



Gardy's Millpond 2012 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 May 5, 2011. 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 13 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 and 2009 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.

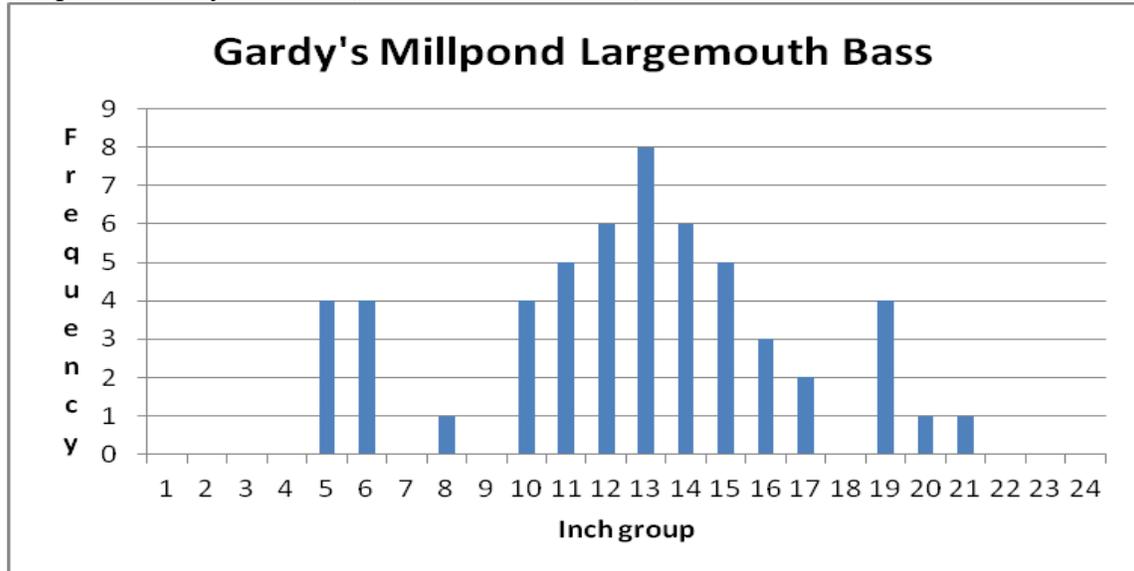
Table 1. Summary of the primary fish species collected by electrofishing of Gardy's Millpond, May 5, 2011.

Species	# Collected	CPUE (fish/hr)	Largest Length	Average Length
Largemouth Bass	54	81	21.73"	13.07"
Bluegill	278	417	8.74"	4.09"
Black Crappie	56	84	12.72"	5.93"
Redear Sunfish	67	100.5	9.53"	6.08"
Chain Pickerel	5	7.5	19.96"	13.87"

Largemouth Bass

The largemouth bass fishery appears to be in decent shape. The 2011 survey collected 54 largemouth bass for a CPUE (Catch Per Unit of Effort) of 81 f/hr. This catch rate showed a slight increase from the 2009 survey (75 f/hr). The size distribution of the collected bass is represented in the attached histogram. The sample consisted of 16 bass that measured 15 inches or greater. This total of preferred-sized bass provided a very respectable catch rate of 24 preferred bass/hr. The largest bass by length measured 21.73 inches and weighed 5.49 pounds. The average size bass collected during the 2011 survey measured 13.07 inches. This mean total length showed a slight improvement from the 2009 survey (mean TL: 12.7 inches).

Figure 1. Length frequency of largemouth bass collected from electrofishing of Gardy's Millpond on May 5, 2011. (N: 54, CPUE: 81 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 40–70 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 2011 sample yielded a PSD value of 78, which is a direct reflection of the 36 quality-sized bass. The sample had a total of 46 bass that were stock size or larger. This PSD value is above the desired range of 40-70 that would represent a balanced bass/bluegill fishery. The 2011 PSD value showed an increase from the 2009 value (PSD: 65). The 2011 RSD-P value of 35 represents the collection of 16 preferred-size bass. This RSD-P value showed an increase when compared to the 2009 value (RSD-P: 23).

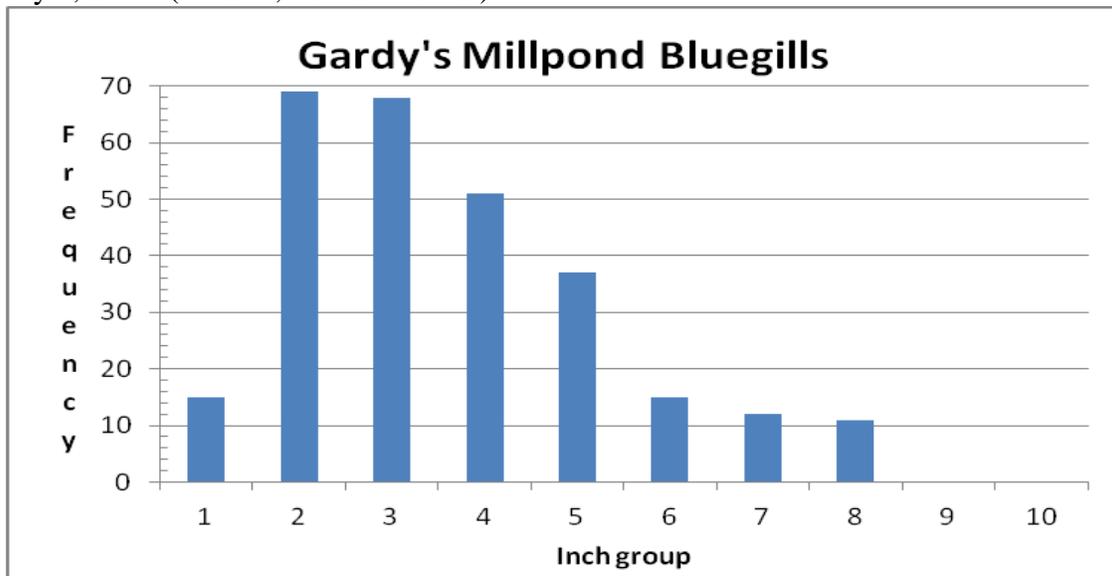
Weights were taken on largemouth bass to calculate relative weight values. Relative weight values are an indication of body condition. A value from 95 to 100 represents a fish that is in the healthy range and finding a decent amount of food. A higher relative weight value indicates fish with a better body condition. The relative weight values for stock, quality, preferred and memorable bass (>8”, >12”, >15”, >20”) were 92, 92, 95 and 94 respectfully. These values showed some similarities to the 2009 survey (stock: 91, quality: 94, preferred: 95) and a noticeable decline for the two memorable-sized bass when compared to the 2009 survey (Memorable Wr: 102).

Bluegills

The sample was able to collect 278 bluegills for a CPUE of 417 f/hr. This catch rate showed an increase from the 2009 survey (CPUE: 372 f/hr). The size distribution ranged from juvenile-sized bluegills of an inch in length up to the preferred-size of 8.74 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 21 and falls just within the desired PSD range (20 to 60) 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 186 stock-sized bluegills were collected. The 2011 bluegill PSD value showed a major decline from the 2009 sample (PSD: 39).

The survey revealed an abundance of bluegills in the 2-3 inch range. The abundance of juvenile bluegills should help to provide a decent forage base for the bass population as well as the adult black crappies. The average total length of collected bluegills was 4.09 inches. This length showed some improvement from the 2009 survey (mean TL: 3.6 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, May 5, 2011. (N: 278, CPUE: 417/hr)



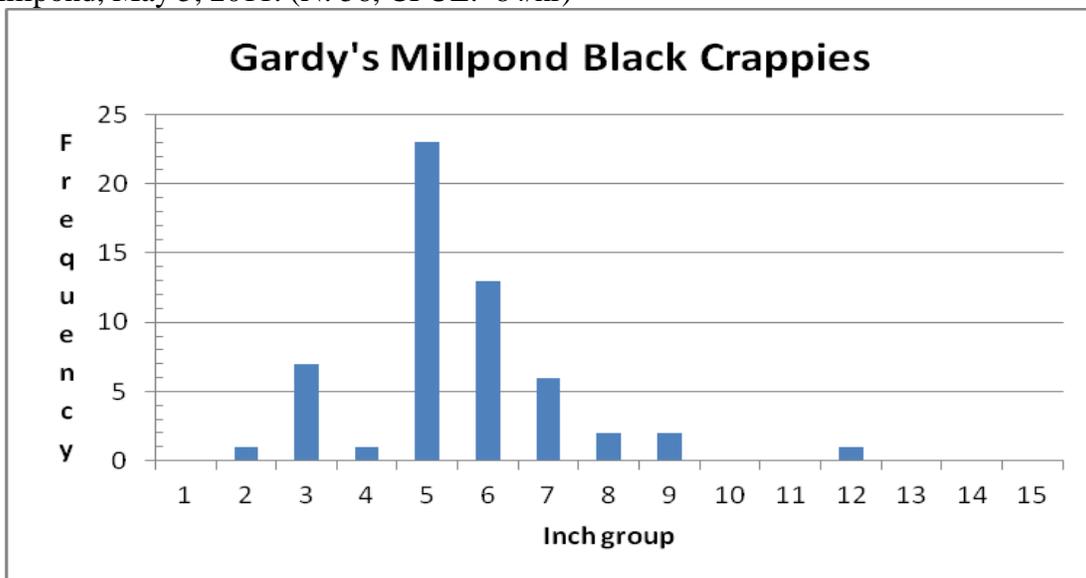
Black Crappies

The sample was able to collect 56 black crappies for a CPUE of 84 f/hr. This catch rate showed an increase from the 2009 sample (CPUE: 52 f/hr). The crappies ranged in size from 2 to 12 inches. A high proportion of the crappies were in the 5 to 7

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 2011 survey showed a better than average crappie abundance even though most of the fish were on the small side.

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 88, 78 and 80. These values were relatively similar to the 2009 relative weight values (stock: 86, quality: 83 and preferred: 80). The one memorable-sized black crappie had a relative weight value of 80. These values are well below the desired range of 95 to 100. Even though juvenile sunfish abundance has increased, there is still not enough juvenile sunfish and other baitfish to provide enough forage for the black crappie population. These low relative weight values indicate that the crappies are experiencing difficulties in finding adequate forage. The average length of collected crappies measured a not so impressive 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 12.72 inch crappie that was collected along the northern shoreline just up from the boat ramp.

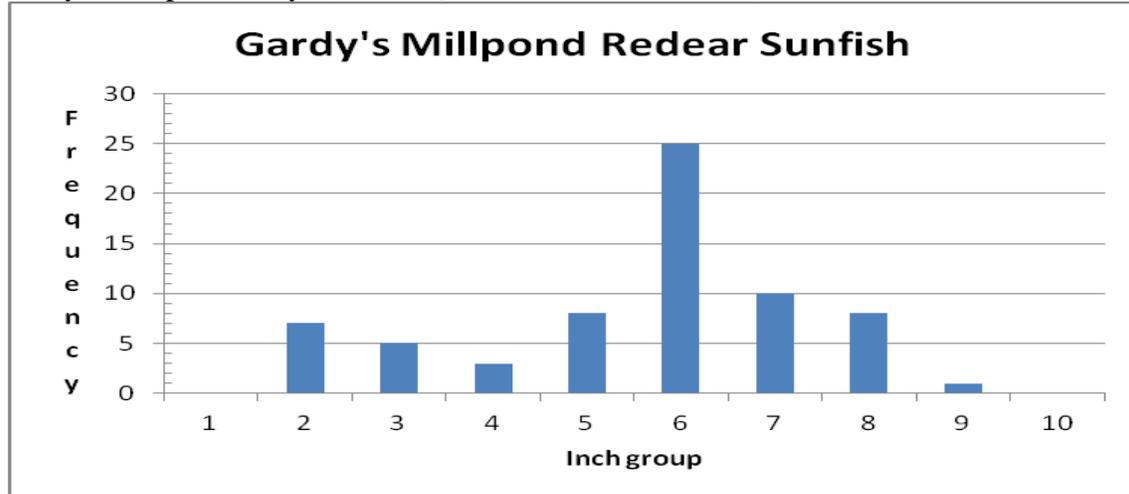
Figure 3. Length frequency distribution of black crappies collected from Gardy’s Millpond, May 5, 2011. (N: 56, CPUE: 84/hr)



Redear Sunfish

The sample was able to collect a total of 67 redear sunfish for a CPUE of 100.5 f/hr. This catch rate showed a favorable increase from the 2009 sample (CPUE: 65 f/hr). The 2011 size distribution consisted of fish from 2 to 9 inches in length. The average size redear sunfish measured 6.08 inches. The largest redear sunfish measured an impressive 9.53 inches. A sample revealed several poor year classes with limited abundance of redear sunfish less than 6 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, May 5, 2011. (N: 67, CPUE: 100.5 f/hr)



Chain Pickerel

The sample collected a total of only 5 chain pickerel. This catch rate (7.5/hr) showed a decline when compared to the 2009 survey (CPUE: 9 f/hr). The size distribution ranged from 9 to roughly 20 inches. The limited abundance of chain pickerel is most likely due to angler harvest or the killing of pickerel by anglers. 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: golden shiners (9), brown bullhead (1), common carp (3), American eels (13), yellow perch (8), warmouth (3), gizzard shad (19) and margined madtom (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 8 yellow perch with a few decent ones in the 9 to 11 inch range.

Summary

The 2011 electrofishing sample of Gardy's Millpond revealed a decent abundance of largemouth bass. The catch rate of bass (CPUE: 81 f/hr) showed a slight increase from the 2009 survey (CPUE: 75 f/hr). The presence of increased numbers of young bluegills should increase the relative weight values of the bass population. The bluegill fishery consists primarily of medium-sized fish in the 3 to 6 inch range. The pond has some potential to grow larger bluegills as a fair number of 7 and 8-inch bluegills were present in our sample. The pond produces some quality redear sunfish in the 7 to 9 inch range with the largest one measured at 9.53 inches. Limited recruitment of redear sunfish was observed.

The increased catch rate of black crappies (84/hr) provided more excitement than the 2009 survey (CPUE: 52/hr). The majority of the collected crappies were within the 5-7 inch range with a one really nice crappie measured at 12.72 inches that weighed 1.05

pounds. The chain pickerel population appears to be less abundant than past years with only 5 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 5 citation fish during 2011. These citations were for 4 trophy largemouth bass and 1 yellow perch. Anglers reported 7 citations caught during 2010. These citations were for 4 largemouth bass, 2 yellow perch and 1 chain pickerel. Anglers reported only 4 citation fish during 2009. These fish citation rewards were for three yellow perch and one largemouth bass. Anglers interested in catching some decent redear sunfish should try Gardy's Millpond during the end of April to mid-May time frame.