

# Goldfish

(*Carassius auratus*)

The goldfish is a well-known species of fish that has been sold world-wide for use in aquariums, ponds and water gardens for hundreds of years. Native to eastern Asia, goldfish were first kept as pets in China around the year 960 and have been reared and sold as pets ever since. They are commonly thought to be the first foreign fish species to be introduced to North America from overseas. Goldfish are often released into ponds, lakes or streams by people who no longer want them.

In Ontario, goldfish are usually found in the wild in quiet areas of vegetated ponds, streams and pools, often in populated urban or suburban areas. The fish are able to tolerate fluctuations in water temperature and water with low levels of dissolved oxygen. They feed mainly on fish eggs, larvae and aquatic plants. In healthy ecosystems, goldfish don't appear to compete well with some native fish. However, they are quite tolerant of poor water quality, and may threaten some native species in degraded ecosystems.

## Range

Goldfish have been introduced worldwide. They are established in locations throughout all provinces of Canada and all of the United States except Alaska. In Ontario, established populations have been reported along the north shore of Lake Erie, the west end of Lake Ontario, and occasionally in other locations across the province.

## Impacts of Goldfish

The ecology and impacts of goldfish introduced to North American waters have not been widely studied. However, the behaviour of Ontario populations indicates they may reduce the province's biodiversity through their effects on native species.



Goldfish have the potential to produce large populations.  
Photo: Ontario Streams

- Goldfish eat snails, small insects, fish eggs and young fish, making this species a competitor with and predator of native fish.
- They stir up mud and other matter when they feed, which increases the cloudiness of the water and affects the growth of aquatic plants.
- They have the potential to produce large populations in some situations.
- Goldfish can carry diseases such as koi herpesvirus that can harm local fish populations. Koi herpesvirus is not a risk to human health.

## How to Identify Goldfish

- Goldfish have elongated bodies averaging 12 to 22 centimetres long, but can grow up to 40 centimetres long.
- Their colour can vary from the typical bright orange to olive green or creamy white. Wild populations are typically olive to grey.
- Head and eyes are large.
- The dorsal fin is long and has a single stout spine with a serrated trailing edge. The anal fin is short and also has a single stout serrated spine. The tail is deeply forked.
- The mouth is small and has no trailing whiskers (barbels).



Goldfish vary in colour, with wild populations typically being olive to grey. Photo: John Lyons, Wisconsin Department of Natural Resources

## What You Can Do

- Learn how to identify goldfish and how to prevent accidentally spreading this invasive species.
- Don't release any live fish into Ontario lakes, rivers or streams. Return or donate unwanted aquarium fish to a pet store or local school.
- Inspect your boat, trailer and equipment after each use. Remove all plants, animals and mud before moving to a new waterbody.
- If you've seen a goldfish or other invasive species in the wild, please contact the toll-free Invading Species Hotline at 1-800-563-7711, or visit [www.invadingspecies.com](http://www.invadingspecies.com) to report a sighting.



Variety of goldfish in aquarium. Photo: Ontario Streams

## Other Resources:

[www.invasivespeciescentre.ca](http://www.invasivespeciescentre.ca)  
[ontario.ca/invasivespecies](http://ontario.ca/invasivespecies)  
[www.invadingspecies.com](http://www.invadingspecies.com)

## For More Information:

Please contact the  
Invading Species Hotline at  
1-800-563-7711.

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