FACT SHEET

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LARGEMOUTH BASS

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Knowledge of largemouth bass biology is necessary to manage bass populations and to improve fishing conditions. Understanding bass reproduction, growth and survival is important for effective management while understanding bass distribution, movements and feeding is valuable to fishermen.

Bass Biology

The largemouth bass is one of several black basses and is actually a member of the sunfish family, which includes bluegills, redear, warmouth and others. Like sunfish, its fins are both spiney and soft-rayed, and it builds a nest for its eggs. However, unlike the sunfish, the adult bass feed primarily on fish.

The adult largemouth bass is a ferocious predator. Until it reaches a length of about 4 inches, it feeds on microscopic animals, insect larvae and other invertebrates. Thereafter it feeds on fish, commonly referred to as "forage." An adequate forage supply improves bass growth. This forage must be the right kind and size to accommodate bass of various sizes. Bluegill sunfish (bream, brim) usually is the best forage species because they reproduce throughout most of the year. With abundant, available forage, bass grow to a length of 7 to 12 inches and weigh up to 1 pound during their first year. Thereafter, they can grow 1 to 2 pounds per year. Under optimal conditions, bass populations weigh 20 pounds per surface acre; they can weigh 40 pounds or more if waters are fertilized correctly.

Clear Water and Bass

Because bass rely heavily on sight to find their prey, water clarity influences bass growth. Clarity of 12 inches or more allows adequate feeding, but visibility of 14 inches frequently leads to depleted food supplies. Such conditions inhibit bass growth but make fishing easier. In clear water, where food is in short supply, bass can be caught easily. In fact, fishermen may remove a year's available harvest in two days.

Clear water usually contains abundant submerged vegetation; therefore, the angler commonly associates vegetation with good bass fishing. Nevertheless, cover rather than vegetation is probably more important to bass. Bass concentrate around submerged trees and other shelter during the spring, summer and fall. During winter, they retreat to deeper waters where conditions are more stable.

Bass Reproduction

Bass activity follows seasonal and daily patterns. In the spring, as temperatures reach the upper 50's, activity increases with the approach of spawning. As the temperature reaches 60 degrees F., males clear out nests in 1 to 4 feet of water along the shoreline. Bass mature at less than 10 inches long. After preparing a nest with a diameter that is about twice his 10-inch body length, the male attracts one or more females to spawn in his nest. After spawning, he fans the fertilized eggs for several days until they hatch (exact time until hatching depends upon water temperature). Thereafter, he guards the fry for about a week as they remain in a tight school. During nesting and guarding, the male does not feed, although he will strike unwanted objects which disturb his nest or young.

Effects of Fishing on Bass Populations

Catching bass is usually easiest during the spring since bass concentrate in shallows in preparation for

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spawning or guarding eggs and young. Forage supplies are low since the last spawn of forage fish was months earlier. Although fishermen are often concerned about the effects of catching bass from the nests, such effects are seldom adverse. In most small ponds, the number of young produced from a single spawn adequately sustains the population.

Reproduction and growth of existing bass allow the bass population to increase in weight each year at a rate approximately equal to its starting weight. Therefore, a bass population of about 20 pounds per acre can yield a harvest of about 20 pounds per acre each year if the fishing is spread out over the growing season. However, removing too many bass depletes bass populations by causing overabundant forage to consume small bass.

Florida Bass

Florida bass in Texas reservoirs have recently received much acclaim for their large size. The Florida bass is a subspecies (strain) of the largemouth bass. It differs slightly from the native ("Northern" or "Texas") subspecies in body structure, behavior patterns and growth characteristics. Without biochemical tests, it is nearly impossible to classify an individual fish as Florida or native. Body shape and color differ somewhat, but the number of "pored" lateral line scales on the fish's side best differentiates the subspecies. Florida bass typically have an average of 70 to 71 pored scales, whereas native have 73 to 65. However, any individual Florida might have as few as 65 pored scales, any native as high as 72. Furthermore the two strains will hybridize, leading to an intermediate population with characteristics of both species.

The Florida bass itself has not proven to be a particularly good fish in small ponds. For example, Florida bass occupy open water areas of a pond, while native bass distribute themselves in shallow water areas. This distribution pattern or possibly different lure preference has caused concern for the ease or difficulty with which Florida bass can be caught. Also, Florida young-of-the-year bass do not grow as fast as the native bass during the first year. However, when stocked with native bass, the Florida bass readily hybridizes, producing a bass which appears superior to either parental strain.

To properly manage bass populations and to improve fishing conditions, consider the quality of the bass' habitat as well as the bass' genetic variability, then integrate proper harvesting methods.

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