

Freshwater Tubenose Goby

Proterorhinus semilunaris



Photo courtesy of Miloslav Petrtyl, biolib.cz (EOL).

The Freshwater Tubenose Goby is a small, bottom-dwelling fish that gets its name from its tubular-shaped nostrils. It feeds mainly on aquatic insects, and while it may have negative impacts similar to that of the Round Goby, its range expansion has been fairly limited in comparison.

Species Description

The Freshwater Tubenose Goby has a cylindrical body with small scales and a somewhat flattened underside, measuring 6-11 cm (2.4-4.3 in) in length. It has a blunt and rounded snout with a wide mouth and large lips. Tubular-shaped nostrils extend just beyond the tip of the snout. Two pelvic fins are fused into a single suction cup-shaped fin and the dorsal fin is split into two distinct fins. The body is light brown with darker brown blotches that form vertical bars on the rear half of the sides. A triangular black spot is present at the base of the caudal fin, followed by two white spots.

While it may be confused with the similar invasive Round Goby (*Neogobius melanostomus*), the Freshwater Tubenose Goby is smaller, has tubular-shaped nostril extensions, lacks a black spot on the first dorsal fin, and has eyes that do not protrude from the top of the head.

Native & Introduced Ranges

Native to the estuaries of Eurasia, including tributaries of the Black and Caspian seas, both the Freshwater Tubenose Goby and the closely related Round Goby were first detected in the Lake St. Clair region around 1990, released in the ballast water of ocean-going ships. While population growth of the Round Goby quickly escalated to the entire Great Lakes region, the Freshwater Tubenose Goby has



experienced a more limited range expansion and can be found in lakes St. Clair, Erie, and Superior. In Pennsylvania, the Freshwater Tubenose Goby has established a reproducing population in Presque Isle Bay, Lake Erie.

Biology & Spread

Young Freshwater Tubenose Goby often resemble small bait fish and can be spread by boaters and fishermen who carry them from one body of water to another in bait buckets, bilge water, and on plant debris. Females spawn multiple times during the warmer months of the year, and males guard their nesting sites, defending the eggs and young from predators. Although females can live for up to five years, males die immediately after spawning.

Habitat

The Freshwater Tubenose Goby prefers shallow water habitats with abundant vegetation in slightly brackish to fresh water. It occupies a variety of waters from estuarine to slow-moving freshwater streams. Nests are created under rocks, logs, and shells.

Impacts

Threat to Biodiversity

While its impacts are not yet known, the Freshwater Tubenose Goby may compete with and prey upon benthic species in a manner similar to the larger Round Goby. However, it does not feed on invasive mussels and its mouth is too small to be caught on a fishing line like the Round Goby. Because it is small, not as aggressive, and its range expansion has been limited, the Freshwater Tubenose Goby may not be as detrimental as the Round Goby.

Photo courtesy of David Jude, Center for Great Lake and Aquatic Sciences.



Photo courtesy of Alexei Poletaev, Flickr.



Prevention & Control

Preventing the introduction and spread of the Freshwater Tubenose Goby is the best way to protect natural habitats from harm.

- Know how to identify the Freshwater Tubenose Goby.
- Always check for and remove any plants, mud, and debris from boats, trailers, clothing, and equipment before leaving a water body.

According to Pennsylvania Fish and Boat Commission regulations (58 Pa. Code Chapter 71):

- Boaters must drain all water from their boat and remove drain/bilge plugs before leaving a water body.
- Unused live bait should be disposed of in the trash; it is unlawful in PA to release any unused live bait into Commonwealth waters. The Freshwater Tubenose Goby should never be used as bait.
- Clean and dry all equipment after use. It is unlawful in Pennsylvania to transport plants, mud, or debris on boats and trailers.
- It is illegal to possess, transport, sell, or introduce the Freshwater Tubenose Goby, living or dead, in Pennsylvania. The PA Fish and Boat Commission Law Enforcement staff regularly check bait buckets and possession of the species can lead to legal penalty.

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References:

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