

ROUND GOBY

Neogobius melanostomus



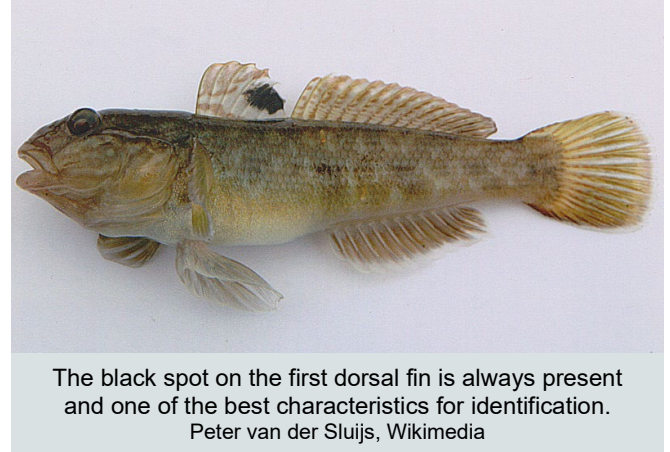
Department of
Environmental
Conservation

What are round goby?

Round goby are highly invasive bottom-dwelling fish from the freshwater region of Europe's Black and Caspian seas. They are voracious feeders that outcompete native species for food, shelter, and spawning areas.

Identification

Round goby are brownish-gray with dark brown or black splotches. During spawning and nest-guarding season (April-September), males have black bodies with yellowish spots and median fins with a yellowish-white outer edge. All round goby have a black spot at the base of their first dorsal fins and a single, fused pelvic fin. Their eyes are large and raised, like those of a frog. When fully grown, round goby range from 4–10 inches long.



The black spot on the first dorsal fin is always present and one of the best characteristics for identification.
Peter van der Sluijs, Wikimedia

Where are they located?

Round goby are typically found in freshwater but can also tolerate mildly saline waters. They are present in all of the Great Lakes, the Erie Canal, the Mohawk River, and the Hudson River, as well as several inland lakes.

How do they spread?

Round goby were accidentally introduced into the Great Lakes in the early 1990s through the ballast water of ocean-going ships. They have since spread by swimming along connected rivers and canals and have been transported to other waterbodies in bait buckets and water-containing compartments of boats.

What are their impacts?

- Round goby directly compete with native fish populations for food by eating the invertebrates they rely on, as well as the eggs and young of the native fish themselves.
- Because they are aggressive, reproduce quickly, and have voracious appetites, they outcompete and reduce native fish populations, which in turn negatively impacts the fishing and tourism industries.
- They are a link between the invasive, disease-carrying mussels that they feed on and the native wildlife that feed on the goby, significantly increasing the mercury content of sportfish, as well as the instances of botulism outbreaks among native fish and diving birds.
- They act as a vector for viral hemorrhagic septicemia (VHS), a serious, fatal fish disease affecting many native species.



Round goby (left) have a single, fused pelvic fin which helps distinguish them from native look-a-likes like the sculpin (right).
Round goby: Peter van der Sluijs, Wikimedia Commons
Sculpin: Scott George, U.S. Geological Survey

What are the tools for management?

Preventing the spread of round goby to new waterbodies is the primary goal of management. Options include physical activities like using traps, dams, canal locks, electrical barriers, and earthen barriers to deter movement. There is little that can be done once round goby have been introduced into a waterbody. Rotenone is a chemical that may be used to kill round goby, but only in specific, controlled circumstances. Rotenone rapidly breaks down in water and on land, limiting long-term pollution after use, but it affects most fish directly exposed to it and must be used cautiously.

Management methods should be evaluated on a case-by-case basis for each infestation. For help with selecting the best management for your situation, contact your local Partnership for Regional Invasive Species Management (PRISM) (see below).



Round goby have bulging eyes and puffy cheeks, giving them a frog-like appearance.
David Jude, School of Natural Resources and the Environment, University of Michigan

What can I do?

- Clean, drain, and dry your watercraft and equipment thoroughly before and after each use.
 - Inspect and remove debris and mud from boats, trailers, and equipment.
 - Dispose of all debris and unwanted bait in trash cans or at disposal stations.
 - Drain all water-holding compartments, including live wells, bait wells, and bilge areas. If possible, visit a decontamination station and disinfect compartments with hot water (140°F) for at least 30 seconds.
 - Dry boats, trailers, and all equipment before use in another waterbody. A minimum of 5–7 days of drying time in dry, warm conditions is recommended.
- Do not dump aquarium contents in any waterbodies, drainage ditches, or sewers.
- Use certified bait that is non-invasive and disease free. See <https://www.dec.ny.gov/outdoor/124974.html#Purchased> for more information.
- Learn how to identify round goby and report any encounters. If you think you have caught a round goby:
 - DO NOT RELEASE IT.
 - Take several photos of it from different angles, including the underside, and freeze it, then throw it in the trash after ID has been confirmed.
 - Email the photos, noting where it was caught (coordinates preferred), to isinfo@dec.ny.gov, OR
 - Submit a report through iMapInvasives at www.NYiMapInvasives.org, OR
 - Contact your local Partnership for Regional Invasive Species Management (PRISM). Visit <https://www.dec.ny.gov/animals/47433.html> for more information.

CONTACT INFORMATION

Bureau of Invasive Species and Ecosystem Health
Division of Lands and Forests

New York State Department of Environmental Conservation
625 Broadway 5th Floor, Albany, NY 12233-4253
P: (518) 402-9425 | isinfo@dec.ny.gov
www.dec.ny.gov

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