lakes in 1987 and occurs in 100 inland lakes in Ontario. Native to Eurasia. Is now present in the Cataraqui Region watershed.	10mm in length with long tail spines. Prefers deep, clear, slightly eutrophic lakes and can tolerate temperatures up to 28°C.	Reduces plankton food source for fish. Difficult to consume as prey, therefore overabundant.
Rusty Crayfish <i>Orconectes rusticus</i>		Introduced in 1960s. Now found in southcentral and southeastern Ontario. Native to Ohio River System.	Rust patches of shell and black bands on claw tips. Found in wetlands, ponds, lakes, rivers in areas of rock and woody debris.	Competes with native fish and crayfish for food and habitat by consuming large amounts of vegetation and invertebrates.

Species

Photo

Distribution

Description

Impact

Aquatic Animal Invaders

New Zealand Mud Snail
Potamopyrgus antipodarum



First observed 1988 in Lake St. Clair and is now in all Great Lakes, St. Lawrence River, Trent-Severn and Rideau Canal. Native to Ponto-Caspian region of Eurasia.

5-8mm in height with 5-8 whorls (shell turns). Favours silty sand sediments of freshwater systems. Cannot tolerate freezing waters but can survive at 0°C in low salinity.

Found in densities of up to 300,000 mussels per square metre in North America impacting habitat and food sources.

Round Goby
Neogobius melanostomus



Found in all Great Lakes, Trent River, Rice Lake, Lake Simcoe, and Trent-Severn Waterway. Native to Black and Caspian Sea.

Black spot on dorsal fin with fused pelvic fins (under belly) and up to 250mm long. Lives in cobble, sandy, and gravel substrates with or without vegetation, deep or shallow areas and with little oxygen.

Eats native small fish, eggs and larvae and threatens survival of many Lake Erie populations. Nutrient cycling may also be altered.

Sea Lamprey
Petromyzon marinus



All Great Lakes, connected channels and rivers upstream of Niagara Falls. Native to Atlantic Canada, Lake Ontario, St. Lawrence River, and Gulf of Mexico.

Long, snake-like with sucking disc at mouth, no scales, and 2 dorsal fins not connected. Young lampreys found in silt in rivers and streams, and adults found in open areas of large lakes and rivers.

Parasitic, feeding on fish and often killing host. Reduce predatory fish impacting prey on food web. Control measures extremely effective.

Silver Carp
Hypophthalmichthys molitrix
Not yet established in the Cataraqui Region, expected to thrive once they are introduced



Not yet recorded in Ontario. Native to eastern China and Russian lowland rivers.

Eyes large and very low on head. Large mouth tilted upwards. Found in large rivers and lakes in temperate & subtropical areas near the surface. Can be found at 2.5°C in low oxygen.

Competes with native fish and invertebrates for food. Leap out of water when frightened creating a hazard.






Asian Clam
Corbicula fluminea
Not yet established in the Cataraqui Region, expected to thrive once they are introduced






Not known to be in Ontario. Found in Lake Erie, Michigan and Superior along USA border, Quebec side of St. Lawrence River. Native to Southeast Asia, Turkey, Australia, Africa.

Small (2.5-6.5cm) with thick yellow to black-brown shell. Found in all water systems with mud-sand bottoms, rocks, woody debris and gravel. Lives in >2°C water and reproduces at 16°C.

Filter feeder increasing water clarity resulting to excess plant growth. Can clog pipes and irrigation. May compete with native mussels.

Species	Photo	Distribution	Description	Impact
<p>Flowering Rush <i>Butomus Umbellatus</i></p>		<p>Lake Erie, St. Clair, west St. Lawrence River, Severn River, southern Quebec, Winnipeg River and Lake Ontario. Native to Eurasia.</p>	<p>Perennial aquatic plant < 2.7m long with small pink flowers produced in summer and fall seasons. Prefers shallow freshwater (2m depth) systems and often found in ditches.</p>	<p>Competes for habitat with native vegetation and reduces access to water.</p>
<p>Eurasian Water-Milfoil <i>Myriophyllum spicatum</i></p>		<p>Occurs in the Great Lakes, southern Ontario, coastal Georgian Bay, St. Lawrence River and southwestern Quebec. Native to Eurasia.</p>	<p>Most commonly found in 1-3m depths of freshwater systems but can be found as deep as 10m.</p>	<p>Creates large mats at water's surface impeding light and native vegetation growth.</p>
<p>Water Soldier <i>Stratiotes aloides</i></p>		<p>All Great Lakes, connected channels and rivers upstream of Niagara Falls. Native to Atlantic Canada, Lake Ontario, St. Lawrence River, and Gulf of Mexico.</p>	<p>Flowering or non-flowering submerged, perennial with no stalk. Favours low flow waters up to 5m deep. Prefers ponds, ditches, inlets, and nutrient-rich water.</p>	<p>Forms large colonies competing with native species. Can reduce growth of phytoplankton and alter ion concentration in waters.</p>
<p>European Water Chestnut <i>Trapa natans</i></p>		<p>Trent-Severn waterway in Peterborough, Lake Ontario Coastline including near Kingston at the mouth of the Cataraqui River. Native to Asia and Northern Europe (as far west as Ireland).</p>	<p>Annual, rooted or free-floating plant. White flowers in summer until frost. Woody nut with 3 spines. Lives in nutrient-rich water of 2-4m deep.</p>	<p>Large floating mats shade and crowd native plants and impedes boating.</p>
<p>European Frog-Bit <i>Hydrocharis morsus-ranae</i></p>		<p>Found in the St. Lawrence River, Lake Ontario, Kawartha Lakes, Rideau and Ottawa Rivers, Lake Erie, St. Claire and lower Canadian Shield. Native to Eurasia.</p>	<p>Floating leaves in round or hear-shape up to 6cm wide. Flowers between spring and fall, white petals with yellow centre. Prefers slow-moving waters, shade, ditches, ponds and rivers.</p>	<p>Creates large mats reducing light penetration, competes with native flora, and impedes water flow.</p>

Species	Photo	Distribution	Description	Impact
Aquatic Animal Invaders				
Purple Loosestrife <i>Lythrum salicaria</i>		Great Lakes basin, St. Lawrence River, Timmins and Rainy River in western Ontario. Native to Eurasia.	Reaching upwards to 2m tall with pink-purple flowers, emergent, and perennial with egg-shaped leaves. Found in marshes, floodplains, edges of waterbodies and ditches.	Forms monocultures reducing diversity, harming native plants, changing nutrient cycling and removing habitat for birds and invertebrates.
European Common Reed <i>Phragmites australis subsp. australis</i>		Found in southern Ontario, common through southern Quebec, Newfoundland, New Brunswick, Nova Scotia, British Columbia and Manitoba. Native to Eurasia.	Tall, perennial grass forming dense stands. Can grow from 1-4m tall with long hairs at the tips. Prefers shallow waters in freshwater wetlands, stream banks, shorelines and ditches.	Creates monocultures reducing native plant diversity and reducing habitat for wetland species at risk.
Curly Leaved Pondweed <i>Potamogeton crispus</i>		Found in southern Ontario, southern Canadian Shield, Georgian Bay-Severn River area and across western provinces. Native to Eurasia.	Perennial, submerged and rooted. Green to red-brown colour with small red-brown flowers in May-June. Can be found in all water systems in silt, clay and sand.	Crowds out native species, reduces water flow, and may alter oxygen levels.

This resource was created using information from: Ministry of Natural Resources and Forestry. 2010. Field Guide to Aquatic Invasive Species, 3rd Edition. Queen's Printer for Ontario and www.invadingspecies.com/download/Guides/27868_FieldGuide2010_FINAL.pdf



Cataraqui
conservation

1641 Perth Rd. Glenburnie ON K0H 1S0
613-546-4228 | info@crca.ca | www.crca.ca