



# Natural Heritage & Endangered Species Program

Massachusetts Division of Fisheries & Wildlife

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## Burbot

*Lota lota*

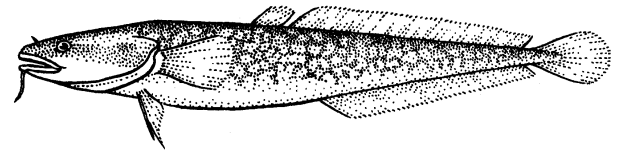
State Status: **Special Concern**

Federal Status: **None**

**Description:** Burbot are a freshwater cod species that has an elongate body and a single, noticeable, chin barbel. They have two dorsal fins. The second dorsal fin and the anal fin are elongate and end at the caudal peduncle. No other inland fish species in Massachusetts looks like this fish.

**Habitat:** Burbot are generally found in deep lakes and cool streams that have shelter such as rock slabs and trees in which they can hide. They can be found in weedy areas of streams and large rivers and have been found to live among dense *Potamogeton* plants in New York. In lakes they are found in the hypolimnion with other deep, cold water fish such as trout. In Massachusetts, Burbot are rare and only a few individuals have been collected in the Connecticut watershed and historically in the Housatonic watershed.

**Food:** Young fish feed mainly on insect larvae, crayfish, and mollusks. As Burbot get larger they begin to feed primarily on fish, such as sculpin, Blacknose Dace, darters, madtoms, Yellow Perch, Alewife, and sticklebacks. To supplement this they will also feed on mollusks, crayfish, and fish eggs.

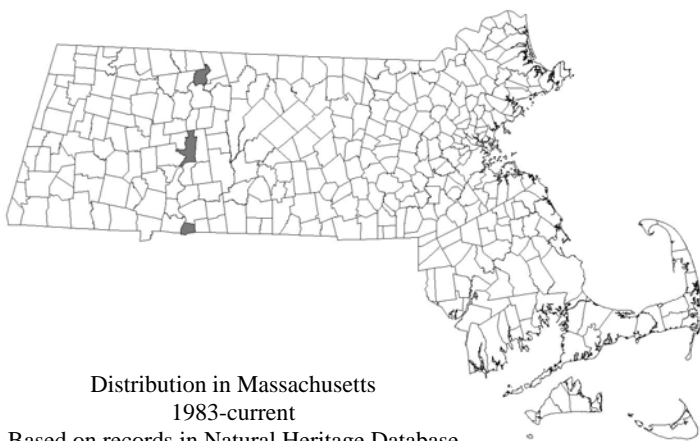


Drawing by Laszlo Meszoly, from Hartel et al. 2002. Inland Fishes of Massachusetts.

**Life History:** Burbot are nocturnal and can live up to 10 to 15 years. They mature when they are 3 or 4 years old and at a size of 280-480 mm in length. They spawn in midwinter under the ice, from November to May, but generally they spawn in January through March. Males reach spawning grounds first and females follow a couple of days later. Spawning takes place over rocky substrates and occurs at night. No nests are built. Spawning activity is quite a sight. They are known to form writhing masses of 10-12 constantly moving individuals that can get as large as 2 feet in diameter. This writhing mass of spawners moves over the bottom and drops eggs. The eggs partially float and sink slowly to the bottom.

Eggs take approximately 30 days to hatch. Young begin to appear in late February to June. They grow fast during the first four years, after which their growth begins to slow. As growth begins to decline, they increase in weight. Burbot can reach a length of 1200 mm (46 in) and weight 75 lbs.

**Movements:** Burbot can move large distances. Studies have shown that their average movements may be as much as 20 km and that their maximum movements can be as far as 125 km.



Distribution in Massachusetts  
1983-current

Based on records in Natural Heritage Database

### Breeding Season

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     |     |     |     |     |     |     |     |     |

Updated August 2008

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form as these donations comprise a significant portion of our operating budget.