Upper James River

Beginning at the confluence of the Jackson and Cowpasture Rivers near Iron Gate, the upper James River flows approximately 90 miles downstream to the city of Lynchburg. Smallmouth bass, muskie, catfish, rock bass, and other sunfish species provide diverse fishing opportunities to anglers on the upper James River. To evaluate the fish community, the Virginia Department of Game and Inland Fisheries collected fish using an electrofishing boat at eight sites from Iron Gate to Monacan Park (Figure 1). For a quick fish regulation guide for common species occurring in the non-tidal James River see Table 1 at the end of this report.
Smallmouth bass, the most popular sport fish anglers seek, were the most abundant species collected in fall sampling. In 2016, 1505 smallmouth bass, ranging from 3 to 21 inches, were collected (Figure 2). Juvenile smallmouth bass (individuals less than 7 inches) made up 25% of all smallmouth bass collected. The majority of adult smallmouth bass collected were between 6 and 13 inches. Approximately 18% of adult smallmouth bass collected were between 14 and 22 inches and therefore protected under the current slot limit regulations.
Figure 2. Smallmouth bass collected from Lick Run to Lynchburg in fall 2016. Juvenile smallmouth bass (less than 7 inches) are represented with red bars, while adult smallmouth bass are shown with green bars. Current regulations protect smallmouth bass between 14 and 22 inches (dark green bars).

After collecting fish with electrofishing equipment, catch rates are calculated in terms of fish collected per hour. Catch rates of adult smallmouth bass in 2016 averaged 95 per hour (Figure 3). This is greater than the long-term average catch rate of 41 per hour and the highest catch rate recorded in the past 25 years.
Figure 3. Annual catch of adult smallmouth bass from 1991-2016 in the upper James River. The dashed line is the long-term average catch rate and the solid line represents the annual trend in adult smallmouth bass catch rates.

The fluctuation in catch rates over time is likely due to young-of-the-year (YOY) survival in previous years. In the upper James River smallmouth bass less than 6 inches in the fall are considered YOY; meaning those individuals were born in the spring of that year. YOY survival appears to be best in years with moderate June river flows and poor with high or low flows during June. YOY catch rates vary from 9 to 59 fish per hour with an average of 27 fish per hour (Figure 4). In 2016, YOY catch rates were below the long-term average with only 19 fish per hour. Although YOY catch rates were low in 2016, the above average YOY survival in 2014 led to the high catch rates of adults in 2016 and will help sustain smallmouth bass abundance into the future.
Figure 4. Annual catch rates of smallmouth bass YOY. The dashed black line is the long-term average catch rate and the solid black line represents annual trend in catch rates of smallmouth bass YOY from the upper James River.

Smallmouth bass anglers may use a variety of soft baits including worms, tubes, and flukes; as well as hard baits such as crank baits, jigs, and spinner baits. While baits and tactics may change with time of year and river flow conditions, angler seeking smallmouth bass should focus on deeper riffle areas, beginnings and ends of pools, and structures such as large boulders or fallen trees.
The upper James River is also home to a variety of sunfish species including rock bass, redbreast sunfish, and bluegill. In 2016 a total of 883 sunfish were collected. Rock bass were the most abundant sunfish collected and ranged from 3 to 8 inches in length (Figure 5). Redbreast and bluegill were also commonly collected and ranged from 2 to 7 inches in length. Although often overlooked, angling for sunfish can provide great entertainment especially using light tackle or fly-fishing. Anglers seeking sunfish should focus on fishing near banks, aquatic vegetation, and fallen trees. Spinners, small grubs, crickets, and worms all make excellent baits for catching sunfish.
Figure 5. Number and sizes of rock bass, redbreast sunfish, and bluegill collected in fall 2016 in the upper James River.

The largest and most challenging fish to catch in the upper James is the muskie. Muskies were collected at almost all sampling sites and were most abundant in pool areas. Fifty muskies, ranging from 15 to 47 inches in length were collected during fall community sampling in 2016 (Figure 6). DGIF conducted more extensive sampling targeting muskies in winter 2015-2016 to continue monitoring the population. In 2016, biologists tagged 211 muskies in the upper James to estimate angler catch rates. There is currently a $20 reward for the return of these tags with the necessary catch information (see poster below). Biologists continued tagging muskies in 2017, so if you catch a muskie, be sure to check for the yellow tags (located near the dorsal fin) and mail them to the VDGIF Forest regional office (see poster below). Muskies can be very picky so anglers often carry a variety of baits such as large crankbaits, spinnerbaits, tubes, and swimbait.
Figure 6. Number and sizes of Muskie collected in winter and fall 2016 in the upper James River.
A 47-inch Muskie collected near Iron Gate in fall 2016.

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Middle James River

The middle James River is considered to be the portion of river from Lynchburg, downstream approximately 130 miles, to the Bosher’s Dam near the city of Richmond (Figure 7). For a quick fish regulation guide for common species occurring in the non-tidal James River see Table 1 at the end of this report. The middle section of the James River has a slightly different fish community compared to the upper James. The middle James has fewer rock bass and muskie, while largemouth bass, channel catfish, and flathead catfish are more abundant.

Figure 7. Middle James River sampling locations.

Smallmouth bass are still a dominant sportfish in the middle James. In fall 2016, 584 smallmouth bass were collected ranging from 3 to 20 inches (Figure 8). Juvenile smallmouth bass (individuals less than 7 inches) made up almost 38% of all smallmouth bass collected with the majority of adults (individuals greater than 7 inches) between 7 and 12 inches. In 2016, 73 smallmouth bass greater than 12 inches were collected, compared to 91 smallmouth bass greater than 12 inches collected in 2015 samples. Approximately 10% of adult smallmouth bass collected were between 14 and 22 inches, and thus protected under the current regulations.
The middle James River also supports a variety of panfish species including bluegill, redbreast sunfish, redear sunfish, and rock bass. In 2016, 483 sunfish were collected with bluegill and redbreast sunfish being the most abundant. Bluegill, redbreast, and redear sunfish made up 86% of all panfish species collected and ranged from 2 to 8 inches (Figure 9). Rock bass were the least abundant sunfish collected and ranged from 2 to 7 inches in length. Panfish numbers can fluctuate annually and high catch rates in 2015 and 2016 should provide excellent fishing opportunities in the future.
The middle James River is also home to channel and flathead catfish. Four hundred fifty-three catfish were collected in fall 2016 community sampling. Channel catfish were most abundant, with 373 collected ranging from 3 to 25 inches in length (Figure 10). Eighty flathead catfish were collected and ranged from 6 to 40 inches in length. Flathead catfish grow larger than channel catfish, but both offer challenging and rewarding fishing opportunities. Catfish are often found in pool areas and near ledges or boulders. Anglers seeking channel catfish use a variety of baits including chicken livers, night crawlers, and stink/dough baits. Flathead catfish tend to be more of a predator than channel catfish. Therefore, live or cut baits are preferred among anglers. Please refer to the regulation booklet regarding laws pertaining to use of live baits.
Figure 10. Numbers and sizes of channel catfish and flathead catfish collected from the middle James River in fall 2016.

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The Fall-Line of the James (Bosher’s Dam to 14th Street Bridge)

The 9-mile stretch of the James River that flows through Richmond (known locally as the Fall-Line section) separates the non-tidal and tidal portions of the James River (Figure 11). This section contains various habitat types including rocky outcrops, large runs, deep pools, shallow riffles, and intense rapids. The Fall-Line section is renowned for kayaking, canoeing, and has traditionally supported popular sport fisheries for trophy smallmouth bass, sunfish, and catfish. For a quick fish regulation guide for common species occurring in the non-tidal James River see Table 1 at the end of this report.
Figure 11. Fall-Line section of the James River sampling locations.

Smallmouth bass was the most abundant sportfish collected throughout the Fall-Line in 2016. However, smallmouth bass total catch was slightly lower than the historical average for the Fall-Line (Figure 12).
Figure 12. Annual catch of adult smallmouth bass from 2007-2016 in the Fall-Line, James River.

The decrease in catch from previous years was mainly due to low catches of young-of-the-year bass in previous years. Smallmouth bass reproduction was poor throughout the Fall-Line in 2016 due to high flow events during the spawn and egg hatching period (month of June). The following graph (Figure 13) shows the poor 2016 smallmouth bass recruitment compared to previous years.
Figure 13. Annual trend in catch rates of young-of-the-year smallmouth bass collected from the Fall-Line, James River.

Due to several years of poor reproduction the smallmouth bass catch continues to exhibit a downward trend in the adult population (Figure 14). More years of average spring flows that contribute to great bass reproduction like 2014 (see Figure 13) are needed to greatly increase number of adult smallmouth bass.
Anglers should not expect to catch high numbers of large bass throughout the Fall-Line section due to years of fair to poor recruitment (see Figure 13). There are still some quality-sized and trophy-sized bass in this stretch of river (Figure 15), but anglers will have to work to catch them. The largest smallmouth bass collected in 2016 measured 19 inches, but several 18 inch bass were also collected. Smallmouth bass spawned in 2014, measuring between 10 and 12 inches were present in good numbers in the electrofishing catch (Figure 15) and anglers should have good success catching these fish in subsequent years. Additionally, the 14-22 inch protective slot limit for smallmouth bass should help protect the remaining adult fish in the population, but the adult population needs more frequent successful spawns and juvenile survival to rebound to historic populations.
Smallmouth bass were present at all sampling sites, so anglers can expect to find them throughout the Fall-Line section. Annual surveys indicate that the best sections of the river for bass are consistently between Powhite Bridge and Belle Island. Anglers should concentrate on shallow to mid-depth riffles or areas near the bank with some type of structure. Previous diet analysis of smallmouth bass indicated that the majority of smallmouth bass feed on shiners and crayfish. Any lures that mimic these diet items should be a must for smallmouth bass anglers of the James River.

Catfish populations continue to be good within the Fall-Line. The blue and flathead catfish populations have good numbers of big fish available to anglers (Figure 16). Blue and channel catfish made up the majority of the catfish collected in 2016. There is an abundance of channel catfish (up to 22 inches), but the large catfish are the blues and flatheads. Numerous blue and flathead catfish at or above 30 inches were caught throughout the Fall-Line (Figure 16).
Anglers looking to catch catfish should concentrate efforts on relatively deep water (greater than 6 feet deep) or waters adjacent to deep holes. The deep pockets of the Pony Pasture recreation area and the deep run just below the Wetlands recreational area (river section that flows past Willow Oaks Country Club) are great places for catfish anglers to wet a line. Anglers should try using live bait for flatheads and cut or stink-bait for blue and channel catfish.
Panfish population numbers were below average for the Fall-Line section and catch rates were less than those observed in 2015. The panfish collected were small, with the majority measuring less than 7 inches (Figure 17). The most abundant panfish collected was bluegill followed by redbreast sunfish. Panfish were caught in all locations throughout the Fall-Line section, and anglers targeting these species should concentrate their efforts around bank structure or slack water adjacent to rocky shoals and outcrops. Small twister tailed grubs, live crickets, and worms are outstanding baits for any of the panfish species.
The Fall-Line section of the James can provide a rewarding trip for any angler but caution is warranted when fishing this stretch of river. The Fall-Line section is prone to flash flooding when there have been heavy rains in the head waters of the James River. Furthermore, boaters need to be conscious of the technical rapids within the Fall-Line section. Before journeying out, anglers should be aware of the current river conditions and boaters need to become familiar with the more technical rapids. To get up-to-date information on river flows and maps of the Fall-Line section, contact the James River Parks Systems at (804)646-8911 or visit their website at http://www.jamesriverpark.org.

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Figure 17. Number and sizes of panfish collected from the Fall-Line, James River 2016.
Table 1. Regulation (creel and length limit) table for fish species that commonly occur in the non-tidal James River

<table>
<thead>
<tr>
<th>Fish Species</th>
<th>Creel Limit</th>
<th>Length Limit</th>
<th>Likely Occurrence Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bass (largemouth, smallmouth, and</td>
<td>5 per day in the aggregate (combined)</td>
<td>No bass 14 to 22 inches, only 1 per day longer</td>
<td>Non-tidal riverwide (upper, middle, and Fall-Line)</td>
</tr>
<tr>
<td>spotted)</td>
<td></td>
<td>than 22 inches</td>
<td></td>
</tr>
<tr>
<td>Muskellunge</td>
<td>2 per day in the aggregate (combined)</td>
<td>No muskellunge less than 30 inches</td>
<td>Upper and Middle, Occasionally Fall-Line</td>
</tr>
<tr>
<td>Striped bass</td>
<td>Creel and length limits shall be as set by the Virginia Marine Resources</td>
<td></td>
<td>Fall-Line</td>
</tr>
<tr>
<td></td>
<td>Commission for recreational fishing in tidal waters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walleye</td>
<td>5 per day in the aggregate (combined)</td>
<td>No walleye or saugeye less than 18 inches</td>
<td>Middle and Fall-Line</td>
</tr>
<tr>
<td>Bluegill (bream) and other sunfish</td>
<td>50 per day in the aggregate (combined)</td>
<td>No statewide length limits</td>
<td>Non-tidal riverwide (upper, middle, and Fall-Line)</td>
</tr>
<tr>
<td>excluding crappie rock bass (redeye)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crappie (black or white)</td>
<td>25 per day in the aggregate (combined)</td>
<td>No statewide length limits</td>
<td>Non-tidal riverwide (upper, middle, and Fall-Line)</td>
</tr>
<tr>
<td>Rock Bass (redeye)</td>
<td>25 per day</td>
<td>No statewide length limits</td>
<td>Non-tidal riverwide (upper, middle, and Fall-Line)</td>
</tr>
<tr>
<td>Catfish (blue, channel, and flathead)</td>
<td>20 per day</td>
<td>No length limits</td>
<td>Non-tidal riverwide (upper, middle, and Fall-Line), except blue catfish mainly middle and Fall-Line</td>
</tr>
<tr>
<td>American Shad and Hickory Shad</td>
<td>Creel and length limits shall be as set by the Virginia Marine Resources</td>
<td></td>
<td>Fall-Line</td>
</tr>
<tr>
<td></td>
<td>Commission for recreational fishing in tidal waters</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>