Tidal Largemouth Bass Volunteer Angler Program

2000 Tidal Black Bass Volunteer Angler Survey Results

Intro

The Tidal Black Bass Volunteer Angler Survey was initiated to fill a gap in information that is critical to the management of Maryland's tidal bass fishery. Biologists at DNR collect data through fishery independent surveys, which employ a variety of gears such as electrofishers and seine nets. These surveys are designed to eliminate human subjectivity and provide an accurate, unbiased picture of a population. As good as this sounds, these surveys do have limitations. We cannot be on the water every day. We cannot sample all tidal bass populations, nor can we control all the variables that affect our sampling from year to year and area to area.

We supplement our information with tournament data to examine trends in populations and angler use but these data also have limitations. Because sub -legal size fish and culls are not accounted for, this data is biased toward fewer and larger fish. This is where you as an angler can contribute. The results of your fishing trips, help to verify changes and trends found in our own data. With enough participation, we may be able to determine how heavily areas are being fished and the types of fishing that are most prevalent (club tournaments, recreational, etc.). We can pinpoint areas, which would benefit from supplemental stocking or special regulation. For certain small isolated populations for which little data exists, this survey will provide a baseline to assess population status.

Methods

Forms are mailed or may be downloaded from the internet (an interactive data entry sheet should soon be available on the fisheries web page). Fishermen fill out an initial Angler Information sheet and are assigned an ID number. This information is strictly confidential. Anglers then fill out a data sheet each time they go fishing. Information on this sheet includes date; angler id; #of anglers, #of hours; #of fish caught per inch group, type of fishing (recreational, club tournament etc.) and comments. Forms are mailed to us and are entered into a relational database for analysis.

Trip Catch Per Unit of Effort (CPUE) was estimated as # of bass/ total angler hours (#anglers x # hours) for each trip reported. Monthly or area CPUE was determined as the average of Trip CPUEs for that period or area. You may notice from the data given in Table 1, that the average of Trip CPUE is not always the same as the Ratio of Totals (total fish/ total hours). Either method can be used. We included the Average of Trips because you can easily calculate the other from the table.

Results

Twenty- two anglers participated in the initial survey. Because some anglers

reported catch from their entire club, the number of anglers contributing to the survey was actually much greater. Nine hundred and sixteen bass were reported caught during 2068 angler hours (Table 1). Trip CPUEs ranged from 0 to 5.4 fish per angler hour. The average CPUE of the 69 trips reported was 0.93 total bass per angler hour and was 0.64 for fish over 12 inches.

Table 1. Tidal black bass volunteer angler CPUE (bass per hour) by month for year 2000

Month	Angler Hours	# Bass Caught	Average # Bass/Hr	Average # Bass/Hr >12"
03	6	8	1.13	0.38
04	8	8	1.00	0.67
05	155	191	1.63	1.49
06	432	165	0.82	0.53
07	214	164	0.91	0.59
08	52	55	0.94	0.67
09	32	17	0.58	0.40
10	391	125	0.57	0.27
11	778	183	0.47	0.21
YEAR	2068	916	0.93	0.64

May had the highest monthly catch rate (Table 1). March and April were the next highest but because of the small amount of effort reported, CPUE for these two months is questionable.

An 'Area' variable was created to group data into three geographical regions, the Potomac, the Upper Bay, and the Eastern Shore rivers (from the Chester River south). The Upper Bay had the highest effort with 1138 angler hours; the Potomac was next with 548 followed by the Eastern Shore rivers with 382. These values are not representative of actual total annual effort in each area but only reflect the preferences of those anglers who participated.

Figure 1. The average of fishing trip CPUEs (all bass and bass >12 inches per hour) by area, from year 2000 Volunteer Angler catch data.

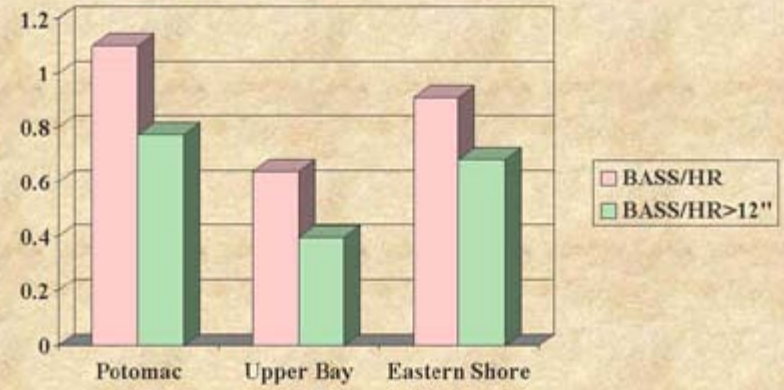

Figure 1 shows that CPUE was highest in the Potomac River followed by the Eastern Shore and the Upper Bay. This same pattern held true for CPUE of bass > 12". Figure 2 shows the greatest number of bass caught were between 11 and 15 inches. The most abundant group was the 13 to 14 inch group. This pattern was generally true for all three areas with some exceptions (Figures 3, 4 and 5). The Potomac River had a higher proportion of small fish than the other areas. The most abundant length group in the Upper Bay was 15 - 16 inches and there was a higher percentage of large fish (> 18") there as well.

Discussion

This was the first look at these data and seasonal or regional patterns should be viewed with caution. Anglers should be especially careful about drawing conclusions about what areas have 'the best' fishing. The monthly effort was not distributed evenly between areas. The Upper Bay had a small amount of effort during May and very high effort in October and November. This probably affected both CPUE and the size frequency. These types of differences may have a great affect on a small set of data and make the true nature of the fisheries less discernable. As participation in the survey increases, this will become less of a problem.

More participation is needed to allow more accurate description for localized assessments. Some rivers only had one or two trips reported. These were pooled into larger areas even though they have distinct populations and characteristics to their fisheries.

In general, the data were similar to that of DNR conducted electrofishing surveys. CPUEs and length frequencies roughly correlated with DNR surveys. Electrofishing did show a greater percentage of small fish (less than 8 inches) in all areas. However, this was expected because angler's gear and tactics are usually biased toward fish larger than eight inches.

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Thank you for your interest in your Tidal Largemouth Bass resources and by working together we can ensure that this fishery remains one of the best in the country!