



Gardy's Millpond 2013 Fisheries Management Report Virginia Department of Game and Inland Fisheries

Gardy's Millpond is a 75-acre impoundment located along the Westmoreland and Northumberland county line. The pond is privately owned, but the Department of Game and Inland Fisheries has an agreement to allow public fishing. The pond is located off of State Route 617 off of Route 202, about 3 miles northwest of Callao, VA. The pond is rather shallow with an average depth of about 5 feet. The shoreline has decent habitat in the form of fallen trees and patches of lily pads. The boat ramp and courtesy pier are open to fishing 24 hours a day, seven days a week. No gasoline motors are allowed, but anglers are able to use electric trolling motors. Fishing this pond should be a nice alternative to fishing some of the bigger waters.

The Virginia Department of Game and Inland Fisheries sampled Gardy's Millpond on April 25, 2012. A community sample was conducted to observe the present fishery. The electrofishing effort of 2,400 seconds (0.66 hour) was used to sample two shoreline sections. A total of 10 fish species were collected. This report will concentrate primarily upon the largemouth bass, bluegill, black crappie, redear sunfish and chain pickerel that were collected. DGIF fisheries staff has increased the frequency of the sampling on Gardy's Millpond. The pond was surveyed in 2006, 2007, 2008, 2009 and 2011 to track trends in the fishery. Gardy's Millpond was down roughly 4.5 feet during September 2005 to February 2006 to allow for repairs to be made to the dam. Gardy's Millpond was not sampled during the spring of 2010.

Table 1. Summary of the primary fish species collected by electrofishing of Gardy's Millpond, April 25, 2012.

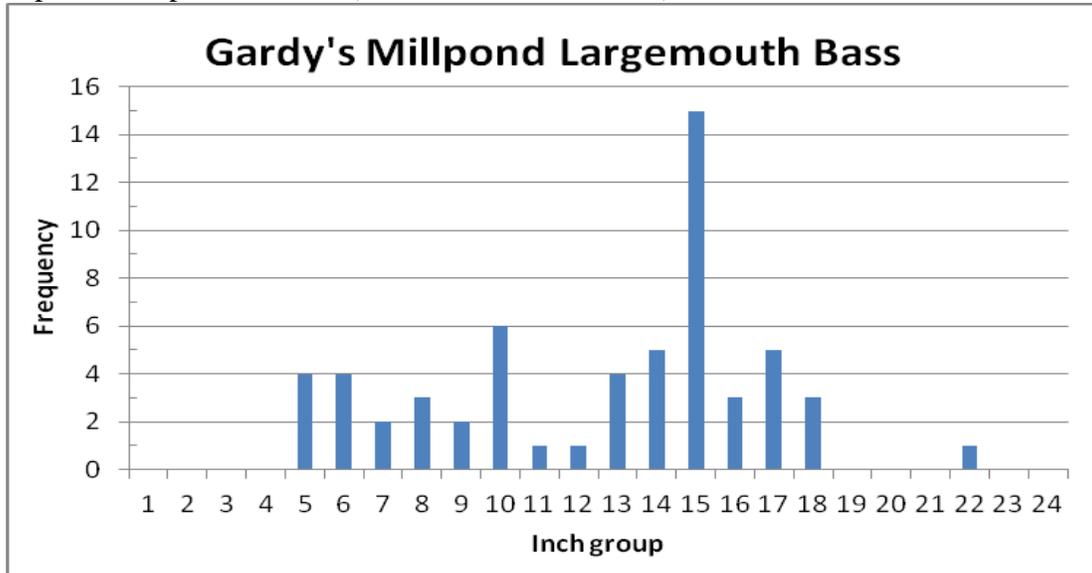
Species	# Collected	CPUE (fish/hr)	Largest Length	Average Length
Largemouth Bass	59	88.5	22.13"	12.96"
Bluegill	241	361.5	8.15"	4.74"
Black Crappie	37	55.5	12.2"	8.34"
Redear Sunfish	56	84	9.53"	6.74"
Chain Pickerel	12	18	19.5"	17.5" for adults

Largemouth Bass

The largemouth bass fishery appears to be in decent shape. The 2012 survey collected 59 largemouth bass for a CPUE (Catch Per Unit of Effort) of 88.5 f/hr. This catch rate showed a slight increase from the 2011 survey (81 f/hr). The size distribution of the collected bass is represented in the attached histogram. The sample consisted of an impressive total of 27 bass that measured 15 inches or greater. This total of preferred-

sized bass provided the great catch rate of 40.5 preferred bass/hr. This catch rate showed a major increase from the 2011 survey (CPUE: 24 preferred bass/hr). Gardy’s Millpond had the highest catch rate of preferred bass of any of the public waters sampled in Region 1, District 1 during 2012. The largest bass measured 22.13 inches and weighed 6.2 pounds. The average size bass collected during the 2012 survey measured 12.96 inches. This mean total length showed a slight decline when compared to the 2011 survey (mean TL: 13.07 inches).

Figure 1. Length frequency of largemouth bass collected from electrofishing of Gardy’s Millpond on April 25, 2012. (N: 59, CPUE: 88.5 f/hr)



Fisheries biologists of the past established certain size classifications to describe the fish they collected. It is through these size classifications that population dynamics are analyzed. The size designations are stock, quality, preferred, memorable, and trophy. 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). A balanced bass/bluegill fishery has a bass PSD value within the 40–60 range. 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. 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 PSD and RSD-P values represent the distribution of collected fish, but one must take into account the total number of bass collected along with the total of stock-sized bass in the sample.

The 2012 sample yielded a PSD value of 76, which is a direct reflection of the 37 quality-sized bass. The sample had a total of 49 bass that were stock size or larger. This PSD value is above the desired range of 40-60 that would represent a balanced bass/bluegill fishery. The 2012 PSD value showed a slight decline from the 2011 value (PSD: 78). The 2012 RSD-P value of 55 represents the collection of 27 preferred-size bass. This RSD-P value showed a major increase when compared to the 2011 value (RSD-P: 35).

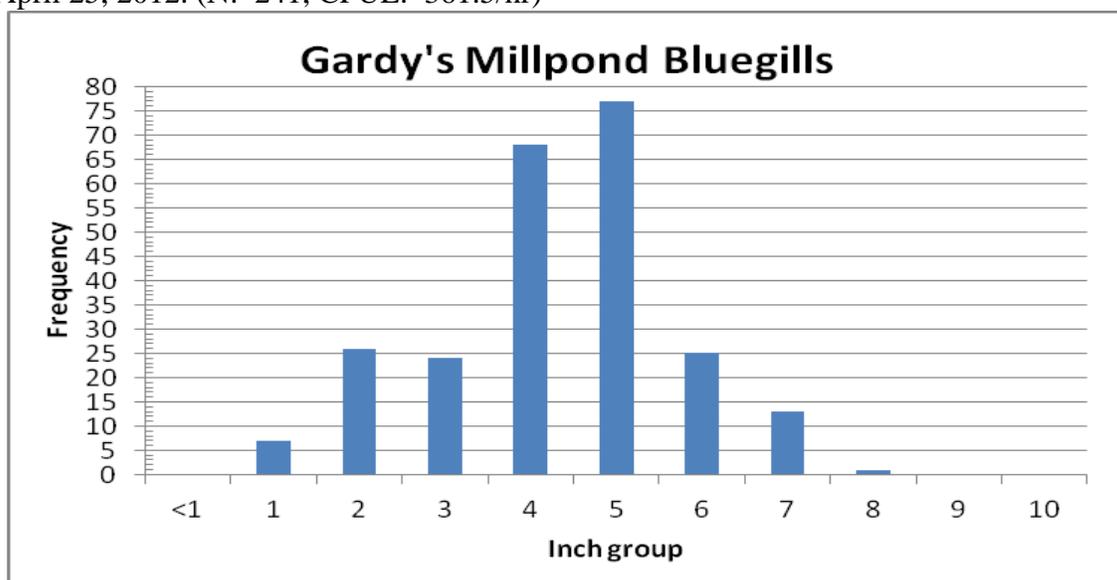
Weights were taken on largemouth bass to calculate relative weight values. Relative weight values are an indication of body condition. A value from 95 to 100 represents a fish that is in the healthy range and finding a decent amount of food. A higher relative weight value indicates fish with a better body condition. The relative weight values for stock, quality, preferred and memorable bass (>8", >12", >15", >20") were 92, 92, 93 and 98 respectfully. These values showed some similarities to the 2011 survey (stock: 92, quality: 92, preferred: 95, memorable: 94).

Bluegills

The sample was able to collect 241 bluegills for a CPUE of 361.5 f/hr. This catch rate showed a decline from the 2011 survey (CPUE: 417 f/hr). The size distribution ranged from juvenile-sized bluegills of an inch in length up to the preferred-size of 8+ inches. The PSD for bluegill is the proportion of stock-size bluegills over 8 cm (3.15") that is also a quality size of at least 15 cm (5.9"). The bluegill PSD value was 19 and falls just below the desired PSD range (20 to 40) that would represent a balanced fishery. The collection consisted of 39 quality-sized bluegills in the 5.9 to 8-inch range. A total of 207 stock-sized bluegills were collected. The 2012 bluegill PSD value showed a slight decline from the 2011 sample (PSD: 21).

The survey revealed an abundance of bluegills in the 4-5 inch range. The limited abundance of 1-3 inch bluegills most likely shows the impact of predation from the bass and black crappie populations. The average total length of collected bluegills was 4.74 inches. This length showed some improvement from the 2011 survey (mean TL: 4.09 inches). The electrofishing survey was conducted about a week or so before the majority of larger bluegills spawn along the shallows. A survey conducted during mid-May would most likely have shown a larger assemblage of bluegills in the 6 to 8 inch range. DGIF staff tries their best to not conduct spring electrofishing surveys during the middle of the sunfish spawning season as a way of trying to protect the developing year class of bluegill fry.

Figure 2. Length frequency distribution of bluegills collected from Gardy's Millpond, April 25, 2012. (N: 241, CPUE: 361.5/hr)

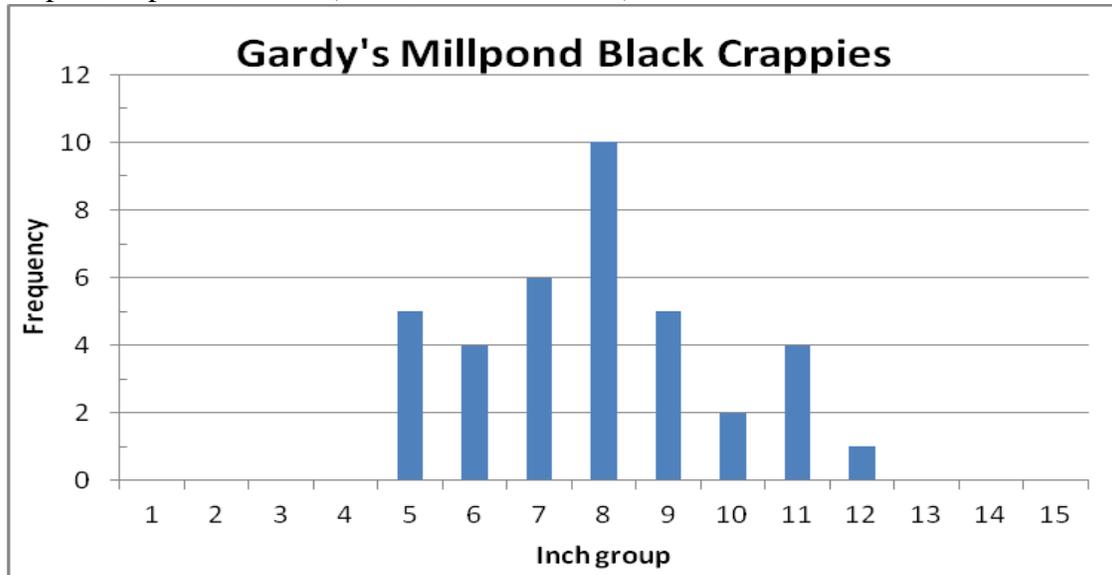


Black Crappies

The sample was able to collect 37 black crappies for a CPUE of 55.5 f/hr. This catch rate showed a decline from the 2011 sample (CPUE: 84 f/hr). The crappies ranged in size from 5 to 12 inches. A high proportion of the crappies were in the 7 to 9 inch range. Past electrofishing efforts on Gardy's Millpond have yielded limited numbers of black crappies. Electrofishing for crappies tends to be hit or miss, depending on the location of schooling fish. The 2012 survey showed the abundance of 5 to 7 inch fish found during the 2011 survey have now grown into the 7 to 9 inch range.

The crappies were weighed to evaluate their relative weights. The relative weight values for stock, quality and preferred-sized crappies (>5", >7.9" and >9.8") were 84, 81 and 80. These values were relatively similar to the 2011 relative weight values (stock: 88, quality: 78 and preferred: 80). The one memorable-sized black crappie had a relative weight value of 78. These values are well below the desired range of 95 to 100. The decreased abundance of juvenile sunfish is reflected in the less than ideal relative weight values of the black crappies. These low relative weight values indicate that the crappies are experiencing difficulties in finding adequate forage. The average length of collected crappies measured 8.34 inches. This was a major increase from the 2011 average length of 5.93 inches. One sign of hope is that if given enough time and luck, Gardy's Millpond can produce some larger black crappies. This was evident by the 12.2 inch crappie that was collected along the eastern shoreline just up from the boat ramp.

Figure 3. Length frequency distribution of black crappies collected from Gardy's Millpond, April 25, 2012. (N: 37, CPUE: 55.5/hr)

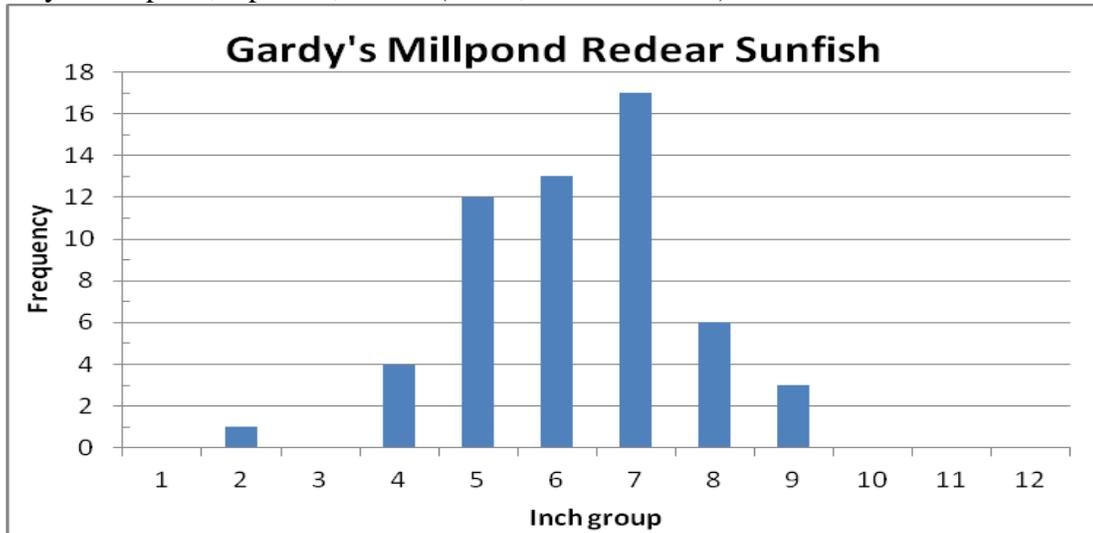


Redear Sunfish

The sample was able to collect a total of 56 redear sunfish for a CPUE of 84 f/hr. This catch rate showed a decline from the 2011 sample (CPUE: 100.5 f/hr). The 2012 size distribution consisted of fish from 2 to 9 inches in length. The average size redear sunfish measured 6.74 inches which was an improvement from 2011's average length of 6.08 inches. The largest redear sunfish measured 9.53 inches. A sample revealed a pair of poor year classes with limited abundance of redear sunfish less than 5 inches in length.

Gardy's Millpond continues to produce quality redear sunfish in the 7 to 9 inch range. Anglers usually do rather well during the middle of May when the redear sunfish are tight to the banks during the spawning season.

Figure 4. Length frequency distribution of redear sunfish collected from electrofishing of Gardy's Millpond, April 25, 2012. (N: 56, CPUE: 84 f/hr)



Chain Pickerel

The sample collected a total of 12 chain pickerel. This catch rate (18/hr) showed an increase when compared to the 2011 survey (CPUE: 7.5 f/hr). The size distribution consisted of ten YOY (young of year) in the 1.75 to 2.25 inch range and two larger specimens (15.6 and 19.5 inches). The limited abundance of chain pickerel could be attributed to angler harvest or the killing of pickerel by anglers. The survival rate of juvenile chain pickerel could also be impacted by the abundance of other predators such as the largemouth bass and black crappies. Chain pickerel are native to Virginia and they serve a purpose of controlling the forage base. Chain pickerel, if given the chance, can actually assist in controlling the numbers of juvenile bluegills and aid in controlling a stock-piled black crappie population.

Additional Species

The remaining species collected in low abundance were: creek chubsuckers (2), American eels (11), yellow perch (4), warmouth (3) and gizzard shad (1). These species offer some diversity and the chance to surprise an angler from time to time. Gardy's Millpond has produced some citation-sized yellow perch in the past. The electrofishing survey collected only 4 yellow perch with two of the perch measured at 11.1 and 11.2 inches

Summary

The 2012 electrofishing sample of Gardy's Millpond revealed a decent abundance of largemouth bass. The catch rate of bass (CPUE: 85.5 f/hr) showed a slight increase from the 2011 survey (CPUE: 81 f/hr). The catch rate of preferred bass (40.5/hr) was the highest catch rate for any public water sampled in Region 1, District 1 during 2012. The

bluegill fishery consists primarily of medium-sized fish in the 4 to 6 inch range. The pond has some potential to grow larger bluegills with a few reaching the 7 to 8-inch range. The redear sunfish population continues to produce some very respectable fish in the 7 to 9 inch range. Limited recruitment of redear sunfish was observed.

The survey revealed a decreased catch rate of black crappies (55.5/hr) when compared to the 2011 survey (CPUE: 84/hr). The majority of the collected crappies were within the 7-9 inch range with the largest crappie measured at 12.2 inches. The chain pickerel population showed some positive signs of recruitment with the collection of 10 pickerel fingerlings, but only two adult pickerel were collected.

Anglers that fish Gardy's Millpond can expect to have good action from the largemouth bass and a decent chance to catch some quality redear sunfish. Anglers reported the catch of 4 citation fish from Gardy's Millpond during 2012. These citations were for 2 trophy largemouth bass, 1 yellow perch and 1 chain pickerel. Anglers interested in catching some decent redear sunfish should try Gardy's Millpond during the end of April to mid-May time frame.