

ROUND GOBY

Invades Ontario Waters



What is Round Goby?

Round goby (*Neogobius melanostomus*) is a small, invasive bottom-dwelling fish that has already had significant impacts on the Great Lakes fishery and threatens to invade Ontario's inland waters. Round goby is native to Eastern Europe but has been introduced to North America where it was first reported in the St. Clair River, Ontario in 1990. The species is believed to have been introduced after being transported in the ballast water of ocean crossing ships.

Round goby can live up to five years and reach lengths of up to 25 cm (10 inches). The fish is mottled brown in colour (a spawning male is black) and looks like our native sculpins. However, unlike most other fish that have two separate pelvic fins, round goby has a single pelvic fin forming a suction disc underneath the body. See diagram for further details.

Round gobies can spawn multiple times in a season. Females can lay thousands of eggs per year. The males guard the nests, which are made under stones, logs, in cavities, or artificial substrata. Eggs develop over approximately 15 days depending on water temperature. In some places, densities of round goby have reached up to 100 fish per square meter.

Where is it found?

Currently, round goby is the fastest spreading fish in Ontario. The species is now established in all five Great Lakes and in Lake St. Clair. It has been found in Michigan's inland waters and recently in inland Ontario, at Trent Severn Waterway (between village of Hastings and Healey Falls), the Pefferlaw River and Lake Simcoe at the mouth of the Pefferlaw River.

This fish prefers to inhabit rocky and sandy bottoms but is not limited to these habitats. It occupies a broad range of depths but is most abundant near shore.

What does it eat?

The diet of round goby consists largely of small benthic organisms like crustaceans and molluscs, as well as insects. Larger round goby feed on zebra mussels (but unfortunately do not control them) and on the eggs and young of important recreational and commercial fish.

What are the impacts?

Round goby has caused the decline of native fish such as mottled sculpin and logperch by competing with these species for food and habitat. Its interference with the spawning of mottled sculpin has potential impacts to yellow perch, which is an important predator of sculpins in some areas. Round goby also severely affects other fish such as bass, lake trout and sturgeon by eating their eggs and young.

The potential for round goby to contribute to food web bioaccumulation of toxins is also a serious concern for fish and other animals in higher trophic levels. Research is beginning to examine possible contaminant burdens that might build up through zebra mussels, round gobies, piscivorous fish, and animals that consume these fish, including humans.

It is suspected that botulism Type E poisoning of fish and fish-eating birds in the Great Lakes is also spread in a similar way. The toxin may be initially contracted by round goby from infected zebra mussel, and then trans-



Photo: George A. Coker



ferred to piscivorous fish and birds that eat round goby.

Recreational activity such as angling is impacted, as well. In areas where round goby densities are high, they are a nuisance to angling because of their aggressive habit of stealing bait.

Due to serious impacts caused by the introduction of round goby and the potential for people to introduce them to new areas, regulations have been passed to make it illegal to possess this fish alive.

You can help!

The Ontario Federation of Anglers and Hunters (O.F.A.H.) and the Ontario Ministry of Natural Resources (OMNR) have set up a toll-free **Invading Species Hotline 1-800-563-7711** and website **www.invadingspecies.com** for you to obtain information on and report sightings of round goby and other invading species.

■ **Report sightings.** If you find round goby in a new area, freeze it or preserve it in rubbing alcohol, then call the Invading Species Hotline or contact your local OMNR Office to report your finding and confirm your specimen as round goby.

■ **Get involved.** Participate in one of our many community based monitoring programs to detect and prevent the spread of invading species.

■ **Find out more.**

Contact the **Invading Species Hotline**

1-800-563-7711 or visit

www.invadingspecies.com

Boaters and Anglers – You can help!

It is extremely important to prevent the further spread of round goby to inland waters and other areas. To protect your lake and prevent the spread of round goby and other invading species, please take the following precautions before leaving a water body and entering another:

- Never use round goby as bait – it is illegal!
- Do not release live bait! Empty your bait bucket on dry land, or freeze or salt the bait for later use. It is illegal to release live baitfish from one water body into another.
- Inspect your boat, trailer and equipment – remove all plants, animals and mud, and dispose of them on dry land or in the garbage.
- Drain water from motor, live well, bilge and transom wells while on land.
- Remove organisms you can't see on your boat, trailer and equipment by:
 - ◆ Rinsing them with hot water (>40°C), or
 - ◆ Spraying with high pressure water (250 p.s.i.), or
 - ◆ Drying them in the sun for at least 5 days.

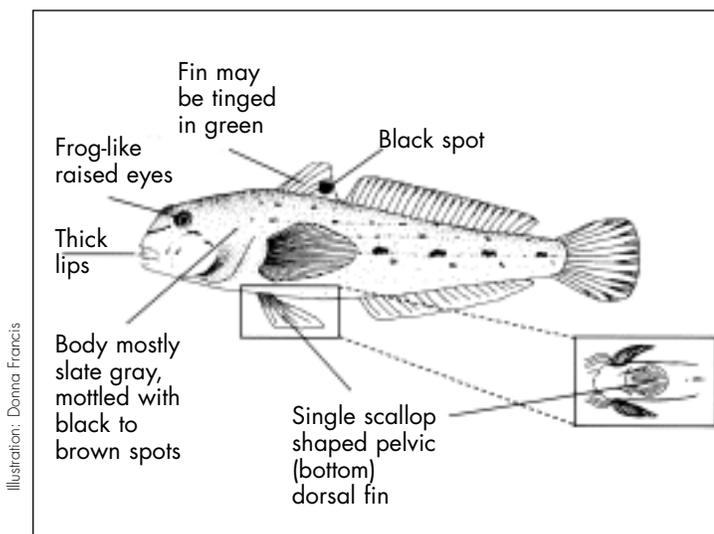


Illustration: Donna Francis

