



## Alerting Lakeshore Communities about the Invasive Round Goby

The role of the Eastern Lake Ontario Dune Steward Program is to educate the public about proper usage of the local resources, about the regulations that govern use of public areas, and about threats to the fragile ecosystem. Invasive species, such as the round goby, pose one of the threats that negatively impact the ecosystem and the people and other species that use the system.



How can a fish that is only 4 to 10 inches long possibly harm Lake Ontario economically and ecologically? Although small, the round goby is a highly aggressive invasive species that feeds on the eggs and offspring of lake trout and logperch, a food source for important game fish such as rock bass, largemouth bass, northern pike, walleye, and lake trout.

A public information program hosted the Pulaski-Eastern Shore Chamber of Commerce provided local residents and anglers with information on round gobies in summer 2007. The bottom-dwelling fish negatively impact the aquatic ecosystem by decreasing native fish populations, and reducing the availability of food and shelter for other more desired fish. The round goby has a vigorous ability to survive, even in Lake Ontario's murkier waters, allowing them to out-compete against native species.

The round goby is a possible vector for botulism moving up the food chain. The round goby eats zebra mussels, and since zebra mussels are organisms that voraciously filter feed, they accumulate toxins in their tissues.

The zebra mussel may accrue the botulism type E bacteria, so when the round goby eats a mussel it becomes a bioaccumulator, concentrating toxins in its body. When other fish eat the goby the bacteria passes to them, and further on to piscivorous (fish-eating) birds.



*Dune Steward Danielle Lichtenstein awaits questions those attending a Round Goby presentation at the Pulaski-Eastern Shore Chamber of Commerce. Photo: Kara Lynn Dunn, NY Sea Grant*

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# A Primer on Round Goby

## General Information

- Most abundant near shore, but can be located at all water depths
- Native to the Black and Caspian Seas
- First discovered by Dr. David Jude in 1990 in the St. Clair River, Michigan
- First sighted in Lake Ontario in 1997
- Thought to have been transported by cargo ship ballast water

## Invasive Characteristics

- Highly aggressive - take bait off hooks, compete successfully with native fish, such as sculpins and darters
- Direct predation - feed on other small fish along with the eggs of lake trout, smallmouth bass, and log perch
- Well-developed lateral line (sensory system) - enhances the ability to detect water movement and avoid predation
- Robust survival - can survive in degraded water conditions where other fish have been pushed out by pollution
- Long, productive spawning period and frequently spawn April to September - one female produces 300 to 5,000 eggs approximately every 20 days

## Identification

- 4 to 10 inches in length, but typically six inches long
- Females and immature males are a mottled gray and brown color
- Spawning males are almost solid black
- Typically have a soft body and large, round head with eyes protruding near the top of the head
- The single pelvic fin located on the bottom is important to note because no native fish in Lake Ontario have a single pelvic fin

## What you can do about the round goby

- Avoid contact with dead or dying animals because of the potential for type E botulism
- Keep pets away from dead or dying animals
- Learn how to identify round gobies
- Do not keep round gobies or use them as live bait
- Never dump your bait bucket in the water
- Inspect and clean your boat, motor, trailer, and boating equipment to be sure it is free of unwanted species before moving to new waters

**For More Information on the Eastern Lake Ontario Dune Steward & Salmon River Program, contact 315-312-3042**

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The Eastern Lake Ontario Dune Steward & Salmon River Steward Program is managed by New York Sea Grant in partnership with the New York State Department of Environmental Conservation, New York State Parks, and The Nature Conservancy.

