



Virginia Department of Game and Inland Fisheries 2015 Shields Lake Management Report

Shields Lake, located off the Boulevard in Richmond's Byrd Park, is owned and operated by the City of Richmond. The 6-acre lake is managed under the Department's Urban Lake Program and is stocked with harvestable-sized trout and channel catfish. The lake is mostly shallow (< 6 ft deep) and contains a fish attractor that usually holds a few big largemouth bass. The lake has recently been inundated with hydrilla growth. The excessive amount of nutrients that are washed into the lake serves as fuel to the SAV (submerged aquatic vegetation) growth.

On October 20th, 2014, the fish community of Shields Lake was sampled using boat electrofishing gear. The survey revealed limited species diversity with only 5 species collected. The species represented in order of abundance were yellow perch, largemouth bass, bluegill, channel catfish and koi. Shields Lake provides anglers with some excitement, but the majority of that excitement is based upon the stockings of trout during the winter months and channel catfish each year during the mid to late-spring. Without those stockings, the fishery has some severe limitations.

Largemouth Bass

The electrofishing survey encountered an excessive amount of hydrilla still growing at the time of the survey on October 20, 2014. This massive amount of aquatic vegetation can quickly spread to cover the majority of this shallow lake. Effort was made to collect as many fish as possible from the hydrilla flats. It is quite possible that fish were missed in this thick cover. A total of 109 largemouth bass were collected for a CPUE (Catch Per Unit of Effort) of 327 bass/hr. In most waters, a CPUE this high would represent a fishery that has an excessive amount of stunted bass. This was not the case within Shields Lake as this catch rate just reflected the great number of YOY (Young of Year) bass that were hatched in the spring of 2014. A total of 104 bass were in the 4-8 centimeter range (1.5–3 inch range). These juvenile fish have taken advantage of the hydrilla by using it for protective cover from the various predators that are present within Shields Lake.

The remaining bass that were collected ranged in size from 6 to 15 inches. The two largest bass measured 15 inches in length with the heavier of the two weighed in at 1.8 pounds. Largemouth bass reproduction appears to be good even though few adult bass were encountered. Although reproduction is good, only a small portion of these young fish are recruiting to the adult population. To protect the bass population, the bass will continue to be managed under the current regulation of only one bass per day over the minimum size limit of 18 inches. The great abundance of cormorants that frequently visit the Byrd Park lakes may be having a severe impact on the number of juvenile bass after their first growing season. The relative weight values of the four stock-size bass was 95 and showed the fish were still able to find sufficient forage amongst the hydrilla growth. Relative weight values of adult bass should increase if the hydrilla is kept in check with the stocking of grass carp in 2015. Anglers should keep an eye out for anyone that might be poaching undersize fish and report them to the proper authorities.

Bluegill

The survey revealed a poor abundance of bluegill with the collection of only 35 fish (CPUE = 105 fish/hr). Although this catch rate showed an improvement from the 2009 survey (CPUE = 32 fish/hr), the bluegill population remains in poor condition. Collected bluegill were in the 2 to 5 inch range, with the majority of fish in the 3 to 4 inch range. The survey may have missed some bluegill that were hiding deep within the hydrilla. Anglers should not expect to catch too many large bluegill out of Shields Lake. On a positive note, the relative weight value from the 32 quality-size bluegill was an extremely favorable 108. This value showed that the bluegill are finding plenty of available food and are in good overall health. No other species of sunfish were encountered during the survey.

Yellow Perch

The survey revealed an abundance of yellow perch were present in Shields Lake. A total of 234 yellow perch were collected along the stretch of shoreline that was covered. The catch rate of 702 perch/hr is extremely high, but reflects the abundance of juvenile yellow perch (CPUE = 612 young perch/hr) from this fall survey. Collected perch ranged in size from 2 to 8 inches. The largest yellow perch measured 8.6 inches in total length and weighed 0.29 pound. The yellow perch fishery will provide some excitement from anglers using small lures and baits. Anglers should not expect to catch too many trophy yellow perch from Shields Lake. The abundance of juvenile yellow perch will provide a forage base for the limited number of adult largemouth bass that are present.

Channel Catfish

The survey produced a total of 21 channel catfish for a CPUE of 63 fish/hr. This catch rate showed an improvement from the past survey due to the fact that holdover fish from the May 2014 stocking were still in the system. Shields Lake gets stocked with channel catfish at a rate of 375 fish/acre. The general fishing public enjoys fishing for these catfish over the course of the summer. Many of the stocked channel catfish have a hard time surviving their first year in Shields Lake due to the high level of angler harvest. The collected catfish ranged in size from 13.5 to 17.4 inches. The average size catfish measured 14.77 inches. These catfish and the thousands of others that have been stocked over the last few years are most likely the main reason why the bluegill population is in such poor shape. The juvenile bluegill are the main forage base for these stocked channel catfish.

Additional species

The survey provided some great excitement in the collection of one large koi. The fish measured 26.7 inches with an estimated weight of roughly 9 pounds. This koi and the reported others that have been seen in the lake have been from illegal introductions. Ponds owners should be discouraged from stocking/dumping their unwanted fish into the lake. The possibility of introducing various fish diseases is the main reason why people should not stock there fish plus it is illegal.

Shields Lake is part of the Urban Trout Program. Rainbow and brown trout are stocked annually at high rates, so anglers have a good chance of catching their limit, especially after the stocking dates. Anglers must possess a trout license in addition to a fishing license between November 1 and April 30. A trout license is not required from May 1 through October 31 or for juveniles under age 16. Anglers must follow the creel limit of 4 trout/person/day.

Byrd Park has picnic area, porta-a-jons, a running and activity trail, and is located adjacent to Maymont Park and the James River. Shields Lake is the lowest lake in the series of three impoundments. The urban program helps to create a valuable fishery for anglers throughout the winter (trout) and in the summer (catfish). Anglers are encouraged to take care of this resource and dispose of trash in the various garbage pails that are found in the park.

Figure 1. The best part of sampling Shields Lake on October 20, 2014

