MARYLAND DEPARTMENT OF NATURAL RESOURCES

Fisheries Service
Inland Fisheries

Black Bass Annual Review

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From the Tidal Bass Manager
Joseph W. Love, Ph. D.
BBAR Volume 4 conveys a lot of great work done in 2011. It was a year filled with much appreciated angler input. Additional thanks go to tournament directors, MBFN, Wheelabrator Technologies, U.S. Fish and Wildlife, and Biologists in Southern, Central, and Eastern Regions. http://dnr.maryland.gov/fisheries/bass/index.asp.

ANGLERS EXPRESS CONCERNS AT 2011 BASS ROUNDTABLE

On 22 February 2011, a roundtable was held to discuss the largemouth bass fishery in Maryland. The meeting was attended by biologists from different agencies, tournament directors, bass guides, and bass anglers.

The closure of **Chopawamsic Creek** took many people by surprise. Don Cosden (Assistant Director of Fisheries) drafted a letter to note dissatisfaction with the outreach process to Army Corps of Engineers. While security reasons were cited for the closure, similar future decisions should include better outreach to stakeholders.

Mike Grant discussed with Capt. Steve Chaconas about the **speed limits and hazard zones** near the National Harbor (Smoot Bay, Potomac River). Steve worked with Mike and National Harbor to voluntarily move buoys and improve safety of boaters on the water.

Capt. Scott Sewell (Conservation Director of Maryland Bass Federation Nation, MBFN) noted that **bathrooms at Smallwood State Park** should be improved. Bill Moffitt has since hired contractors to improve ventilation and fix stalls of the bathrooms, which will take about a year or a little longer.

The **Weigh-in station at Smallwood State Park** required repair. Money from the Friends at Smallwood State Park supported MBFN and Pat Bright (Park Manager) in their efforts to

repair the weigh-in station. In addition to this repair, an aerator was submerged near the dock. The aerator was purchased with a donation from MBFN to MDDNR. Because of low levels of dissolved oxygen in 2009 and 2010, there was a concern that the release of largemouth bass at the dock during summer would kill them. In 2011, an aerator was purchased and submerged. The measured oxygen levels in 2011 were high and similar to those prior to 2009. It will be used in 2012 as a precautionary measure.

The idea of **catch-and-return areas** was debated as a way of protecting old fish in small populations from being moved around in the upper Bay area. After several conversations with MDDNR biologists and bass anglers, catch-and-return areas were not considered an effective solution. To help find an effective solution, a survey of tournament directors from the upper Bay was taken. Most directors indicated that they would utilize Elk Neck State Park as a weigh-in facility in addition to Anchor Marine. Use of Elk Neck State Park would assist in spreading out the weighed-in largemouth bass and reduce the level of releases at Northeast River. Following tagging studies (2011), we found that several bass remained in Northeast River after their release at Anchor Marine.

Capt. Scott Sewell noted that an engineering study had been completed to install breakwaters at the Elk Neck State Park boat ramp, which would improve and promote Elk Neck State Park as a weigh-in facility. The new breakwaters cost around 1 million dollars. Unfortunately, no money is available for this project. Priorities include access points elsewhere on the Bay, including a new launch area in Anne Arundel County.

Amid concerns regarding closing areas of **Dyke Marsh** to anglers, MDDNR met with the National Park Service (NPS) who owns and manages Dyke Marsh. While NPS will restore the wetlands of Dyke Marsh, the area is not closed to anglers.

Randy Elliot suggested that volunteers would be helpful in distributing **largemouth bass fry throughout the Choptank River**. He led a MBFN initiative to assist MDDNR in distributing hatchery-reared fry throughout the Choptank River during late spring. MDDNR also was allowed to stock young bass collected from a privately owned pond near Greensboro, MD. However, these bass were not needed because the hatchery contributions were more than sufficient in 2011 to stock the Choptank River.

2011 Work in Response to Angler Concerns

Choptank River Spawning Boxes

Dick Berich (MBFN) suggested the use of spawning boxes in Choptank River. These boxes were tested in hatchery ponds, modified, and then deployed in a cove of Choptank River. They will be examined in spring.

Wicomico River WWTP Follow-Up

Concerns issued by Capts. Bruce Wooten and Scott Sewell resulted in an investigation into the nutrient amounts and pollution of the upper Wicomico River. Discharges from the Salisbury Wastewater Treatment Plant (WWTP) were investigated. Total Nitrogen levels in upper Wicomico River were sometimes above suggested standards. Total Phosphorus levels in upper Wicomico River are higher than suggested standards. Downstream levels of Nitrogen and Phosphorus are within acceptable standards, likely because of dilution of upstream pollution. The WWTP of Salisbury was required to limit its discharge of Nitrogen in 2008. The WWTP is currently undergoing upgrades that will be completed by 2015. The upgrades will reduce Nitrogen and Phosphorus discharge levels to levels required by MDE and EPA. The money spent by the City of Salisbury to pay earlier WWTP violations of excessive Phosphorus and Nitrogen will be used to improve infrastructure in order to meet nutrient reduction targets.

Mattawoman Creek Comprehensive Plan

Many of the general public and several anglers have expressed concern regarding the potential development of Mattawoman Creek watershed. MDDNR Environmental Review team worked with MDDNR Fisheries Service to provide a briefing document that showed the potential impacts on the tidal bass fishery because of watershed development. The briefing document was an important component of the comprehensive plan of ecosystem-based management that was requested by and submitted to Charles County. The comprehensive plan is a multi-agency (state and federal) document that helped provide advice to the county. The proposed watershed development was not permitted by Maryland Department of the Environment.

Catch-and-Release Mortality

The loss of largemouth bass following catch-and-release angling is a critically important aspect of tidal bass management. Unfortunately, it is often difficult to measure. On 24 July, 264 largemouth bass were fin-clipped and released following their handling during a tournament of the Paralyzed Veterans of America. These fish were released at the dock of Smallwood State Park. Each day for 1 week, an area 0.8 km^2 was surveyed for dead largemouth bass. The number of dead (and floating) largemouth bass was recorded each day. About 15% of marked fish were recovered and had died from fishing stress (39 of 264 caught bass). This estimate is similar to the 11.7% reported in 1991 by Leon Fewlass during a similar study.

Some fishing mortality is expected to be related to hooking injury. Hooking injury can be fatal if the fish is gut-hooked. A project to help estimate how many fish are gut-hooked during fishing was conducted with the Maryland Bass Federation Nation Youth Chapter. Based on the number of gut-hooked fish and other data, the proportion of fish expected to die because of hooking injury using mainly soft baits during catch-and-release fishing was 10.8%. To get a more accurate estimate of catch-and-release mortality, we will perform similar work with anglers of different experience levels, having different tackle, and during different seasons.

Fishery Management Plan

Staff wrote a Tidal Bass Fishery Management Plan to provide a blueprint document for managing tidal bass populations in Maryland. This document provides reference points based on annual surveys of the largemouth bass.

LMBV Testing

In early 2011, Capt. Ken Penrod (Bass Guide) expressed concern to Joe Love (Tidal Bass Manager) regarding LMBV in Potomac River. Since 1999, 13 water bodies in Maryland have been tested for Largemouth Bass Virus (LMBV). The virus can be transmitted by water or fish-to-fish contact. It is found in other fish species too.

The first positive cases were observed in 2005 and from the Potomac River. In 2011, we tested for LMBV in 10 fish from Susquehanna River, 10 fish from Northeast River, and 5 fish from the Potomac River. The virus was detected from fish from all three rivers. The Northeast River had the greatest prevalence (70% of fish had LMBV). The Susquehanna River (30%) and Potomac River (20%) had less prevalence.

No signs of LMBV disease were observed or have been reported. Signs of disease include abnormal swimming near the surface and an orange, distended air bladder. Please report bass that are swimming poorly by calling MDE at 800-285-8195 (M-F 8-4:30) or 877-224-7229.

Prevent Spread of LMBV

1. Never transfer live fish from one body of water to another
2. Never discard fish parts or unused bait to any body of water
3. Drain water from boat and clean trailer before leaving the launch area
4. Disinfect live well daily with a chlorine solution and rinse.

Spawning Sanctuaries for Bass

Many anglers have expressed concerns about fishing during the spawning season for largemouth bass in tidal water. To leave more males on their nests, a 15" creel limit was adopted during the spawning season (1 March – 15 June). In addition to this creel limit, two sanctuaries have been established in different streams of the Potomac River since 2001. These areas are restricted from fishing and boating from 1 March – 15 June, except by permit. Sanctuaries were established in Nanjemoy River (area = 0.34 km^2) and Chicamuxen Creek (0.11 km^2) to help protect spawning adults.

The Chicamuxen Creek Sanctuary was surveyed for two years. It provided good habitat for young-of-year largemouth bass even though the number of adult bass using the habitat was low. Large beds of aquatic grasses likely improve survivorship for young largemouth bass by providing refuge.

Snakehead Round-Up

Bass anglers have expressed concern that Northern Snakehead will harm the Largemouth Bass fishery. Northern Snakehead is NOT a predator that is wanted in Maryland waters.

The Snakehead Contest, a year-long fishing contest to catch and kill snakehead in the Potomac River was successful. It will be held again in 2012. It provided useful data for management agencies, removed snakehead from the population, and showed us all how to better fish for the snakehead.

There were 82 reports from 69 anglers who removed 172 Northern Snakeheads from Maryland, Virginia, and D.C. waters in 2011. The harvested snakeheads ranged in weight from 1.2 pounds to 16 pounds. The 16 pound fish was taken by James Berry and near Fort Washington. While he took his fish using a bow-and-arrow, most anglers reported using hook-and-line.

Anglers found success using chatterbaits, frogs, worms, and crawdads. Corporal Ryan Voegtle harvested two Northern Snakehead using black or green roostertails with excellent results. Harvest of Northern Snakehead with bow and arrow seemed pretty effective. Dutch Baldwin reported harvesting a few Northern Snakeheads with bow-and-arrow, cautioning that they spook pretty easily during the day.

The majority of anglers reported catching their Northern Snakehead between May and July. Anglers were reporting catching Northern Snakehead between April and October, though. For all months, anglers reported catching about 2 snakeheads for each report. Northern Snakehead was caught in grasses, near cover and lily pads. While most anglers fished tidal water, a few found success at Bumpy Oak Pond. Bao Huynh referred to the pond as "snakehead pond." Popular tidewater areas included Nanjemoy Creek and Mattawoman Creek.

Several anglers remarked happily on the taste of Northern Snakehead. After removing the invasive fish from the water, anglers often filleted the fish and cooked it up for dinner. Robert Bruce noted that the fish tasted like chicken. An easy way to fillet the fish was discussed by Hon Kwon who suggested the fish can be filleted like a striped bass – cut along the dorsal fin and backbone and peeled down to tail.

Anglers occasionally reported harvesting females with eggs. Andy Rheuban harvested a large female with eggs near National Capital Parks. The removal of these spawning-ready fish prior to the spawning season in spring is thought to be most beneficial to controlling the growth of its population. While the species may be here with us permanently, as Brian Barth noted, control efforts to minimize its spread may help limit its impact to the Potomac River or other nearby ecosystems.

Additional meetings with DNREC led to the coordination of efforts to monitor for Northern Snakehead and educate the public about the species. Signs with Northern Snakehead pictures were paid for with money donated by Whackfactor, Inc. to MDDNR. These signs were posted in well-attended areas along the Nanticoke River and Wicomico River, and Susquehanna and Gunpowder State Parks.

Middle River Bass Fishing

Many anglers have indicated that Middle River largemouth bass fishing has become sluggish over the past few years. In response to that, members of the MBFN (contact: Scott Sewell) are helping to improve the fishery by working with fishery biologists from MDDNR and staff from Wheelabrator Technologies, Inc.

Since 2003, MDDNR hatcheries have worked with staff from Wheelabrator to raise young largemouth bass that were then released into Middle River. Over the past three years, sponsors from Domino Sugar have donated money to purchase adult largemouth bass that were also released to Middle River. These adult largemouth bass were tagged using Floy tags. Several anglers reported catching fish with these tags from 2009-2011. Because all tagged fish have been reported from Middle River, the bass may be remaining in Middle River. In times of environmental stress, however, largemouth bass may leave Middle River, leading to sluggish fishing.

In 2012, a water quality monitoring unit will be set in Middle River to measure water quality conditions. To date, no fish kills have been reported and no Middle River tagged bass were caught outside of Middle River, which is good news for the fishery.

For this Middle River black bass initiative to work, bass anglers are strongly encouraged to report tagged fish to Joe Love (Tidal Bass Manager, 410-260-8257) or Mary Groves (Southern Regional Manager, 410-260-8320). When reporting these tags, anglers should also let MDDNR know where there are potential problems to help protect their bass fisheries. Other questions regarding this initiative can be directed to Joe Love or Scott Sewell (Conservation Director, Maryland Bass Federation Nation).

Current Status of Populations

The tidal bass survey (2011) reported 633 largemouth bass (*Micropterus salmoides*) collected from targeted drainages of the Chesapeake Bay watershed. The targeted drainages were: systems of the upper Chesapeake Bay, Patuxent River, Marshyhope Creek, Wicomico River, and Marshyhope Creek (Nanticoke River). Each fish was measured, weighed, and most were released to their site of capture. Fish ranged in size from 2.3 inches – 21.5 inches TL (0.01 lbs – 7.9 lbs).

Upper Chesapeake Bay abundance indices were slightly below average. However, other indices reflecting growth, body condition, and proportion of large fish in the sample were above average. Annual survivorship was also above average. The population does not appear impaired and lower catch levels possibly reflect lower water clarity because of storm and flooding events prior to sampling. Once catch estimates were corrected for habitat sampling conditions, there was little observable change in catch between 2010 and 2011.

Choptank River abundance indices were below average. However, the proportions of older and larger fish in the sample were above average. Survivorship was also above average. It is possible that the greater proportion of older

and larger fish, as well as greater survivorship, will lead to greater catch levels in the future.

While many reference points are not yet available for the remaining targeted drainages, catch levels from the Wicomico River, Patuxent River, and Marshyhope Creek were similar to those from previous years. Body condition indices reflected a population of robust individuals.

In addition to these targeted rivers, Gunpowder River was surveyed for juveniles. Nine sites were sampled and juveniles were collected at all of them. The juvenile catch was similar to that of Marshyhope Creek and Patuxent River.

Stocking Strategy

During the 2011 stocking season, several hatchery releases were undertaken for largemouth bass. The total number of young-of-year released to tidal rivers was 335,107. An additional 1,600 young-of-year were raised to study the influence of poultry litter on the intersex condition. Approximately 68.3% of young-of-year fish were released to the Choptank River. The remainder was released to the Patuxent River (22.3%), Savage Reservoir (8.9%), and Middle River (0.01%). Most of the young-of-year (83.4%) released to tidal rivers were unmarked fry (< 1 inch). There were 25,349 fingerlings (1 – 2 inches) that were marked with coded wire tags (CWT) and released to the Choptank River. In October, 308 advanced fingerlings (2 – 8 inches) were tagged with passive integrated transponder (PIT) tags and released to the Choptank River. The proportion of each stage will be evaluated for the next 3-5 years to determine how many survive to older age classes. MDDNR staff and Dick Berich (MBFN) introduced nesting boxes into Choptank River in 2011 to reduce the future need for stocking.

Recreational Fishing

From the Angler's Log (fall 2011):

Devin Angleberger: "…fishing…below Baker Park to Market Street [Frederick]. I did catch 2 largemouths of small proportions on a trout magnet."
Mark Carper: "5 pound bass caught…lower Potomac, on a red rattletrap."
Lisa Hopps: "…the air temperature was 51 degrees [and] Lisa continued to fish in order to catch a 3 pound largemouth" [Northeast River].
Don Suckstorf: "We caught numerous smallmouth and largemouth bass [on the upper Bay]…the biggest fish, a 22 inch 5-1/4 pound smallmouth…WOW, what a hawg."
Andrew Marquesen: "The largemouths were biting on buzzbaits with a slow retrieve for the most part, but color seemed insignificant as we were catching them on white, black and brown equally well" [Potomac River].
Noah Schlossberg: "…caught [a] nice bass on a black and blue chatter bait. My dad landed a smaller one on a buzz bait."

Tournament Fishing

For 115 tournament days, the total number of anglers fishing those tournaments in 2011 was 4246, which is lower than earlier years. Check out the list of black bass tournaments at: http://**dnr.maryland.gov/fisheries/bass/ta.asp**

Reported catch per-angler-hour for the Potomac River fishery during the 12" season was 0.42 fish/ang-hr or 1 fish per 2 hours. In the upper Bay, anglers reported 0.29 fish/ang-hr or 1 fish per 3.5 hrs. Catch was similar to 2009 and 2010. For other drainage populations, we had less data. Catches during the 12" season for Wicomico River (0.44 fish/ang-hr) and Pocomoke (0.40 fish/ang-hr) were similar to those from the Potomac River. Catch for the Choptank River was relatively low (0.16 fish/ang-hr).

Reported survivorship ranged from 96.4% - 99.9% (on average) during the weigh-in process.

Requesting Comments on Tournament Permitting

MDDNR is considering a regulation which would require largemouth and smallmouth bass tournament directors to obtain a free permit before conducting bass tournaments in Maryland. Directors would be asked to register their tournament and report catch results. The registration process will enable MD DNR to better establish angling effort, monitor catch rates and population trends, assure responsible handling and release of bass, and work more efficiently to maintain and protect bass populations. The regulation may indirectly affect other anglers, boaters and local businesses. MDDNR is seeking comments regarding this idea. Comments may include suggestions, constructive criticism, and/or a general *like* 👍 or *dislike* 👎 of this idea.

Read the full story here:

http://dnr.maryland.gov/fisheries/regulations/draftregulations.asp

Participate in the future of this management idea by emailing at mddnrfish@dnr.state.md.us, visiting facebook (md dnr fisheries service), or following the story on twitter (mddnrfish). All comments will be posted on-line and anonymously.

All comments on this report can be submitted to *Joe Love* at jlove@dnr.state.md.us. Data presented here are summarized from a comprehensive report generated in 2012. The work is paid for from Federal Aid in the Fish Restoration Acts and from State of Maryland Fisheries Management and Protection Fund. Fishing license dollars were used to pay for this work.

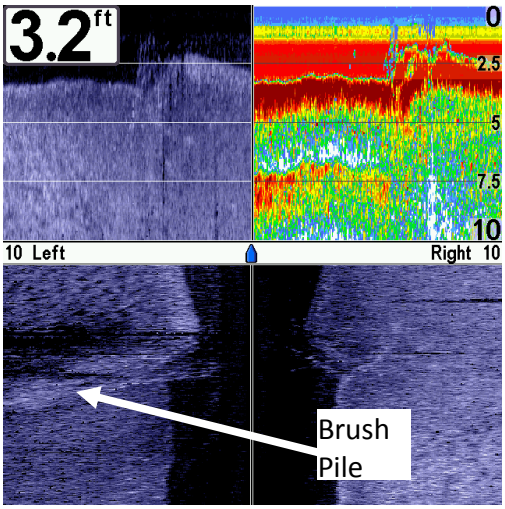
Proposed 2012 Work

Sanctuary at Gumtree Cove

Details are still being worked out on how and when to survey the black bass sanctuary at Gumtree Cove (Potomac River). These surveys will complement the work we've done in 2010 and 2011 that assess the black bass sanctuary in Chicamuxen Creek.

Side Scan Sonar

Mary Groves (Southern Region Manager) will be working with Joe Love (Tidal Bass Manager) to scan Potomac River tidal bass sites for underwater structure and bathymetry data. The information on structure and depth will improve our sampling program for largemouth bass and generate better catch estimates. We also plan to stitch these data together and provide some very basic maps to anglers who request them.



Gear Efficiency

The efficiency of boat electrofishing will be assessed in the Potomac River during the fall tidal bass survey. This work was done in the upper Chesapeake Bay in 2011 at two sites.

Tidal Bass Survey

The Tidal Bass Survey will be conducted in fall. Proposed drainages are: Potomac River, Patuxent River, Marshyhope Creek, Pocomoke River, and Wicomico River. We may also survey the upper Chesapeake Bay again. In some cases, these rivers are chosen to generate base-line data for comparing indices.

Creel Survey

In addition to the survey and analysis of data from tournament anglers, we will begin a 1 – 2 year project to assess the level of harvest of largemouth bass from eastern shore rivers. This work will follow-up on work completed in 2005. If the level of harvest is low, like in other drainages, then it will not greatly influence observed mortality rates.

Stocking Efforts

It is anticipated that advanced fingerlings (4 – 8 inches) will be stocked during fall in the upper Bay, Patuxent River, and Wicomico River. Some largemouth bass will be stocked in Schumaker Pond (Salisbury) in spring to promote fishing and a fishery in the upper Wicomico River. Largemouth bass released to Patuxent River will be tagged with PIT tags in an on-going effort to determine the best size of largemouth bass to stock in our tidal rivers.

Delayed Mortality

For a second year in a row, we will tag largemouth bass and recapture them daily for a week to assess delayed mortality of black bass following a black bass tournament. This work will be done in collaboration with a yet unidentified black bass tournament director.