

Muskellunge: A Michigan Resource



The muskellunge, or musky, is a tremendous game fish native to the lakes and streams of Michigan. The musky also is a fish of many myths regarding its' appetite, size and elusiveness. The stories about muskies portray a fish feeding on anything that moves and can fit down their tooth-filled jaws...yet believed to be so difficult to catch that the musky is called "the fish of 10,000 casts." Here, we briefly explore the mythical, legendary and genuine muskellunge.

IDENTIFICATION

Muskellunge are members of the esocid family of fish, which also includes the northern pike. This particular family of fish, technically called Esocidae, share similar characteristics such as long thin bodies and soft-rayed fins. These fish have large mouths full of sharp teeth. Muskellunge and pike are identified as piscivores, which means their primary diet is fish.

Though similar in appearance, muskellunge tend to achieve larger sizes than northern pike. The musky's coloration is one of dark stripes, or dark spots, on a light background. Northern pike, in contrast, usually have light, bean-shaped spots on a dark background. The shape of the tail fin is a good method of identification as a musky's is pointed and the tail fin of a pike is rounded. Another key characteristic for identification is the presence or absence of scales on the cheeks and gill covers. Muskies only have scales on the upper half of the cheek and gill cover. Like the muskellunge, the northern pike gill cover has scales on the upper half, but the cheek is fully scaled.

Occasionally, muskellunge and northern pike will spawn together producing a hybrid known as a tiger musky. These fish will have the rounded tail fin of the northern pike with the musky color pattern of dark "tiger" stripes on a light background.

BIOLOGY

Muskellunge spawn in the spring, like their northern pike cousins, yet at somewhat warmer temperatures. Ideally, musky spawning occurs around 55 degrees Fahrenheit. There is no nest, the eggs are simply scattered in shallow waters, either over submerged woody debris or over vegetation such as Chara, which also know as muskweed. If the eggs fall into poor habitat, such as where

there is low oxygen, egg survival may be low. In some fishery ecosystems, northern pike may out-compete muskellunge due to the pike's tendency to spawn right after the winter ice is gone. When musky fry hatch, northern pike young are already large enough to prey upon them. Yet, in other environments such as impoundments and the Great Lakes, the two species seem to coexist. Successful egg incubation, dependent on spawning habitat quality, seems to be the primary factor to muskellunge survival.

After hatching, the young muskellunge absorb their yolk sac and start to feed on small invertebrates generically known as zooplankton. At around two inches in length, the young muskies turn their attention to other fish for food. Young fish of other species, minnows, and even smaller muskies may be preyed upon. As they grow, they may also target frogs, ducklings, and crayfish. Longer, cylindrical fish, such as soft-rayed suckers are more preferable as prey than spiny, deep-bodied panfish. As muskellunge reach larger sizes, their diet increasingly becomes one of perch and suckers instead of bluegills and crappies. In addition to prey shape, the muskellunge also develop a preference for larger prey, sometimes approaching a third of the musky's length. This is due in part to the musky's metabolism which favors ambushing one large meal instead of many smaller ones. For example, a sucker around 15 inches long would be more preferable to a half-a-dozen six-inch crappies. As with all predators, the musky is an opportunistic feeder that will prey upon other species that present themselves.

Muskellunge growth rates vary depending on water temperatures and food base, but they tend to grow fairly rapidly their first few years, capable of reaching 30 inches or more in three to four years. Female muskies tend to grow faster and larger than their male counterparts. They also mature later than males. At maturity, growth rates slow considerably, especially for males. Generally, because of this slowing growth rate, most fish over 40 inches are female. Muskellunge are long-lived fish, with recorded ages reaching 30 years or more.

Though considered a coolwater species, the muskellunge prefers water temperatures slightly warmer than northern pike. A musky's optimum growth rate occurs around 73 degrees Fahrenheit, compared to the northern pike's 66 degrees.

Muskellunge are less susceptible than northern pike to stunting, a condition where normal growth rates are slowed. Where northern pike may be stunted due to overpopulation and warm water temperatures, muskellunge are seldom numerous enough to effect growth and can withstand water temperatures into the 80s. The makeup of the forage base is a far more critical factor in determining musky growth. In a shallow, weedy lake where the forage is primarily bluegills, crappies and largemouth bass, a musky's growth will typically be below average. In lakes and rivers where the forage consists of suckers, common shiners and carp, their rate of growth will probably be above average and at or near their optimum. It is not uncommon for a musky to reach more than 50 inches in length

and weigh more than 40 pounds. The largest muskellunge on record attained a length of nearly 60 inches.

SOCIAL IMPORTANCE

In Michigan, the muskellunge is a highly valued game fish that is often considered the ultimate challenge in fresh water fishing. This may be due to a variety of reasons such as their larger sizes and fighting abilities. The musky's tendency to follow a lure to boat side contributes to their reputation as an extremely wary predator. Seldom numerous, musky numbers rarely exceed more than one adult fish per three acres. This is due to their low reproductive success and difficulty rearing them artificially for stocking by state agencies. So not only are they challenging to entice, there are usually not many of them. Hence muskellunge have been described as "the fish of 10,000 casts" as was mentioned earlier.

Although at times muskellunge maybe difficult to catch, they aren't impossible. Anglers who do their research through state fishery departments, musky fishing publications or private musky organizations, will increase their opportunities for success. Musky anglers can choose from a variety of methods such as trolling, casting or still fishing with live bait. Tackle requirements for muskellunge are tougher than equipment generally used for walleyes and bass. Larger, bulkier lures and fish that exceed 30 pounds or more call for heavier lines and stronger rods. Musky fishing success usually requires more dedication and persistence than for other species. Be patient, the memories will last a lifetime.

Muskellunge are often blamed for perceived impacts on other species of game fish. People who are not familiar with the diet and feeding habits of the musky view this large, toothy predator as being capable of decimating their favorite fish species. In reality, the musky's preference for larger, cylindrical, soft-rayed fish narrows their food choices significantly. Thus the musky, as a predator of suckers and carp, benefit the fish community by their predation of these species that can impact game fish populations.

Many anglers rate muskellunge as the premier challenge of freshwater angling. However, many also fear and loath these sport fish. The misinformation and myths surrounding the musky's predatory instincts, as well as their elusiveness from capture, are of epic proportions. The real muskellunge is not the decimator of other species, nor is it impossible to catch. The musky is an exciting game fish that many anglers find worthwhile pursuing and an integral part of the fisheries resources of Michigan.



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