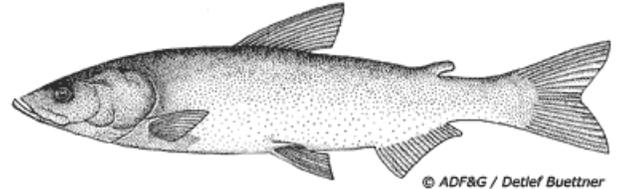




## Sheefish

The **sheefish** (*Stenodus leucichthys nelma* (Pallas)) called *inconnu* (unknown fish) by early explorers, is found only in arctic and subarctic North America and Asia. In Alaska, it is most abundant in the Kuskokwim and Yukon river drainages and in the Selawik and Kobuk drainages of Kotzebue Sound. A few are found in the smaller rivers of Norton Sound. Its tremendous size, fighting ability, and fine eating qualities make the sheefish one of the most unique fish in North America.

**General description:** The sheefish is a member of the whitefish family but is distinguishable from the more common whitefish by the strong extended lower jaw. The body profile is streamlined and the color is silvery with a darker coloration on the dorsal surface. It often displays a phosphorescent purple sheen when taken from the water. Males and females are similar, but females live longer and attain greater size. Sheefish in the Selawik-Kobuk area may weigh up to 60 pounds, while in Interior Alaska they seldom exceed 25 pounds.



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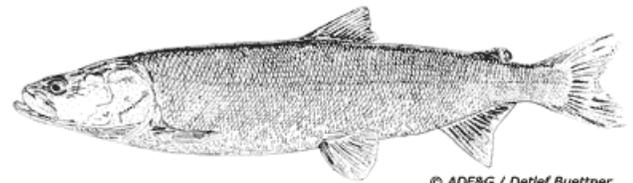
**Life history:** Sheefish in Alaska have been separated into five major stocks. In addition, smaller rivers such as the Nowitna, Black, and Porcupine have small local populations. The Minto Flats and Upper Yukon River populations are year-round residents in the eastern part of Interior Alaska. The Lower Yukon and Kuskokwim groups overwinter in the delta areas of these large rivers while the Kobuk-Selawik groups spend the winter in the brackish waters of Hotham Inlet and Selawik Lake. These latter groups can best be termed estuarine anadromous.

Upstream migrations of sheefish from the wintering grounds begin during the period of ice breakup. Some fish move to feeding grounds while mature fish migrate to spawning areas. The movements last from a few weeks in the Upper Yukon to over four months in the Lower Yukon River. Sheefish travel up to 1,000 miles upstream to spawn in the Alatna River. Sheefish do not feed in the later stages of the spawning migration but subsist on reserves of body fat. A 12-pound female may contain 100,000 eggs while a 50-pound female contains nearly 400,000 eggs. Sheefish have very stringent spawning ground requirements. The water must be from 4 to 8 feet deep with fast current over a bottom composed of differentially-sized gravel. Spawning occurs during late afternoons and evenings in late September and early October in water of 40° F or colder. Sheefish do not dig a redd or spawning nest. The females spawn on the water surface and males swim underneath, fertilizing the eggs. The spawning splashes of a female can be heard for considerable distances on cool fall evenings. The slightly adhesive fertilized eggs fall to the stream bottom where they lodge in the gravel. Unlike Pacific salmon, which die after spawning, sheefish may live to spawn several times. A fairly rapid downstream migration occurs after spawning as sheefish head to their wintering grounds and once again the fish begin feeding.

Development of the eggs proceeds slowly in the cold water, with up to six months elapsing before hatching. The fry travel downstream with spring floods to the extensive delta areas of the large rivers. They begin to feed on plankton. Their diet rapidly changes to insect larvae and small fish, and by the second year of life they feed almost entirely on fish. Adults eat any fish available.

For an arctic freshwater species, the sheefish exhibits a rapid rate of growth. Studies have shown that fish of each stock exhibit distinct growth rates, have a different life span, and reach sexual maturity at different ages. Fish of the Kuskokwim and Minto Flats populations grow the fastest. They reach 16 inches in length at age 2, and up to 30 inches in length and weights to 14 pounds by age 8. Sheefish from the Selawik-Kobuk area grow at a slower rate. They weigh about 10 pounds at age 10, but since they may live over 20 years, they may attain a very large size. Age at first spawning varies with the population, but males mature from ages 7 to 11. Some sheefish spawn every year, but every other year is probably the rule in most populations.

**Sport fishing:** In past years, the major use of the sheefish has been as a subsistence food for Alaska Natives and their dogs. However, its popularity as a sport fish is continually increasing. Sheefish taken on summer feeding grounds such as Minto Flats, the Holitna River, or the Selawik-Kobuk areas put up the best fight. During September, the Koyukuk River at Hughes and Allakaket provides the best fishing on the Yukon system.



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When the word "shee" is mentioned to veteran sheefish fishers, the Selawik-Kobuk country comes to mind. There, north of the Arctic Circle, the largest sheefish are found. Sheefish can be taken on medium action spinning or bait casting gear using 10 or 20 pound line. During their feeding periods, sheefish can be caught close to the surface using a fly. Sheefish can also be taken through the ice in Selawik Lake and Hotham Inlet during April and May using a lure attached to a short jigging stick with heavy line.

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