



UNIVERSITY OF WISCONSIN SEA GRANT INSTITUTE

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Lake Superior Whitefish

SUSTAINABLY MANAGED AND DELICIOUS

Lake Whitefish

Coregonus clupeaformis



JOHN LYONS

Length: 18 to 19 inches, can grow to 40 inches

Weight: 1.5 to 2 pounds, can be over 20 pounds.

Coloring: Silvery with greenish brown backs and clear fins

Common names: Great Lakes whitefish, gizzard fish

Commercially harvested in: Lake Superior, Lake Michigan, Lake Huron and Canada



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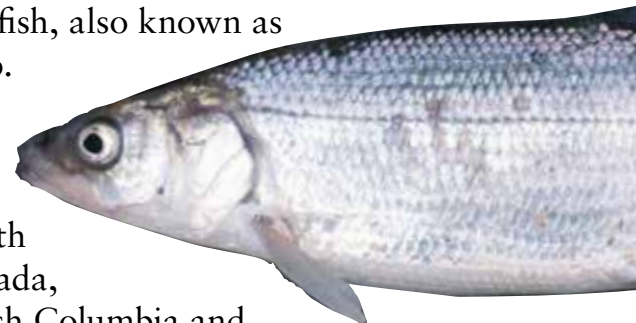
Legal size lake whitefish (above) and whitefish in a trap net waiting to be sorted (below). Lake whitefish are a sustainable fishery in Lake Superior with health benefits that make them a great addition to a healthy diet.

What's in a Name?

Talk to someone from the ocean coasts about whitefish and they may think you're referring to several marine species that have white flesh (cod, haddock or pollock). In the Great Lakes we have THE whitefish, also known as lake whitefish, which are big business and tasty, too.

The fish's Latin name, *Coregonus*, means "angle-eye" or pupil, and *clupeaformis* means "herring-shaped."

Whitefish are distributed widely in northern North America from the Atlantic coast of Maine and Canada, through the northern U.S. and Great Lakes to British Columbia and north to the Arctic Ocean and Alaska.



RELATED SPECIES



Coregonus artedii; Cisco, lake herring or tullibee

Deepwater ciscos



Coregonus hoyi; Bloater



Coregonus kiyi; Deepwater chub — only caught in Lake Superior



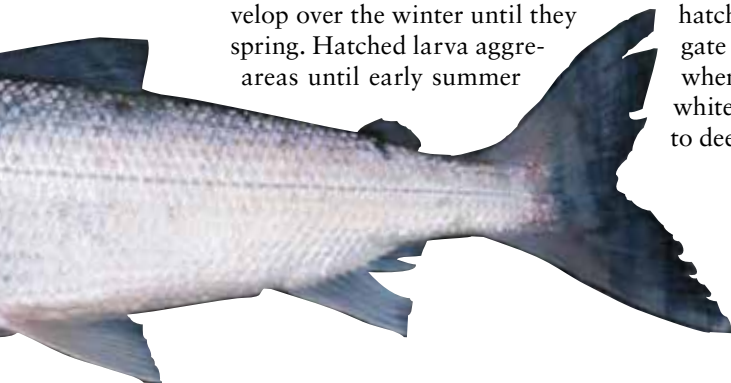
Coregonus zenithicus; Shortjaw cisco

Lake Superior is home to several species in the whitefish family. Collectively known as the ciscos, these fish are smaller than the lake whitefish and are commercially harvested for roe, for smoking and seasonally as fresh fillets.

Life History

Lake whitefish are benthic fish that feed on a wide variety of bottom-living invertebrates and small fishes. Predators of whitefish include lake trout, northern pike, burbot and walleye. Sea lamprey will feed on lake whitefish, but the impact on the populations is not great. Whitefish spend most of their time in Lake Superior between 100 and 300 feet, but will move from deeper water into shallower water at night. Spawning occurs in the fall when whitefish move into shallow water of less than 25 feet to spawn over rocky and sandy areas. Eggs are deposited randomly over the bottom and develop over the winter until they hatch in the spring. Hatched larva aggregate in shallow areas until early summer

when young whitefish move to deeper water.



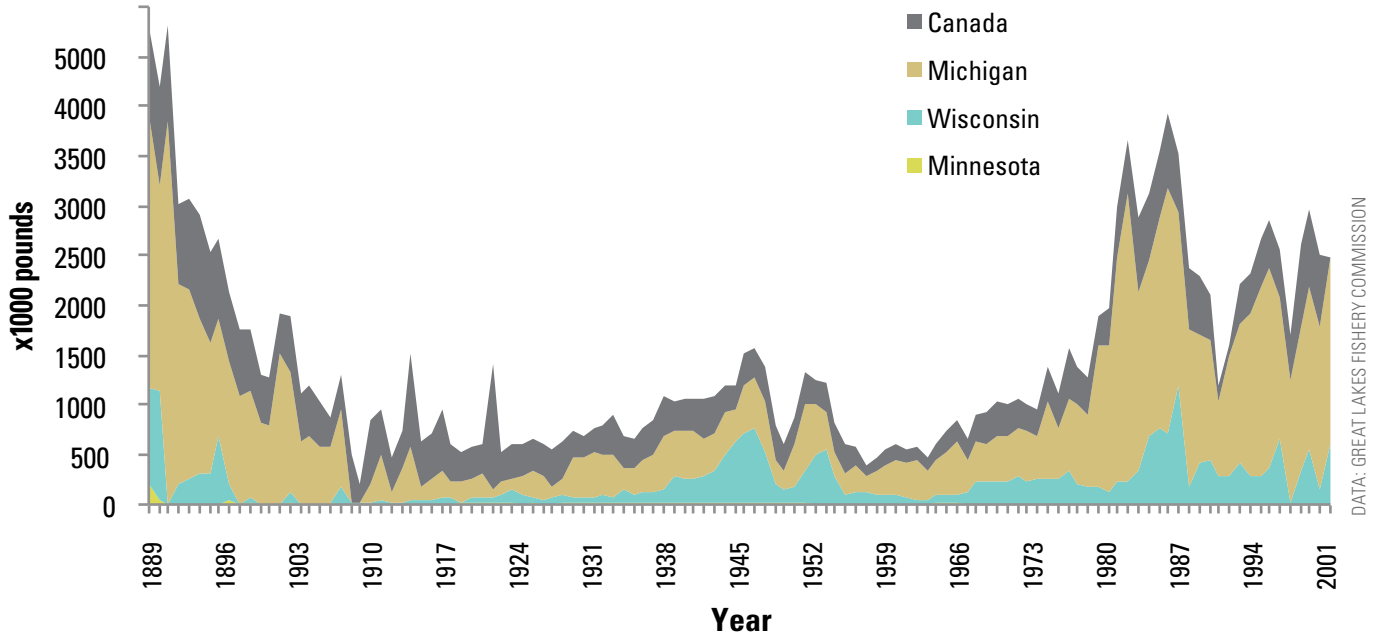
Market

The whitefish fishery in Lake Superior crashed in the late 1800s, and remained low in the 1900s, with a small increase in the late 1940s. Harvest increased in the 1980s, followed by a slight decline in the 1990s. Harvest levels have been steady in recent years and have been able to support commercial activity in Lake Superior.

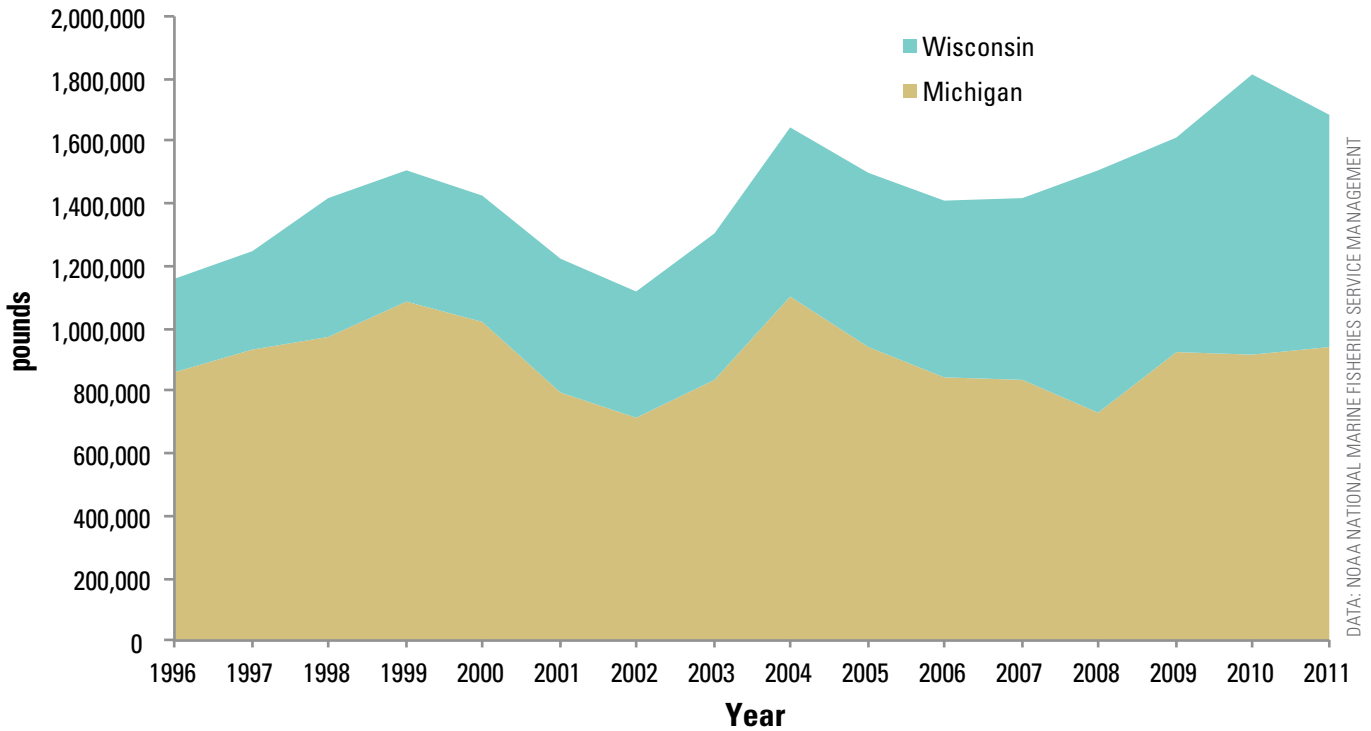
The lake whitefish harvest has been increasing in recent years. Michigan has historically been a larger producer of whitefish than Wisconsin in Lake Superior, however in recent years, the harvest has been roughly equal between the two states. There is not a fishery for whitefish in the Minnesota waters of Lake Superior.

In Lake Superior, Wisconsin has a closed season for spawning from Oct. 1 to Nov. 27 each year. The season is closed in Michigan waters during the month of November for state commercial operations and the last three weeks in November for tribal fishers to allow for spawning. Small fish are protected through a minimum legal harvest size of 17 inches for whitefish. Wisconsin issues a maximum of 10 commercial licenses with no maximum quotas for capture on Lake Superior. Whitefish are harvested in Lake Superior by a combination of gill nets and trap nets. In addition to commercial fishery, there is also a winter fishery for whitefish by anglers through the ice.

Historic Lake Whitefish Harvest

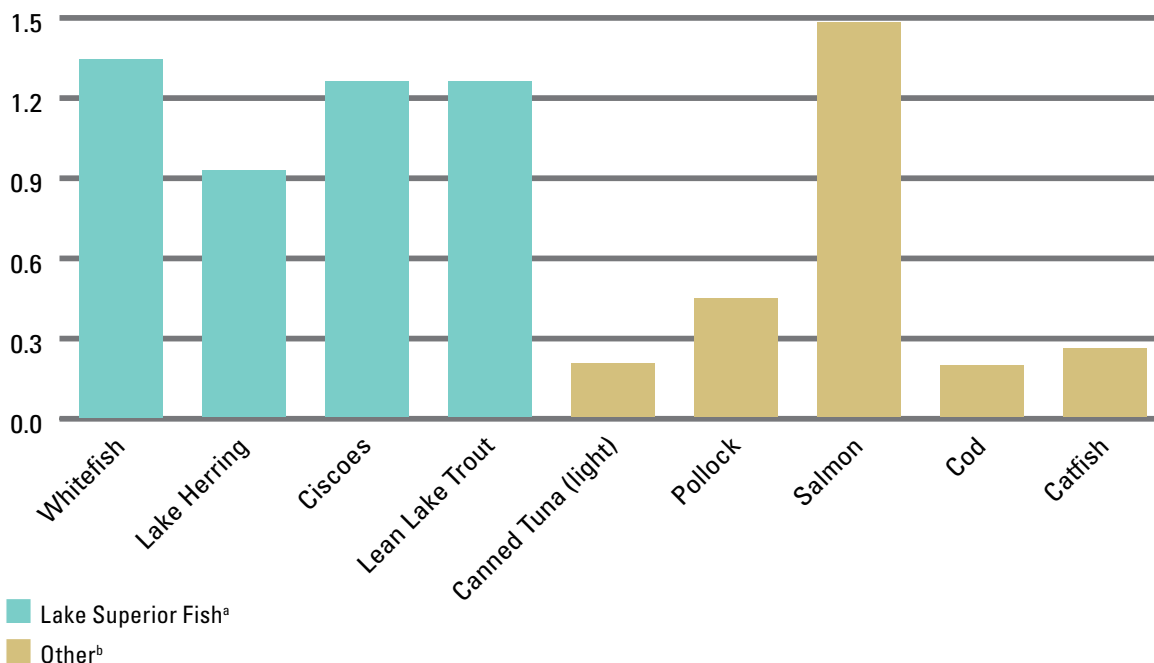


Lake Whitefish Harvest in the United States in Recent Years





Omega-3 Fatty Acids per 3 ounce serving



SOURCE: AMERICAN HEART ASSOCIATION

Use as a Food Fish

Fish consumption advisories recommend one meal per week for Lake Superior whitefish and one meal per month for Lake Michigan whitefish. This applies to all sizes of fish and protects all classes of people, including children and pregnant women.

Whitefish can be quickly and easily prepared in the kitchen by rubbing fillets with olive oil, salt and pepper and then broiled until done. Cooked whitefish is white and flaky with a fine flavor. Whitefish is also excellent smoked and the eggs can be processed into caviar.

In addition to being delicious, lake whitefish is also good for you. Whitefish are an important source

of omega-3 fatty acids, the essential unsaturated fatty acids that, according to the American Heart Association, have been shown to reduce blood pressure, blood triglycerides and the risk of heart attack. There is also evidence these fish oils help people cope with rheumatoid arthritis, cardiac arrhythmias, depression and anxiety. Several studies suggest omega-3 fatty acids may have anti-cancer effects. Whitefish have the highest levels of omega-3 fatty acids compared to other Lake Superior food fish, and have levels similar to salmon.

^a Wang et al. 1991. Journal of Food Science 55: 71-73

^b American Heart Association. "Fish 101" Accessed 9/9/2013