



2012 Sandy Bottom Pond Management Report Virginia Department of Game and Inland Fisheries

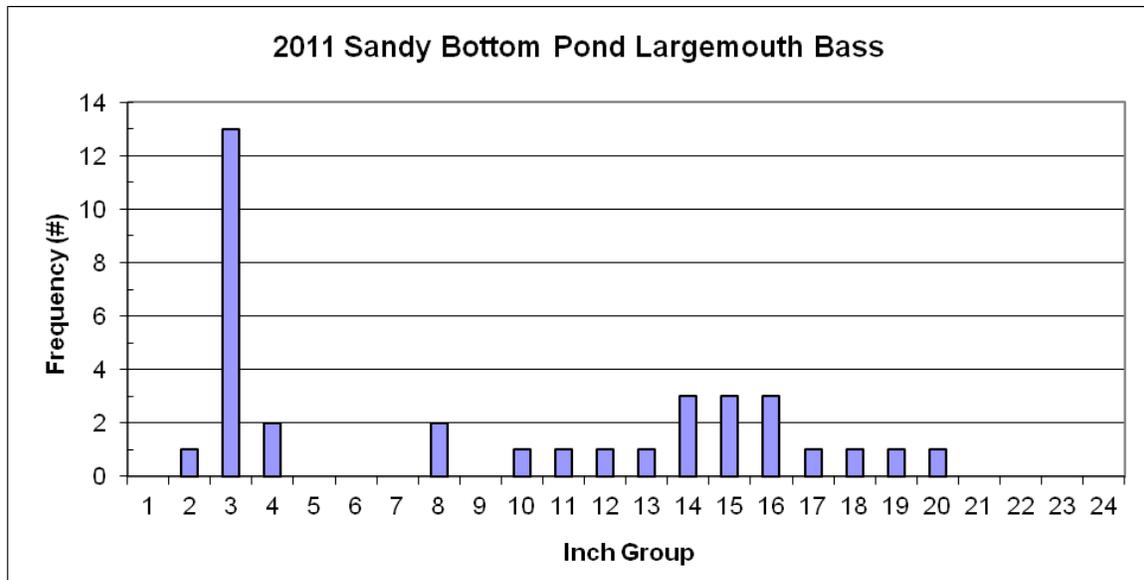
Sandy Bottom Nature Park consists of 465 acres of land that provides a sanctuary from the development of the Hampton area. The park was established in the early 1990s. It provides various activities for the outdoor enthusiast. There are trails for biking, hiking, and horse riding. Facilities include boat rental, a fishing pier, picnic areas, nature center, wildlife center, primitive camping areas, and tent cabins. The park is home for the 12-acre Sandy Bottom Pond. The pond was formed from an old borrow pit that was originally excavated for construction of Interstate 64. Sandy Bottom Pond provides fishing opportunities for park visitors.

The Virginia Department of Game and Inland Fisheries sampled Sandy Bottom Pond on May 3, 2011. A full community sample was conducted to observe the present fishery. Sandy Bottom Pond was last sampled on May 5, 2009. The electrofishing effort of 1,570 seconds (0.436 hours) was used to attain a representative sample of the present fishery. A complete circuit of the shoreline was conducted with the water temperature being quite warm at 23.3°C (73.9°F). Electrofishing efforts consisted of shocking along the shoreline habitat as close as possible, with the majority of the effort concentrated in the 2 to 5 foot depth range. Being that the pond was constructed from an old borrow pit, the shoreline drops off pretty quickly. Efforts were made to stick to the bank and shoreline brush as close as possible. A total of 6 fish species were collected with the majority of the sample consisting of bluegills and largemouth bass.

Largemouth Bass

Sandy Bottom Pond provides a limited bass fishery. A total of 35 largemouth bass were collected to provide an expanded CPUE (Catch Per Unit of Effort) of 80.3 bass/hr. The catch rate showed a favorable increase from the 2009 sample (CPUE: 59.1 bass/hr). The size distribution of the collected bass can be seen on the enclosed length frequency graph. The 2011 survey reflects some improvements in bass recruitment with a concentration of 2 to 4 inch fish from the 2010 year class. The 2010 year class of bass will hopefully survive long enough to reach mature size and provide action for anglers that fish the pond. The survey showed a low abundance of bass in the 5 to 12 inch range with only 5 bass collected. The combination of smaller bass and some larger bass yielded an average length of 9.7 inches. Our sampling efforts are just a representative picture of the fish community collected along the shoreline on May 3, 2011. The bass collected during the survey were holding tight to the cover of the shoreline brush. Additional bass may have been holding in deeper water not sampled by the electric field of the electrofishing boat.

Figure 1. Length frequency of largemouth bass collected from Sandy Bottom Pond on May 3, 2011 (N: 235, CPUE: 80.3/hr)



With largemouth bass being the most popular game fish in this country, it has been considered that a “quality” bass is one that is 12 inches or larger. A “preferred” bass is one that is 15 inches or larger in length. These size classifications help to describe the present dynamics of the population. 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. One must consider the relatively small sample size of bass collected when assessing the PSD and RSD-P values. The survey collected a total of 19 stocked-size bass (8” or larger) in which 15 of those bass were of quality size (> 12 inches). These values yield a PSD value of 79 which is above the desired range of 40-70. The RSD-P value of 53 is based upon the collection of 10 preferred-sized bass. A balanced fishery has a population that is composed of various year classes that are represented by distribution peaks. Your typical length frequency graph from Sandy Bottom Pond has some major gaps in the distribution where very few bass in the 6 to 12 inch range are found.

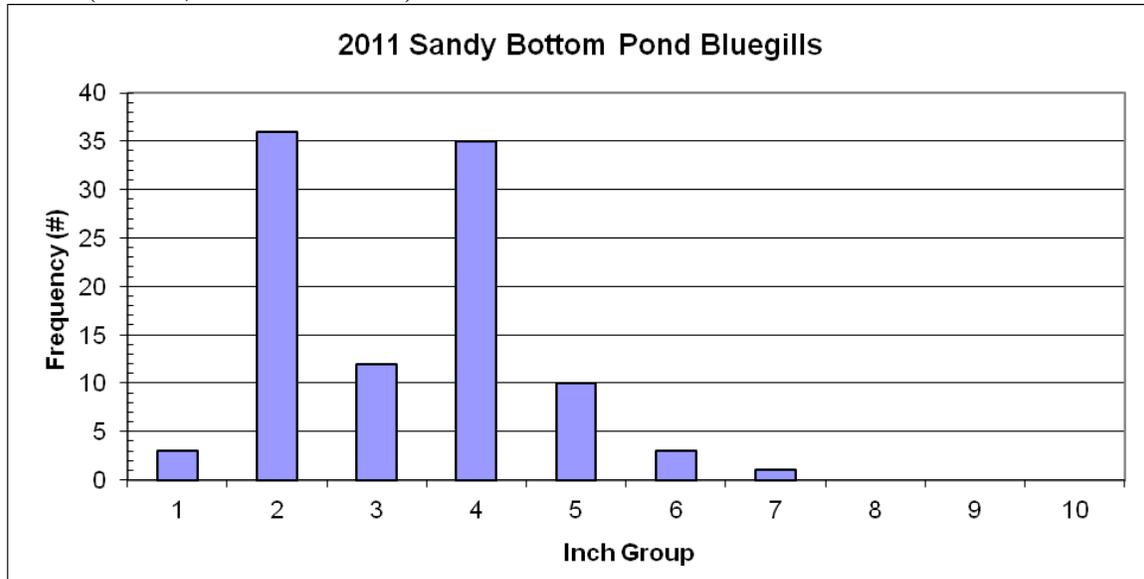
Weights were taken on largemouth bass to calculate relative weight values. Relative weight values are an indication of body condition. A value from 95 to 100 represents a fish that is in the healthy range and finding a decent amount of food. A higher relative weight value indicates fish with a better body condition. The relative weight values for stock, quality, and preferred bass (>8”, >12”, and >15”) were 94, 94 and 90 respectively. These relative weight values show some similarities to the 2009 survey (stock (95), quality (94) and preferred (94)). The largest bass measured 20.4 inches and weighed only 3.86 pounds. This older bass was in poor condition with a relative weight of 79.

Bluegills

The 2011 survey was similar to past surveys as it showed the bluegill fishery in Sandy Bottom Pond to be dominated by fish less than 5 inches in length. Our electrofishing effort collected 100 bluegills. The expanded CPUE of 229.3 bluegills/hr showed an increase when compared to the 2009 survey (CPUE: 195.4 bluegills/hr). The

size distribution can be seen on the attached length frequency graph. The majority of the bluegills were within the 2 to 4 inch range. The PSD for bluegill is the proportion of bluegill over 8 cm (stock size) that are also at least 15 cm (quality size). The bluegill PSD of 7 is a reflection of only 4 quality-size bluegills (5.94 inches). The 2011 PSD value showed an increase from the 2009 survey (PSD: 3), but was not nearly as friendly as the 2008 survey (PSD: 15). The 2011 survey produced a total of 60 stock-sized bluegills. Anglers that fish Sandy Bottom Pond should not expect to catch too many large bluegills.

Figure 2. Length frequency of bluegills collected from Sandy Bottom Pond on May 3, 2011. (N: 100, CPUE: 229.3/hr)



Other Species

The pond's fishery has a little more species diversity in the form of American eel, warmouth, eastern mudminnow and yellow bullhead. A total of 6 American eels were collected. The eels ranged in size from 11 to 18 inches. Additional eels were observed along the shoreline as they avoided the edge of the electric field. All collected eels were removed from the pond. Only one warmouth of 4.4 inches in length was collected. A total of 3 eastern mudminnows were collected. These fish ranged in size from 2 to 2.5 inches. A pair of yellow bullheads was collected. The bullheads measured 9.2 and 11.5 inches in length. One juvenile bluegill/redear sunfish hybrid was also collected.

Sample Summary

The electrofishing sample of Sandy Bottom Pond collected 6 fish species. The largemouth bass population continues to be out of balance with limited numbers of bass in the 5 to 12 inch range. The survey revealed a decent number of bass greater than 15 inches in length. The overall catch rate showed a marked improvement from the 2009 survey. The 2010 year class showed a better than average survival rate for their first year of life. This is a good sign and successful spawns will hopefully continue to strengthen the bass population. I would recommend that anglers continue to release all largemouth bass to protect the current population. The bluegill population appears to be in fair shape with very few bluegills greater than 5 inches in size. The bluegill size distribution was

centered on two main peaks of 2 inch and 4 inch bluegills. The 2 inch bluegills will be the most valuable in providing forage for the largemouth bass population. The fishery provides some species diversity in the way of warmouth, American eel, eastern mudminnow and yellow bullhead. DGIF staff conducted a supplemental stocking of bass into Sandy Bottom Pond in October 2009. All bass were marked with a floy tag which has a specific number for each fish. Bass ranged in size from 8 to 14.7 inches. Additional stocking during the fall of 2009 consisted of black crappie fingerlings from the DGIF King & Queen Hatchery as well as some adult black crappies from Beaverdam Swamp Reservoir. The 2011 survey was unsuccessful in collecting any of the tagged largemouth bass and no black crappies were collected. DGIF fisheries staff was able to stock a limited number of channel catfish during the summer of 2011. These fish will provide some excitement for anglers if they are lucky enough to catch one.

The park is open from sunrise to sunset every day except for Christmas; however the fishing pier is open to pedestrians for fishing 24 hours a day. The park is located at 1255 Big Bethel Road, a few minutes from I-64 by way of the Hampton Roads Center Parkway West exit. Please call the park office at (757) 825-4657 or try their website at www.hampton.va.us/sandybottom for additional information.

Report prepared by Scott Herrmann, Aquatics Biologist for the Virginia Department of Game and Inland Fisheries