



## Muskellunge

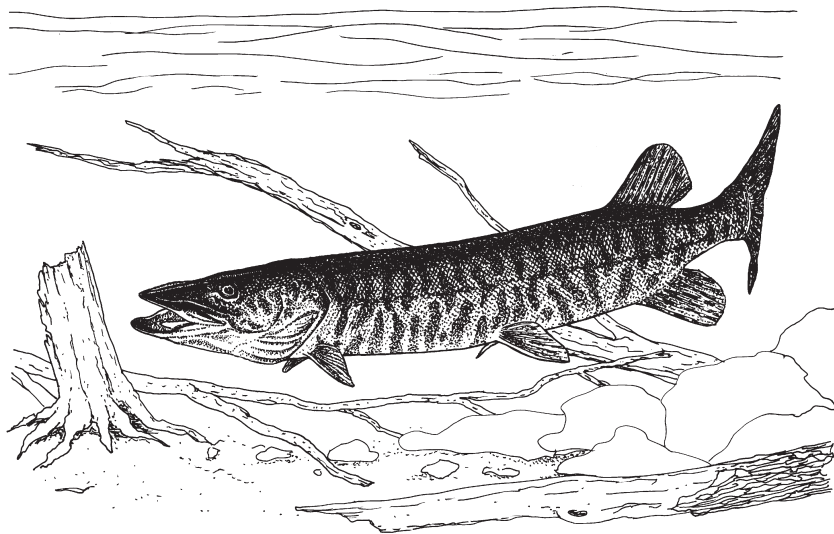
*Esox masquinongy*

The muskellunge is one of the most ferocious predatory fish in our North Carolina mountain waters. Over the last 200 years there has been quite a controversy over the name of this fish—in fact, it has been known by 92 different names. Some names that you may still hear in North Carolina are “pike,” “tiger” and “jack.” Today, most anglers who pursue this fish refer to the muskellunge simply as muskie.

### History and Status

The fossil record indicates muskellunge were once widely distributed across northern North America. The southern distribution of muskellunge probably occurred during the Wisconsin glacial period when these fish moved downstream ahead of the advancing glaciation. They survived this cold period in rivers of the Mississippi Valley, and when the climate warmed, they moved up the Mississippi Valley and repopulated the northern waters. They also moved up the Tennessee River and established populations in the cold, clear streams of western North Carolina.

As European settlers moved into the Mountains, they made significant changes to the watersheds that drained the rivers where muskellunge were found. The growing human population and its use of the land and natural resources increased siltation and other pollutants, such as chemical and biological waste, entering the rivers. Muskellunge could not survive in the polluted waters, and by the 1950s



they were no longer found in North Carolina.

Water quality began to improve in the 1960s, and in 1970 the N.C. Wildlife Resources Commission began stocking muskellunge into waters with good-quality habitat. From these stockings a naturally reproducing population was established in Fontana Reservoir.

### Description

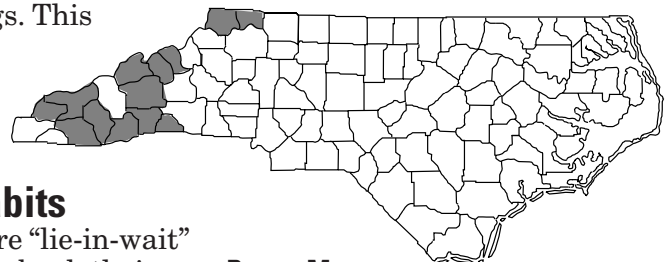
The muskellunge is an excellent predator. Its snout is long and wide, and its mouth is full of long pointed teeth for grasping and holding prey. The large eyes are high and forward on the head. A muskellunge body is elongate, and its dorsal and anal fins are located well back and in front of the caudal fin. This provides for a large amount of fin surface area pushing against the water to propel the fish forward when it ambushes prey. The body color is highly variable but generally consists of a light background with dark markings. This pattern provides camouflage for the muskellunge's large body.

### Habitat and Habits

Muskellunge are “lie-in-wait” predators—they ambush their prey. They find a submerged tree

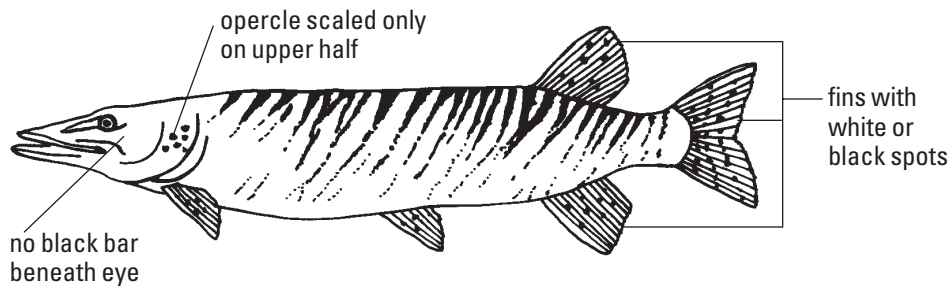
or aquatic vegetation and wait until their prey swims by. At that moment, they dash out and grab the unsuspecting fish. Muskellunge are primarily piscivorous (fish eaters), but they are known to eat anything that will fit in their mouths, including amphibians, reptiles, birds and mammals. Because they wait for their prey, they tend to eat whatever is in greatest abundance. In many rivers this will be suckers and carp. The 41-pound state record fish had a 5-pound carp in its stomach! Muskellunge are adapted to life in streams and rivers, but they have been successfully stocked into lakes and reservoirs. Adult muskellunge are solitary and establish a territory that they defend. If smaller muskellunge are careless in the territory of an adult, they will be eaten.

Muskellunge are sexually mature between 3 and 5 years of age, and males mature before



**Range Map:**  
Occupied range 

# WILD Facts



females. Spawning occurs early in the spring when water temperatures warm to 50 degrees Fahrenheit and remain that warm for several days. Eggs are scattered in shallow pools close to moving water. The 200,000 to 300,000 eggs hatch in approximately three weeks and receive no parental care. The young fish begin feeding on zooplankton, but within three weeks they switch over to their life-long diet of fish. Muskellunge have been known to reach lengths of 60 inches and weigh as much as 70 pounds.

## Range and Distribution

Muskellunge are thought of as a northern game fish, but they were present in the headwaters of the Tennessee River as late as the early 1900s. Within the next 20 years these native fish had all disappeared due to habitat degradation.

Although populations of muskellunge have been reestablished through stocking, only a few of the rivers and lakes have shown any evidence of natural reproduction. It is not known whether these populations will sustain themselves over the long term. Muskellunge continue to survive in Fontana Reservoir and probably in the lower Little Tennessee and Tuckasegee rivers. Muskellunge are presently stocked in the French Broad, Nolichucky and New rivers and Lake Adger in Polk County.

## People Interactions

Because muskies can grow very large, they are a prized

game fish. Most states, including North Carolina, manage muskellunge populations as trophy fisheries, with creel and size limits restricted to produce populations supporting large individuals. In North Carolina, anglers are allowed to harvest two muskies per day that are at least 30 inches in length, but it's difficult to do this. Across the country the average catch rate is about one fish per 60 hours of fishing, but in North Carolina on the French Broad River, the catch rate is one fish per 30 hours of fishing.

## References

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## Credits

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Produced January 1997 by the Division of Conservation Education, N.C. Wildlife Resources Commission.

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## MUSKELLUNGE

### Classification

Class: Osteichthyes  
Order: Salmoniformes

### Average Size

Length: 40 in.  
Weight: 40 lbs.

### Food

Primarily fish such as suckers and sunfish. But muskellunge will eat anything they can swallow. In addition to various fish they have been known to eat amphibians, reptiles, birds and mammals.

### Breeding

Spawning occurs during April or May in shallow areas of pools where the current will flow over the eggs. Females are usually larger than males and mature a year earlier. Females will deposit 200,000 to 300,000 eggs during spawning. There is no parental care given to the eggs or young.

### Young

Eggs hatch in 2 to 3 weeks, and by 3 weeks of age the young begin to feed on other fish. Growth is rapid during the first year, with one-year-olds reaching 12 in.

### Life Expectancy

Muskellunge may live to be 8 to 10 years old.