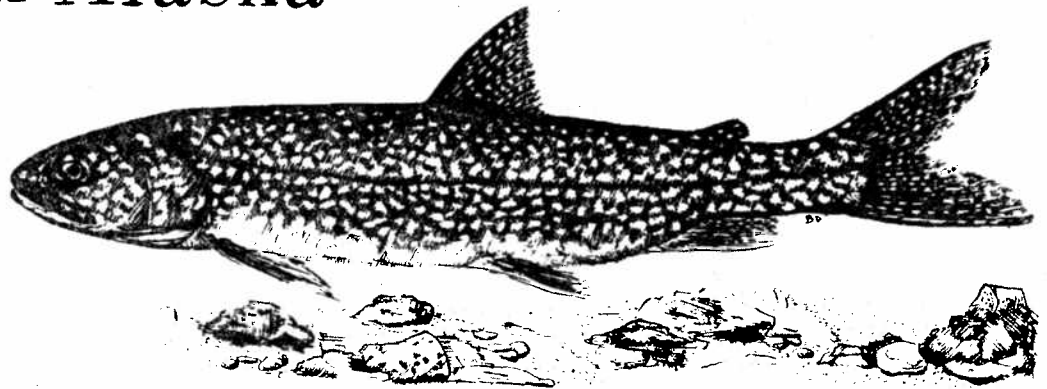


the

LAKE TROUT

in Alaska



Alaska Department of Fish and Game
Wildlife Notebook Series

LAKE TROUT (*Salvelinus namaycush*) are Alaska's largest freshwater fish. They are also the largest of the group of fishes known as char. In Alaska, close relatives of the lake trout are Dolly Varden and arctic char, and all three species are members of the genus *Salvelinus*. Trout and salmon are more distantly related and are in the same family as the chars.

GENERAL DESCRIPTION: Lake trout have a body shape common to that of trout and salmon. They generally have small, light, irregularly shaped spots on a silvery-to-dark gray background, but color varies extensively at different seasons and in different lakes. Males and females are quite similar, with males having a slightly longer, more pointed snout. Lake trout can best be separated from other chars by their deeply forked tail.

DISTRIBUTION: In Alaska, lake trout are present north of the Brooks Range but are not found in lakes of the North Slope lowlands. To the west, lakere are found in the Kobuk drainage, but not within 400 miles of the Bering Strait. Lake trout are common in Bristol Bay lakes and in the Pacific drainages just south of Cook Inlet.

LIFE HISTORY: Lake trout prefer large, deep, cold lakes in which they spend their entire lives. As lake waters cool in the early fall, the lakere feel the spawning urge and the mature fish begin looking for broken rock or rubble areas typically found along the lakeshore.

Males apparently select the spawning sites. Some researchers have watched males apparently cleaning silt from the spawning sites by brushing against the bottom with their snouts and fins.

The spawning act occurs when one or more males press themselves against a female. Eggs and sperm are then ejected simultaneously. Nearly all spawning occurs at night.

No parental care is given to the eggs other than a careful selection of spawning sites. Eggs are broadcast over the bottom and settle into cracks and crevices between rocks. Spawning typically starts when the water temperature cools to 50 degrees. Fishery scientists have discovered lake trout spawning in depths ranging from six inches to 200 feet. In Susitna Lake, all spawning appears to occur between depths of six to 15 feet. The eggs hatch early in the following spring.

Lake trout fry spend several years hiding in the rubble of the bottom, feeding on plankton and bits of plant material. The small fish are preyed on by older lake trout, ling cod and northern pike. When the young lake trout reach a size of six to eight inches, they are large enough to avoid serious predation. They then leave the protection of the rocky bottom and begin solitary wandering which, except for spawning periods, continues throughout life.

The small fish grow slowly and in seven or eight years, when most will spawn for the first time, they are still only about 18 inches in length. The maximum age of lake trout is unknown, but some very large specimens from Great Bear Lake, Canada are believed to have been nearly 40 years old.

A general knowledge of lake trout habits can pay dividends to the angler. In the spring, when lake waters are cold, lake trout are found near the surface. Lakers also feed more voraciously during the spring and anglers then catch more large specimens than at any other time.

As the lakes warm, the lakers go deeper and finally reside beneath the thermocline, that band of water separating the warm surface waters from the still, cold water of the extreme depths. Anglers should fish at progressively greater depths as water temperatures rise.

In the fall, as the lakes cool, they move once more to the inshore area to lay their eggs and forage on small fish.

FOOD HABITS: In general, if adequate numbers of both fish and invertebrate organisms are available, small lake trout will chiefly feed upon insects and some small fish. As the lake trout grow larger, they eat more fish and fewer invertebrates, a fact anglers would do well to remember when selecting suitable lures.

Usually the concentration of food is low in the large lakes where lake trout are found and their diet is determined by what they can find rather than what they prefer.

Lake trout residing in lakes without a species of forage fish, such as whitefish, tend to be small and stunted. In Alaska, such situations usually result in large numbers of lakers with individual fish seldom exceeding 16 inches. An excellent example of such a lake is Seven-Mile Lake on the Denali Highway. Also in the Denali area, lakers frequently catch mice and voles which fall into the lake. The author has found as many as four voles in a single lake trout stomach.

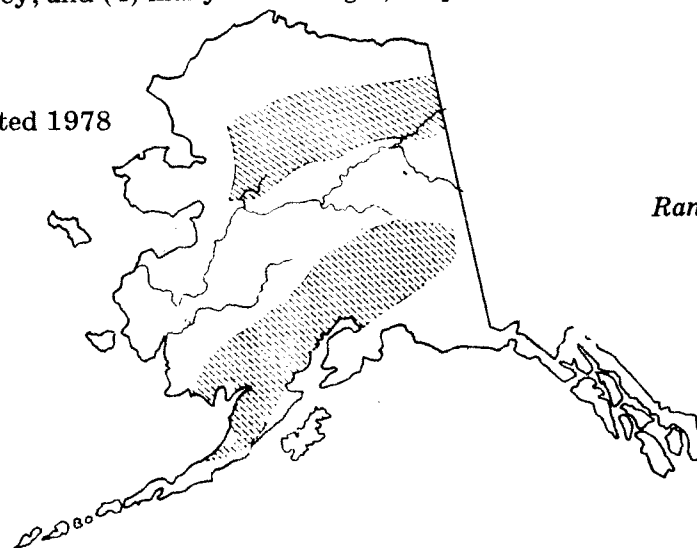
FISHING: Most successful lake trout anglers use bright spinners or spoons. Lakers can be taken by casting from shore, particularly in the early spring. However, trolling lures slowly through the deep, colder water layers will produce more action. Lake trout are also caught on pieces of cut fish and by jigging lures through the winter ice.

The world record lake trout is a 50-inch, 102-pound monster from Athabasca Lake, Canada.

In Alaskan waters, lake trout weighing up to 54 pounds reportedly have been taken by rod and reel. A 47-pound lake trout was caught in Clarence Lake in July, 1970.

Some of the more popular Alaskan lake trout fishing areas are: (1) Crosswind Lake and the Lake Louise complex near Glennallen, (2) Summit and Paxson lakes in the Denali area, (3) Jack Lake and Tanada Lake in the Nebesna Valley, and (4) many of the larger, deeper lakes along the Denali Highway.

R. Russell Redick
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*Range of Lake Trout
in Alaska
(shaded area)*