



## **Woodstock Pond 2015 Fisheries Management Report Virginia Department of Game and Inland Fisheries**

Woodstock Pond is a 7.5-acre impoundment located within York River State Park. Known in its early history as Taskinas Plantation, the park was the site of a 17<sup>th</sup> and 18<sup>th</sup> century tobacco warehouse where local planters stored their crops to be shipped to England. Woodstock Pond was built in the 1950s and the park itself was opened in 1980. Because of its location and the quality of the fishing, this little fishery is ideal for a family outing.

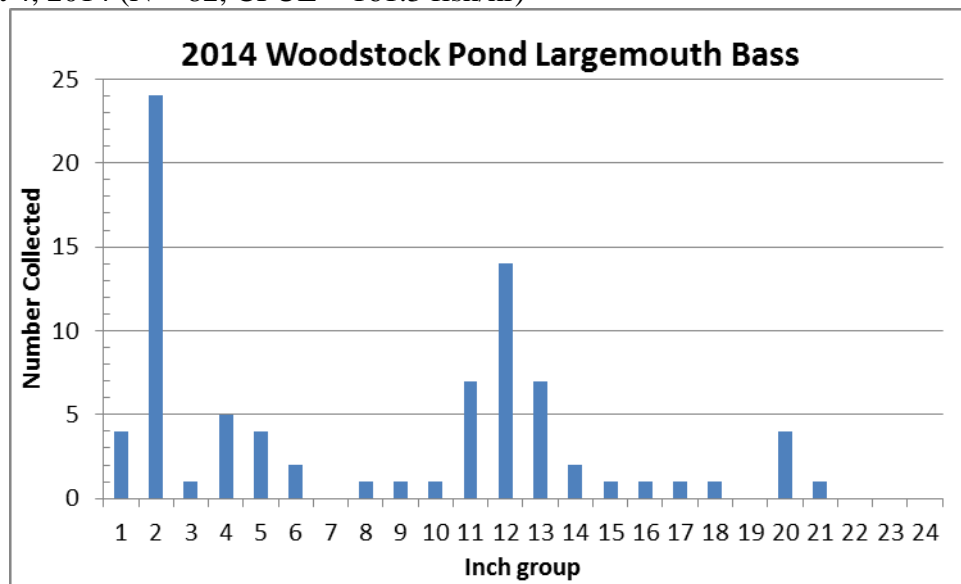
The Virginia Department of Game and Inland Fisheries sampled Woodstock Pond on August 4, 2014. The pond was last sampled on October 11, 2011. A full community sample was conducted to observe the present fishery. The electrofishing effort of 1,830 seconds (0.51 hour) was used to attain a representative sample. Two sample runs were conducted to break up the amount of shoreline covered. Both the western and eastern shorelines were sampled to cover all of the boat accessible shoreline. The August survey is not your typical time for electrofishing surveys. DGIF staff was contacted by Virginia DCR staff to check on the overall health of the fishery due to angler complaints. Electrofishing efforts consisted of shocking along the shoreline with the majority of the effort concentrated in the 2 to 3 foot depth range. Efforts were made to sample the shoreline brush as close as possible. This is essentially a bass and bluegill fishery with a few other species present in significant numbers. The survey revealed species diversity to consist of eight species: largemouth bass, bluegill, redear sunfish, black crappie, American eel, white catfish, golden shiner and grass carp.

### **Largemouth Bass**

Woodstock Pond continues to provide a decent bass fishery for a small resource. A total of 82 largemouth bass were collected. The expanded CPUE (Catch Per Unit of Effort) for largemouth bass was 161.3 bass/hr. The catch rate showed a slight decline when compared to the 2011 survey (CPUE = 165.3 bass/hr). The catch rate ranks much higher than the mean Woodstock Pond CPUE of 89 bass/hr. The size distribution of the collected bass can be seen on the enclosed length frequency graph. The majority of the bass sample consisted of fish in the 11 to 14 inch range. The high proportion of bass in this size range shows what the average fisherman will most likely be catching. The August survey allowed for the collection of Young of Year (YOY) largemouth bass. The 2014 year class was very abundant and represented by the many 2-inch bass that were collected. The bass in the 4 to 6 inch range most likely represents fish from the 2013 year class. The assortment of bass in the 8 to 10 inch range most likely represents the weak year class from the 2012 spawn.

With largemouth bass being the most popular game fish in this country, it has been considered that a “preferred” bass is one that is over 15 inches in length. It is through this size classification that population dynamics are analyzed. The PSD (Proportional Stock Density) is the proportion of bass in the population over 8 inches (stock-size) that are also at least 12 inches (quality-size). The sample provided a PSD value of 86, which is a direct reflection of the 36 quality-sized bass. The sample had a total of 42 bass that were of stock-size or larger. A balanced bass/bluegill fishery has a bass PSD value within the 40–60 range. The RSD-P (Relative Stock Density of Preferred bass) is the proportion of bass in the population over 8 inches that are also at least 15 inches. The RSD-P value of 21 is a direct reflection of the 9 preferred bass collected. The 2014 PSD value showed a major increase from 2011 (PSD: 56) to an unfavorable high value when you relate to the overall balance of the fishery. The RSD-P value showed a more favorable increase from the 2011 survey (RSD-P: 10).

Figure 1. Length frequency of largemouth bass collected from Woodstock Pond on August 4, 2014 (N = 82, CPUE = 161.3 fish/hr)

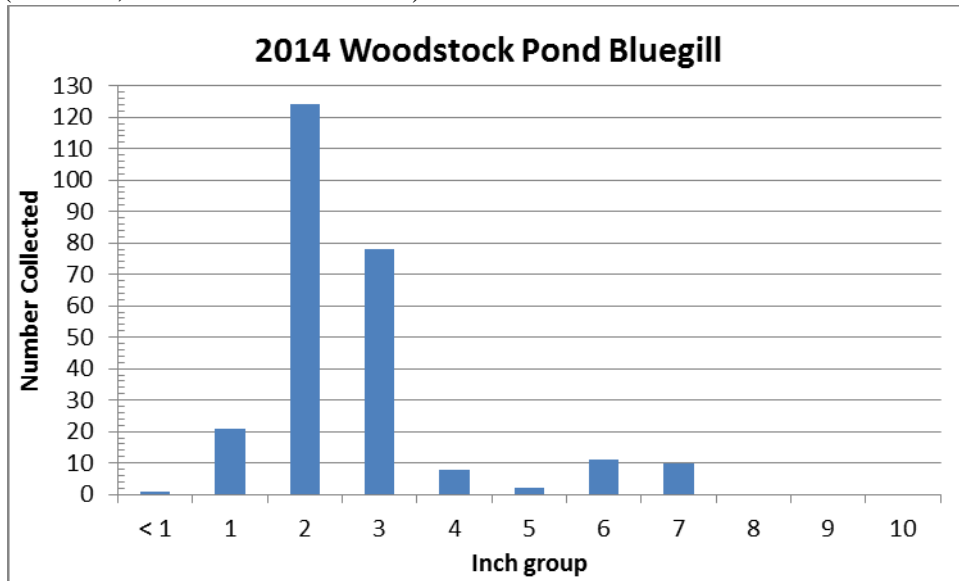


Weights were taken on largemouth bass to calculate relative weight values. Relative weight values are an indication of body condition. A value from 95 to 100 represents a fish that is in the healthy range and finding a decent amount of food. A higher relative weight value indicates fish with a better body condition. The relative weight values for stock, quality and preferred bass ( $\geq 8''$ ,  $\geq 12''$ ,  $\geq 15''$ ) were 94, 93, and 91 respectively. These values showed an increase from the 2011 survey (stock = 91, quality = 92, and preferred = 87). The relative weight values are slightly below the desired range and provided further evidence that the forage base is insufficient to provide adequate size forage for the abundant bass population. The largest bass measured an impressive 21.9” and weighed 7.58 lbs.

## Bluegill

The electrofishing survey revealed a limited bluegill population exists within Woodstock Pond. The survey collected 255 bluegill for the expanded CPUE of 501.6 bluegill/hr. The 2014 catch rate is well below the 2011 survey (CPUE = 1,129.4 fish/hr). The length frequency graph shows the population to be dominated by fish in the 2 to 3 inch range with limited numbers of fish greater than 4 inches. The PSD for bluegill is the proportion of bluegill over 8 cm (stock size) that are also at least 15 cm (quality size). The 2014 bluegill PSD value (21) showed a favorable increase from 2011 (PSD = 9). This value describes the collection of 21 quality-sized bluegill from the collection of 96 stock-sized bluegill. The largest bluegill measured 7.95 inches and the average size bluegill was 3.2 inches. Anglers should not expect to catch too many trophy-sized bluegill from Woodstock Pond.

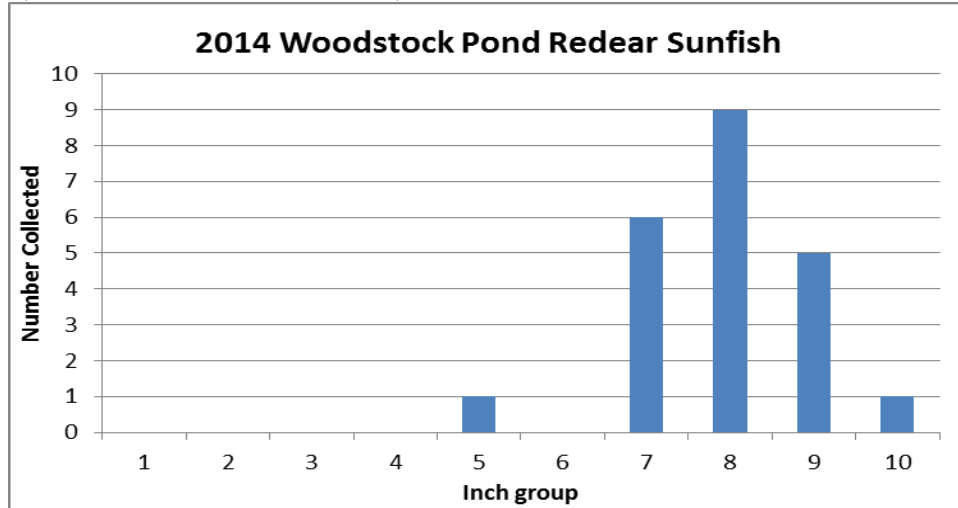
Figure 2. Length frequency of bluegill collected from Woodstock Pond on August 4, 2014. (N = 255, CPUE = 501.6 fish/hr)



## Redear Sunfish

The electrofishing survey revealed the redear sunfish population to be dominated by fish in the 7 to 9 inch range. The collection of only 22 redear sunfish (CPUE = 43.3 fish/hr) showed a major decline from 2011 (CPUE = 139 fish/hr). Past surveys have shown limited recruitment of juvenile redear sunfish less than 5 inches in length. Recruitment from the last few years has been extremely poor. DGIF plans on stocking redear sunfish fingerlings into Woodstock Pond during the summer of 2015 to assist the fishery. The largest redear sunfish measured 10.12 inches in length and weighed 0.78 pound. Woodstock Pond provides anglers with an opportunity to catch a few quality-sized redear sunfish. The average size redear sunfish was 8.5 inches in length.

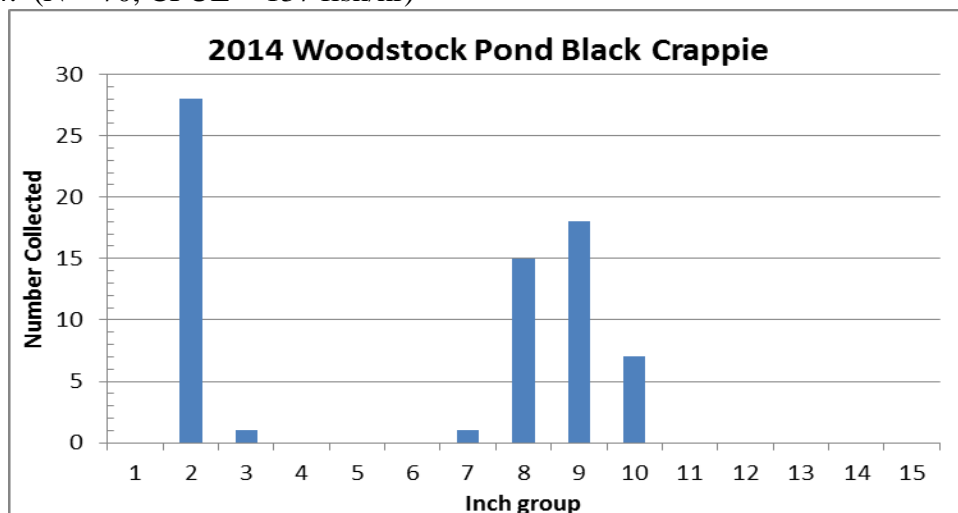
Figure 3. Length frequency of redear sunfish collected from Woodstock Pond on August 4, 2014 (N = 22, CPUE = 43.3 fish/hr)



### Black Crappie

The survey revealed the presence of 70 black crappies (CPUE = 137.7 fish/hr), which showed a decline when compared to 2011 (CPUE = 243 fish/hr). The size distribution showed a large proportion of fish in the 8 to 10 inch range that anglers can take advantage of and harvest if they so desire. The two largest black crappie measured 10.3 inches and weighed 0.6 lb. each. Anglers have caught some decent crappies in the past. Anglers that are fishing Woodstock Pond for the first time may be pleasantly surprised by the decent black crappie fishing. All black crappies were weighed to provide data for relative weight calculations. The stock-sized fish yielded a relative weight value of 102. This value showed a major increase from 2011 (Wr = 90). The quality-sized crappies provided a relative weight value of 102 and the preferred-size crappies had a relative weight value of 99. These values are within or above the desired range of 95–100 and show the crappie are consuming enough forage for good overall health.

Figure 4. Length frequency of black crappies collected from Woodstock Pond on August 4, 2014. (N = 70, CPUE = 137 fish/hr)



### **Additional Species**

The pond has some additional diversity in the form of American eel, white catfish, golden shiner and grass carp. Each of these species was collected in limited abundance and may provide some excitement to an angler from time to time. The survey collected one American eel that measured 24 inches. The one white catfish that was collected measured in at 12.3 inches. Grass carp were stocked into Woodstock Pond a number of years ago to assist in the control of aquatic vegetation. The survey collected one extremely large grass carp that measured 42.6 inches in length. Anglers should carefully release any grass carp if they happen to catch one while fishing Woodstock Pond. The survey collected 22 golden shiners that ranged in size from 2.5 to 9.7 inches. The golden shiner forage base will provide extra nourishment to the largemouth bass and black crappie populations.

### **Summary**

An electrofishing survey provides a snapshot picture of what the fishery looks like at any given time. A fair assessment of the present fish assemblage can be acquired during the typical shoreline survey in impoundments that are relatively shallow. A great number of variables interact on a fishery and can influence the population structure of a desired species such as the largemouth bass. The 2014 survey revealed a largemouth bass catch rate of 161.3 fish/hr. This catch rate was slightly less than the 2011 survey (CPUE = 165.3 fish/hr). The size distribution was similar to past survey years with an abundance of bass in the 11 to 14 inch range. A limited abundance of bass greater than 15 inches in size was encountered. Only 9 preferred-sized bass ( $\geq 15''$ ) were collected. The limited number of bass greater than 15 inches may be a direct result of angler harvest. The current bass regulation limit is set at a minimum of 15 inches. Any otters found in the pond can have a devastating impact on the bass population and should be trapped to preserve the limited abundance of larger fish.

The survey revealed an overall decrease in bluegill abundance. The catch rate of 501.6 bluegill/hr was down from 2011 (CPUE = 1,129.4 bluegill/hr). The majority of the collected bluegill were in the 2 to 3 inch range with a fair number of 6 to 7 inch fish. The survey was similar to past years with some quality redear sunfish in the 7 to 10 inch range. Limited recruitment of juvenile redear sunfish is an issue that will hopefully be addressed with the stocking of redear sunfish fingerlings in 2015. The black crappie population showed a decent year class of juvenile fish from the 2014 spawn along with an assortment of fish in the 8 to 10 inch range.

Anglers can fish from the bank or from rented row boats. Shoreline angling access is best off of the dam. Several fishing platforms and piers have also been constructed. Boat rentals offer anglers a chance to try their fishing luck or skills in areas of the pond not accessible from the shore. Private boats are not permitted on Woodstock Pond.

York River State Park can be reached by taking Route 607 from I-64. Heading in the direction of Croaker, take Route 606 east to the park. For further information, please contact the park office at 757-566-3036. For any questions regarding the fishery within Woodstock Pond, please contact Scott Herrmann at DGIF (804) 829-6580 ext 126.

