



DEPARTMENT OF
**GAME & INLAND
FISHERIES**
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Virginia Department of Game and Inland Fisheries 2018 Upper Bryan Park Pond Management Report

Upper Bryan Park Pond, located within Bryan Park along the northern edge of Richmond, is managed by the City of Richmond Department of Parks & Recreation. Bryan Park provides numerous recreational activities for visitors. The park has two ponds of roughly 6 acres each that were created by the construction of dams on Upham Brook. Upper Bryan Park Pond has suffered from poor water quality conditions in the past which has created fish kills. The majority of angler access to the pond is along the dam area. Some shoreline access adjacent to the dam is also available. The pond is extremely shallow and suffers from the excessive amount of silt that is washed in from the surrounding watershed.

On September 20th, 2015, the fish community of Upper Bryan Park Pond was sampled by boat electrofishing. A 14 foot electrofishing boat was used to conduct the survey. One shoreline run was conducted with the total electrofishing effort of 650 seconds (0.18 hr) used to cover all of the accessible reaches of the pond. Encountered fish were collected by dip nets and placed in a live well tank. Length and weight measurements were taken on fish to assess their overall health and the health of the current fishery. The fishery revealed high species diversity with the collection of 9 fish species. The five most abundant fish species were bluegill, pumpkinseed sunfish, creek chubsucker, golden shiner, and largemouth bass. The survey provided a snapshot photo of the fish assemblage collected along the shoreline. The majority of the shoreline was sampled during the survey. Some stretches of shoreline had significant silt accumulations that made sampling difficult.

Table 1. CPUE values of all fish collected from Upper Bryan Park Pond electrofishing survey, September 20, 2017

Species	N	CPUE (#/hr)	% of total
Bluegill	95	526	47.73
Pumpkinseed Sunfish	46	254	23.12
Creek Chubsucker	33	182	16.58
Golden Shiner	11	60	5.52
Largemouth Bass	5	27	2.51

Eastern Mosquitofish	3	16	1.51
American Eel	2	11	1.01
Yellow Bullhead	2	11	1.01
Warmouth Sunfish	2	11	1.01
Total Fish	199		

Largemouth Bass

The largemouth bass population within Upper Bryan Park Pond appears to be extremely limited. The survey collected only 5 largemouth bass for a CPUE (Catch Per Unit of Effort) of 27 bass/hr. The average-sized bass from this limited sample set was 10.43 inches in total length. One juvenile bass of 3.82 inches was collected. The remaining four bass measured from 10.28 to 13.5 inches in total length. The largest bass measured 13.5 inches and weighed 1.47 pounds.

The fishing regulation for the bass population is a minimum size of 15 inches with a creel limit of 2 bass/person/day. The full level of harvest by anglers is not known at this time. The limited standing stock of bass collected in the survey may be from a combination of poor recruitment and harvest of the limited abundance of brood stock. The pond was stocked with 1,200 bass fingerlings in June 2009. It does not appear that many fish from that stocking are still present. Our sampling efforts are just a representative picture of the fish community collected along the shoreline on the survey day. From initial observations, it appears that anglers have managed to crop out the majority of the bass greater than 15 inches in length. No preferred size bass were collected during the survey.

Weights were taken on largemouth bass to calculate relative weight values. Relative weight values are an indication of body condition. A value from 95 to 100 represents a fish that is in the healthy range and finding a decent amount of food. The higher the value, the better the condition of the fish in terms of overall body mass. The relative weight values for stock ($\geq 8''$) and quality ($\geq 12''$) bass were 107 and 107 respectively. These relative weight values of the limited number of bass show the fish to be in good shape and finding plenty of forage in the appropriate size.

Bluegill and Pumpkinseed Sunfish

The survey revealed the presence of 95 bluegill for a CPUE (Catch Per Unit of Effort) of 526 fish/hr. The bluegill length distribution ranged from 3 to 15 centimeters (1 to 6 inches) with the majority of fish in the 10 to 14 centimeter range (4 to 5 inch range). The average size for the collected bluegill was 4.48 inches. The largest bluegill measured 5.98 inches. Relative weight values are an indication of body condition. A value from 95 to 100 represents a fish that is in the healthy range and finding a decent amount of food. A higher relative weight value indicates fish

with a better body condition. The relative weight data of the 85 stock-sized bluegills revealed a favorable value of 124. The relative weight value of the 5 quality-sized bluegill revealed a less than ideal value of 91. The bluegill population within Upper Bryan Park Pond is similar to Youngs Pond (Lower Bryan Park Pond) in that it may be entertaining to some young anglers that are just happy to catch a bunch of small fish. Trophy sunfish anglers should not expect too much action.

The survey revealed the decent abundance of pumpkinseed sunfish (N = 46; CPUE = 254 fish/hr). The pumpkinseed sunfish showed a high proportion of fish in the 4 to 5 inch range with fish having impressive body mass. Relative weight data from the collected pumpkinseed sunfish showed the fish to be in great shape (Wr stock = 142). These fish will add some diversity to the catch and may surprise an angler from time to time.

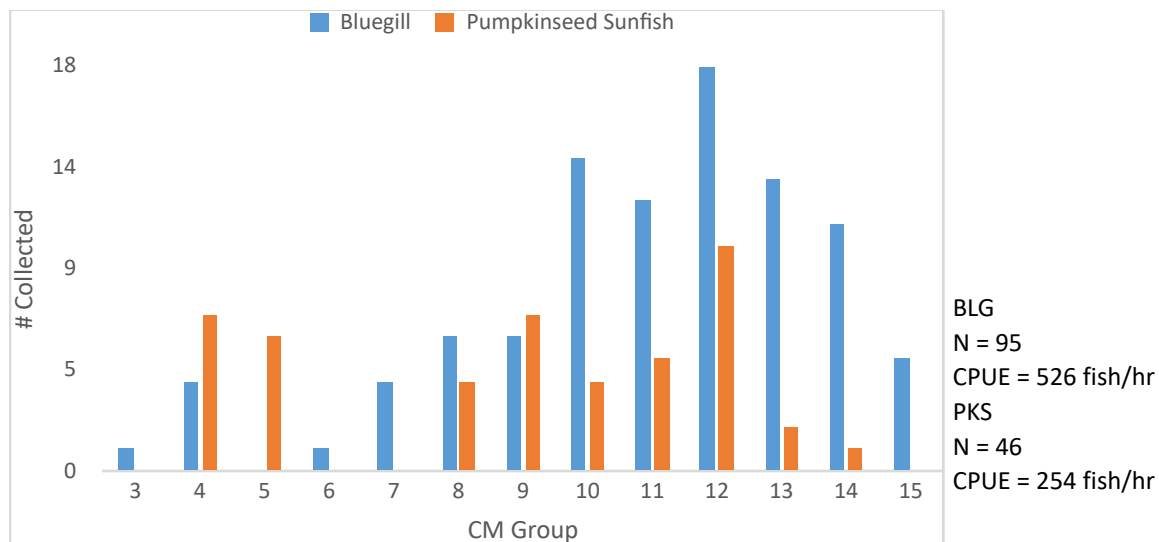


Figure 1. Length frequency distribution for bluegill and pumpkinseed sunfish collected from Upper Bryan Park Pond on September 20, 2017

Additional Species

The 2017 electrofishing survey was successful in catching 199 fish from Upper Bryan Park Pond. The majority of these fish were found along the northern shoreline which had the highest concentration of lily pad growth. Of that total, the bluegill made up for 47% of the catch. The collection of largemouth bass was nothing to write home about with only 5 bass collected. The remaining fish diversity consisted of a limited abundance of yellow bullhead, warmouth sunfish, American eels, eastern mosquitofish, and golden shiner. The survey revealed a rather large stock of creek chubsuckers present with 33 collected. These fish were in the 6 to 10 inch range and they will provide additional forage for any larger bass that might be present. The survey did not reveal any channel catfish from past DGIF stockings. DGIF catfish stocking

efforts at Bryan Park has concentrated on the lower pond which provides much better habitat for channel catfish.

The fishery within Upper Bryan Park Pond has some limited potential from a variety of fish species present. The bluegill population appears to be stockpiled with juvenile fish which might have had an influence on bass recruitment over the last few years. The level of bass harvest over the protective 15 inch minimum size limit is not known at this time. An increase presence of preferred-sized bass (≥ 15 inches) would possibly allow for increased predation on the stunted bluegill population, with the hope of achieving a more balanced sunfish population.

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