



Smallmouth Bass (*Micropterus dolomieu*)

Smallmouth bass are a non-native fish that was introduced into Arizona in 1921 (AGFD 2005). They are native to the upper Mississippi River basin.

Within its native range the smallmouth bass seems most abundant in pools of streams that consist of a substantial proportion of riffle habitat, clean, rocky, hard bottoms, and gradients of 0.5 to about 5.0 m per km. In large rivers and lakes, smallmouth bass tend to congregate over hard, stony bottoms, where currents are present (Minckley 1973).

These bass are most often bronze to brownish in color, with dark vertical bars on the sides. In contrast to the largemouth bass, the upper jaw does not extend beyond the rear margin of the eye. The eye is reddish in color and there is a shallow notch in the dorsal fin. The soft dorsal fin has 13 to 15 rays. Length can vary between 12 and 22 inches, and smallmouth bass can weigh between 8 ounces and 7 pounds.

At the present time, smallmouth bass occur in the mainstream of the Colorado River, in the Verde River system, and throughout the Salt River Basin below about 2,200 meters in elevation (Minckley 1973).

Spawning occurs from March through May in Arizona, when water temperatures reach 15C to 18C. Males fan an oval depression in sand or gravel through violent, lateral movements of the body and caudal fin. Individual nests usually contain about 2,000 fertilized ova; eggs hatch in 3 to 5 days at typical water temperatures; the young remain in the interstices of gravel for about a week. The fry then rise as a school, and are herded about and defended vigorously by the male until 30 to 40 mm in total length (Minckley 1973).

Foods of young smallmouth bass consist mostly of tiny crustaceans. As they grow, they shift over to insects, then to other fishes, and finally to a mixed diet of crayfish and other fishes.

In Arizona, smallmouth bass reportedly are responsible for eliminating or reducing some populations of native fishes.

When introduced into the upper Salt River system, this bass enjoyed an immediate population explosion and spread throughout the basin in a period of only 2 to 3 years. This phenomenal growth presumably occurred because of a general lack of competitors and a rich food supply, consisting of native minnows and suckers. Smallmouth bass have been shown to eat smolts of Pacific salmonids, therefore posing a threat to these already declining species in the Columbia River (Fuller 2006). Jenkins and Burkhead (1994) speculate that introduced smallmouth bass may have contributed to the demise of an isolated population of trout-perch in the Potomac River in Virginia and Maryland. Introduced predatory centrarchids are likely responsible for the decline of ranid frogs in California and for the decline in tiger salamander populations (Dill and Cordone 1997).

Work Cited

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