

# Burbot

(*Lota lota*)

By Tom Dickson



**T**he burbot is unlike any other fish in Montana—or the world, for that matter. Also known as ling, it is the only freshwater member of the cod family and is closely related to Atlantic cod, haddock, and pollock. Some biologists speculate that the burbot was once a saltwater cod before becoming landlocked millions of years ago during a continental shift or flood. If that sounds farfetched, consider this: The burbot is the only freshwater fish to spawn in midwinter—and at the exact time saltwater cod spawn.

**Appearance** The burbot looks something like a cross between an eel and a catfish. It is marked by a single barbel on its chin (the fish's name comes from *barba*, the Latin word for “beard”). The slender fish has tiny, imbedded scales that give it a smooth feel. The body is cream or pale green with dark brown or olive green mottling. Slow for a fish, the burbot uses its camouflage to hide from minnows and other small species. When they swim close enough, it grabs them with its massive mouth, which is lined with several rows of tiny teeth. The burbot has a disturbing habit of wrapping its body around an angler's arm like an eel.

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**Range** Burbot are primarily a fish of northern waters, including those of northern Europe. They are found in clean, large rivers and deep, cold lakes. In Montana, burbot inhabit the Missouri, Big Hole, Beaverhead, Ruby, Madison, Yellowstone, Milk, Poplar, Bighorn, lower Clark Fork, and lower North Fork of the Flathead rivers.

**Reproduction** Witnessed only by a handful of biologists and ice anglers, the burbot's spawning ritual is nearly mythical. In early February, the fish move from the depths of rivers and reservoirs to shallows over mud flats or sandy shoals under the ice. The fish then congregate in a living glob of up to a hundred or more intertwined bodies that move in and out of the quivering sphere, releasing eggs and spawn.

The great North Woods author and naturalist Sigurd E. Olson once witnessed the spectacle through a large ice hole and described it as “a struggling, squirming mass of fish, the long brownish snaky bodies twisting around each other, the entire contorted mass turning over and over, beating the water to a foam.”

**Feeding** Burbot are voracious predators that will eat about anything they can find—primarily fish but also frogs, snakes, and even

baby swallows that fall into the water. Their tendency to bite lures and bait makes burbot easy to catch. The fish are most active at night, and anglers do best using a minnow-tipped jig. In addition to their catchability, burbot are great to eat. The meat is dense, flaky, white, and free of bones (though it becomes rubbery and inedible after being frozen and thawed). Like that of cod, the burbot's liver is rich in vitamins A and D. French connoisseurs prize the *foie de lotte de rivière* (liver of river cod) poached in white wine.

**Management** A native Montana fish, the burbot may be declining in number from overharvest as well as dams, which restrict river migration. Recent studies of burbot on the Missouri River show a distribution similar to that of rainbow and brown trout. Burbot numbers are highest near Holter Dam, progressively declining downstream. On the lower Yellowstone River and its tributaries, FWP biologist Matt Yeager is in the last year of a four-year study that tracks burbot to see where the fish go during different times of the year. This baseline information will help biologists in the future better understand how factors such as water temperature and river flow affect burbot movement and populations. 🐟