

Brandywine River Volunteer Angler Log 2008

Please help biologists to manage the Brandywine River fishery resource by completing this volunteer log and send it by **May 31, 2008** to:

Matt Fisher
4876 Hay Point Landing Road
Smyrna, DE 19977

Thank you for your assistance. The information you provided will be kept confidential. For additional information contact Matt Fisher at (302) 653-2887 x 112 or Matthew.Fisher@state.de.us

- 1.) What County and State did you travel from to fish in the Brandywine R.? _____, _____
- 2.) What species do you fish for most in the Brandywine R.? _____
- 3.) How many years have you fished the Brandywine R.? _____

Example

	Date	4/1											
	Hours Fished	4.5											
American shad (white shad)	Caught	1											
	Released	1											
Hickory shad	Caught	0											
	Released	0											
River Herring	Caught	0											
	Released	0											
Gizzard shad (mud shad)	Caught	0											
	Released	0											
White Perch	Caught	5											
	Released	0											
Striped Bass (rockfish)	Caught	5											
	Released	5											
Smallmouth bass	Caught	3											
	Released	0											
Redbreast sunfish	Caught	0											
	Released	0											
Channel catfish	Caught	0											
	Released	0											
American Eel	Caught	0											
	Released	0											
Other _____	Caught												
	Released												
Other _____	Caught												
	Released												
How much did you spend in whole dollars to fish this trip? Tackle, gas, guide fee, ramp fee, snacks, etc.		45											
Fishing location; 1=above West St. Dam, 2=between West St. dam and RT 13 bridge, 3=between RT 13 bridge and Christina/Brandywine confluence		2,3											
B = Boat or S = Shoreline fishing?		B											
Mostly did you use a F=fly rod, S=spinning rod, or D=dipnet?		S											

***On the reverse of this page is a fish identification aid for selected species. If you are still unsure of the species, please include a picture.



American Shad
 -typically 13"-22"
 -top and bottom jaw parts align

Hickory Shad
 -typically 12"-18"
 -bottom jaw protrudes well past upper jaw

When comparing American shad to hickory shad - run finger along the front edge of snout and if the bottom jaw catches your finger easily it's a hickory shad

River Herring
 -typically 8"-12"
 -Blueback herring eye diameter is the same distance as tip of snout to eye

-Alewife eye diameter is larger than the distance from tip of snout to eye

Gizzard shad
 -typically 7"-14"
 -rounded blunt snout
 -last dorsal fin ray is long
 -slimy when handled



OPTIONAL-

May we contact you about your responses? If so provide phone # _____.

Do you have any comments or additional information pertaining to you fishing experiences on the Brandywine River in 2008?

**Data Summary for Fish Population Study on the Brandywine River near Wilmington
April 29, 2008-May 30, 2008**

Date	Sheet #	Hours Fished ³	Number of Years Fishing on Brandywine River	Money Spent on Trip	Number Caught	Number Released	Boat or Shoreline	Type of Fishing ⁴	Location
20-Apr	1	3	3	\$5.00	2	2	S	S	2
20-Apr	2	3	20	\$10.00	3	3	S	S	2
21-Apr	3	1	17	\$1.50	2	2	S	S	2
26-Apr	/	0.75	25	\$5.00	1	1	S	S	1
26-Apr	6	1.5	4	\$20.00	0	0	S	F	1
26-Apr	51	0	5	\$10.00	0	0	S	S	1
30-Apr	60	1	0	\$20.00	6	6	S	S	2
30-Apr	57	1	13	\$0.00	6	6	S	S	/
30-Apr	/	0	15	\$20.00	0	0	S	S	/
2-May	58	/	10	\$0.00	8	8	S	S	2
4-May	61	0.5	0	\$50.00	0	0	S	F	2
12-May	67	0	3	\$2.00	0	0	S	S	2
12-May	66	0	1	\$2.00	0	0	S	F and S	2
15-May	91	/	/	/	4	4	S	F	2
15-May	90	/	3	\$10.00	0	0	S	F	2
18-May	11	0	45	\$8.00	0	0	S	S	2
18-May	72	1	1	\$2.00	10	10	S	S	2
18-May	71	1	10	\$0.00	4	4	S	S	2
18-May	40	1	50	\$3.00	6	6	S	S	2
TOTALS	19 Interviews	14.75	225	\$168.50	52	52			
AVERAGES²		0.92	12.5	\$9.36	3	3			

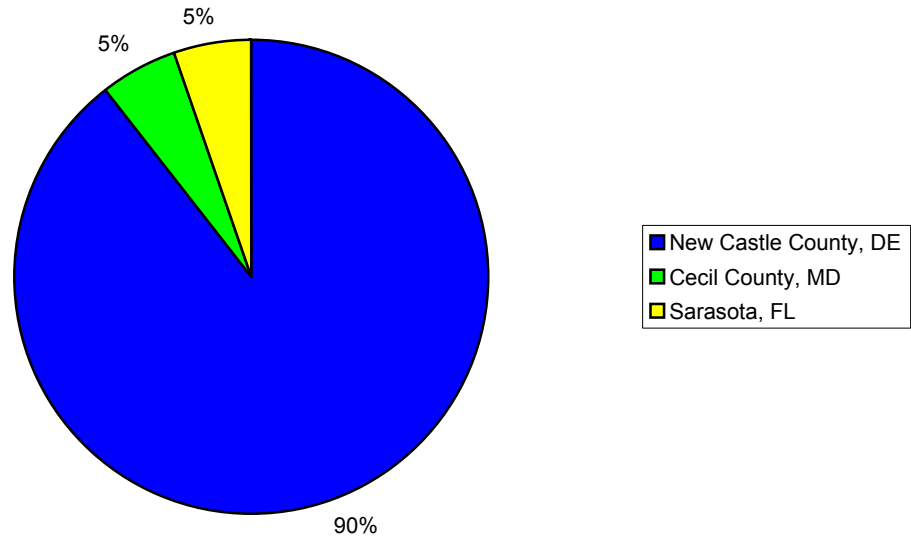
¹ "/" = No answer on interview sheet

² Based on number of answers, not number of interviews.

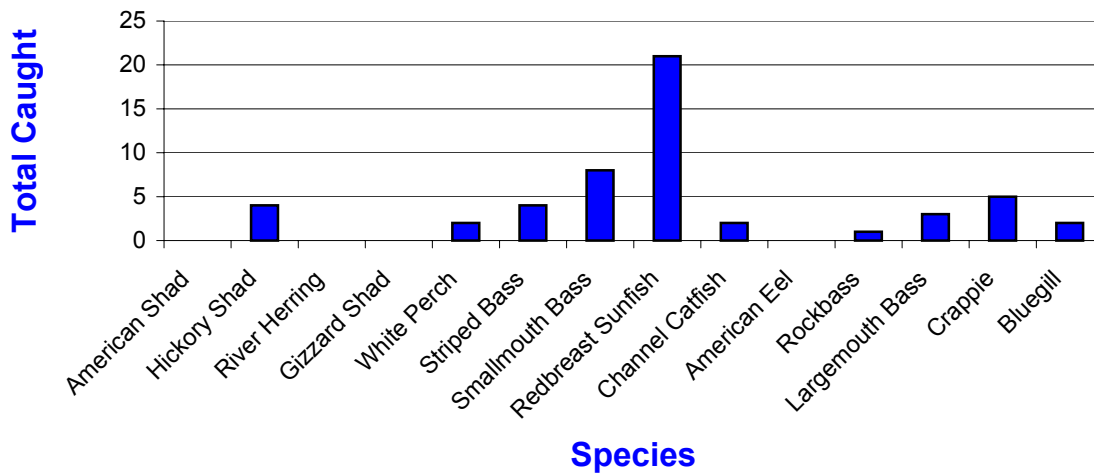
³ Three of the survey logs did not have information on this question and five of the anglers had just arrived, which slightly skews the results.

⁴ F=flyrod, S=spinning

**Angler Origin in the Brandywine River near Wilmington
4/20/08-5/30/08**



**Fish Species Caught
in the Brandywine River near Wilmington
4/20/08-5/30/08**





DATE: June 6, 2008

TO: Matt Fisher, DNREC

FROM: Martha Corrozi, University of Delaware, Institute for Public Administration-
Water Resources Agency

SUBJECT: Fish Population Study on the Brandywine River

The University of Delaware's Water Resources Agency, a unit of the Institute for Public Administration, worked in partnership with DNREC and the Brandywine Conservancy to conduct a fish population study on the Brandywine River. Erika Farris, Maureen Seymour, and Mandy Tolino, graduate research assistants with the Water Resources Agency, and Martha Corrozi, Assistant Policy Scientist collected data from April 29, 2008 through May 30, 2008. DNREC's Matt Fisher set the exact dates and times for the data collection and provided a volunteer angler log for the interview tool. The Water Resources Agency will provide the data to DNREC and the Brandywine Conservancy and it is understood that this data will be used to assist the Brandywine Shad Partnership's efforts to restore shad migration to the Brandywine River.

The fish population surveys were conducted on three randomly selected weekdays (Monday through Friday) each week for the six-week period. Angler counts and interviews were also conducted twice on one of two weekend days for each week, which resulted in data collection on two Saturdays and three Sundays during the six-week period. The Water Resources Agency was responsible for collecting data on 22 days from April 29, 2008 through May 30, 2008. The Water Resources Agency was able to collect data for 21 of the assigned days. Due to a miscommunication, sampling on May 20, 2008 did not occur.

The data collected over the 21 days shows a total of 49 anglers fishing on the Brandywine River either above the West Street dam or between the West Street dam and the Route 13 Bridge. One-on-one interviews were conducted with 44 percent of these anglers, or 19 anglers. The reasons interviews were not conducted include:

- Location of the angler made it difficult or impossible to approach
- Angler was too far away to see or hear the interviewer
- Angler was not interested in being interviewed
- Angler had already been interviewed and was not interested in being interviewed again.

Overall, the anglers were extremely cooperative and very willing to share information about fishing and their experiences on the Brandywine River.

DNREC set the exact times to collect the data and throughout the six-weeks there were six days when the data collection time coincided with a heavy rain storm. Site visits were conducted on these days and at the exact sampling time but no anglers were in the river at these times.

The majority of the anglers that were interviewed were from New Castle County, Delaware (90%) while one angler was from Cecil County, Maryland and one was from Sarasota, Florida. Of the 19 interviews conducted, 18 anglers provided information on how many years he or she has been fishing on the Brandywine River, the average number of years fished on the Brandywine River was 12.5 years. Responses ranged from zero, or just starting to fish, to 50 years. Anglers' reported that they fish for the following species:

- Everything and anything
- Bass (Smallmouth and Largemouth)
- Shad
- Rockfish

A total of 52 fish were reported caught and all of the fish that were reported caught were released, resulting in an average of 3 fish per angler. The Redbreast Sunfish was the most commonly caught fish, as reported by those interviewed, 21 of the 52, or 40% of the total fish. The second most commonly caught fish was the Smallmouth Bass. According to the anglers' reports, 8 of the 52 total fish caught were Smallmouth Bass. The anglers reported catching Hickory Shad, approximately 4 were caught, but did not report catching American Shad. Two anglers commented that they saw numerous shad in the river and one angler pointed out that earlier in the week he had seen "hundreds of American shad" in the river. Overall, the fish species that the anglers reported catching include:

- Bluegill
- Channel Catfish
- Crappie
- Hickory Shad
- Largemouth Bass
- Redbreast Sunfish
- Rock Bass
- Smallmouth Bass
- Striped Bass
- White Perch

The anglers were asked the average amount of money spent on this specific fishing trip, of the 19 interviewed, 18 responded and the average amount spent was \$9.36. The average amount of time spent out on the river for this fishing trip was 0.92 hours or approximately 55 minutes. This estimate may be slightly lower than the true average time because five of the anglers who were interviewed had just arrived and a zero was recorded as the amount of time fished. Removing these anglers and recalculating the average time spent on the river increases the average to one hour and thirty-four minutes. The majority of the anglers interviewed were using



spinning rods and all of the anglers were fishing from the shoreline or in the river rather than using a boat.

All of the information discussed in this memo is summarized in the attached charts and table and the data is also included in the interview sheets provided to DNREC. If there is a need for further data analysis please contact Martha Corrozi at mcorrozi@udel.edu or 302-831-4931.

CC: Robert Lonsdorf, Brandywine Conservancy
Gerald Kauffman, University of Delaware, Institute for Public Administration-Water Resources Agency