



James River through Richmond 2011



The 9-mile, non-tidal stretch of the James River that flows through Richmond (known locally as the Fall-Line section) is a unique portion of the James that provides numerous recreational opportunities. The Fall-Line section separates the non-tidal and tidal portions of the James River and contains various habitat types including rocky outcrops, large runs, deep pools, shallow riffles, and intense rapids. Because of these unique characteristics, the Fall-Line section is renowned for kayaking, canoeing, and has traditionally supported popular sport fisheries for sunfish, catfish, and trophy smallmouth bass. In November 2010, the fish community within the Fall Line section was sampled at six locations between Boshers' Dam and the 14th Street Bridge (Figure 1). This report summarizes the findings from the 2010 survey and informs anglers on what they can expect to catch from this section of the James River.

The Fall-Line section contains an exceptional diversity of fish species with a total of 22 different species collected in 2010 (Table 1). American eel, redbreast sunfish, and smallmouth bass were the most abundant species collected throughout the Fall-Line section. Although smallmouth bass were one of the more abundant species, their catch rate was low when compared to previous surveys and historical averages for the river. The lower observed catch rate is expected due to very poor reproduction from 2008-2009. The poor reproduction has been attributed to extreme summertime drought conditions. The trend in past recruitment failures is echoed in the young adult smallmouth bass population with very low catches of bass between 7 and 11 inches. The above average 2007 year class appears to be maintaining the majority of the adult population. The 2007 fish are now reaching the 11 to 15 inch range and are relatively common throughout the Fall-Line (Figure 2).

Smallmouth bass reproduction was below average in 2010 due to the drought conditions. Anglers should not expect to catch many small bass (< 11 inches) over the next few years due to three consecutive years of recruitment failures. Conversely, the above average year classes from 2004 and 2007 are showing up in decent numbers. Anglers should experience good success with bass between 11 and 15 inches. Moderate success should be experienced for bass between 15 and 20 inches, with the potential to catch the occasional bass above the trophy size of 20 inches (Figure 2). The largest smallmouth bass collected measured 20 inches and weighted 4.4 lbs. The 14-22 inch protective slot limit for smallmouth bass should help to protect the remaining adult fish in the population.

Smallmouth bass were present at all sampling sites, so anglers can expect to catch them throughout the Fall-Line section. Annual surveys indicate that the best sections of the river for bass are consistently between the Powhite Bridge and Bell's 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 mimics these diet items should be a must for smallmouth bass anglers of the James River.

Catfish populations continue to be exceptional within the Fall-Line. The blue and flathead populations have a remarkably high number of big fish available to anglers. Blue and flathead catfish at or above 30 inches were routinely caught throughout the Fall-Line. Age and

growth analysis indicated that flathead growth is somewhat fast till age-7 where it slows and levels off around 30inches (Figure 3). The catfish fisheries could use more angler harvest as evident by a high survival rate (over 90% annual survival) and good numbers of flatheads collected age-10 or older (Figure 4). Diet analysis indicated that the primary diet item of flathead catfish was redbreast sunfish. No smallmouth bass were found in the stomach contents of flathead catfish indicating that smallmouth are not a primary diet item of the catfish.

Anglers seeking to catch catfish should concentrate efforts on relatively deep water (> 6ft deep) or waters adjacent to deep holes. The deep pockets above 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 flathead and cut or stink-bait for blue and channel catfish.

Panfish population numbers are about average for the Fall-Line section and were similar to catch rates observed in the Middle James. Although numbers are good, all panfish collected were small (≤ 8 in.), with the majority of the panfish collected less than 7 inches. The most abundant panfish species collected by far was redbreast sunfish followed by bluegill and rock bass (redeyes). 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 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 System at (804) 646-8911 or visit their website at <http://www.jamesriverpark.org/>.

For more information on the James River through Richmond, please contact:

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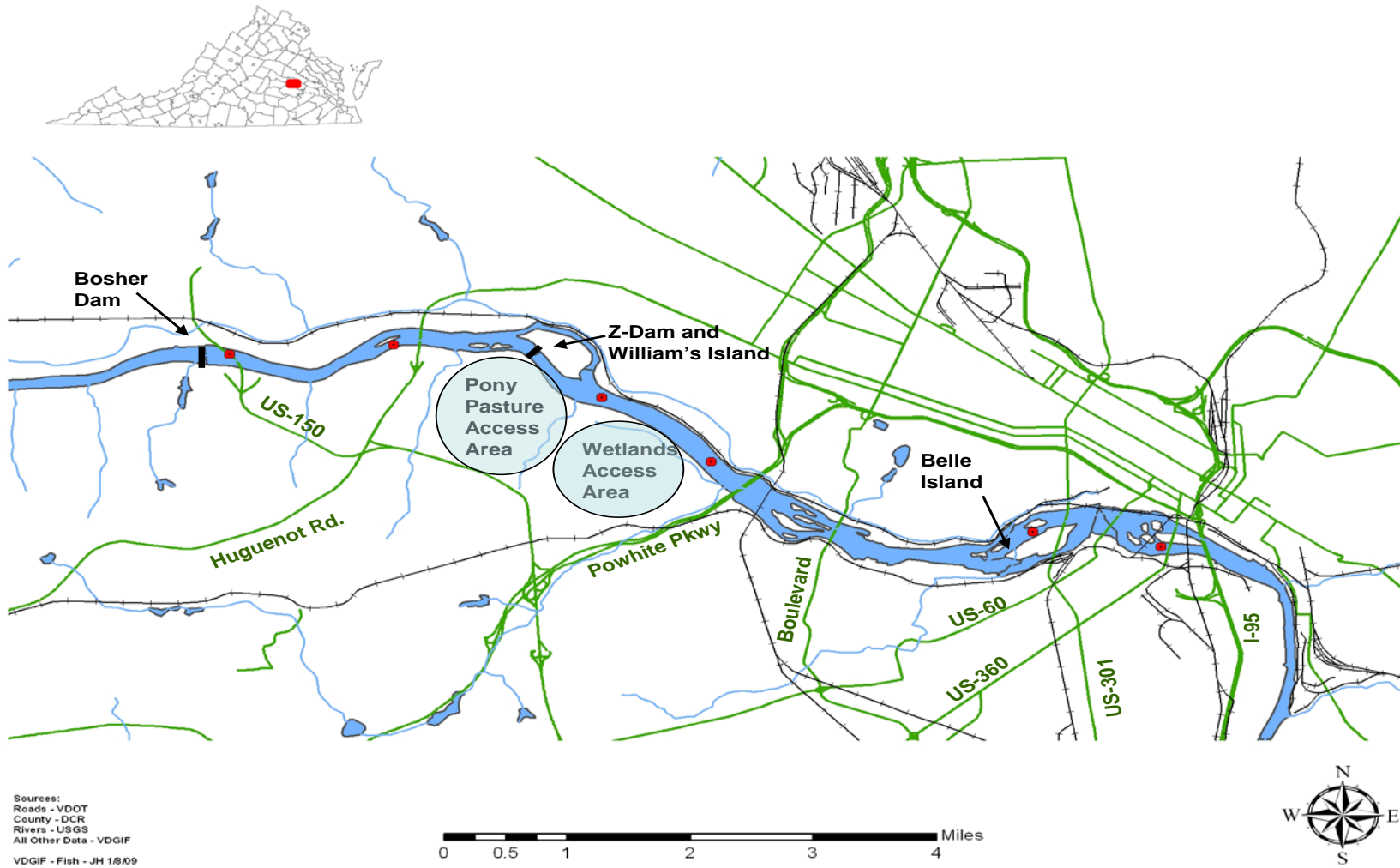


Figure 1. Map of the James River through Richmond (Fall-Line section). Red Dots indicate fish sampling location during November, 2010.

Table 1. Species account and catch rates for fish collected throughout the Fall-Line section of the James River, November 2010.

Species	Number Collected	Relative Abundance (fish/hour electrofishing)	Percentage of Total Catch
American Eel	197	32.9	23.6
Black Crappie	1	0.2	0.1
Blue Catfish	7	1.2	0.8
Bluegill	66	11.0	7.9
Bowfin	4	0.7	0.5
Bull Chub	40	6.7	4.8
Channel Catfish	18	3.0	2.2
Common Carp	8	1.3	1.0
Flathead Catfish	14	2.3	1.7
Green Sunfish	3	0.5	0.4
Largemouth Bass	62	10.3	7.4
Longnose Gar	12	2.0	1.4
Northern Hog Sucker	59	9.8	7.1
Quillback	6	1.0	0.7
Pumkinseed Sunfish	3	0.5	0.4
Redbreast Sunfish	193	32.2	23.1
Redear Sunfish	5	0.8	0.6
Rock Bass	14	2.3	1.7
Shorthead Redhorse	28	4.7	3.4
Smallmouth Bass	88	14.7	10.5
Spottail Shiner	6	1.0	0.7
Striped Bass	1	0.2	0.1

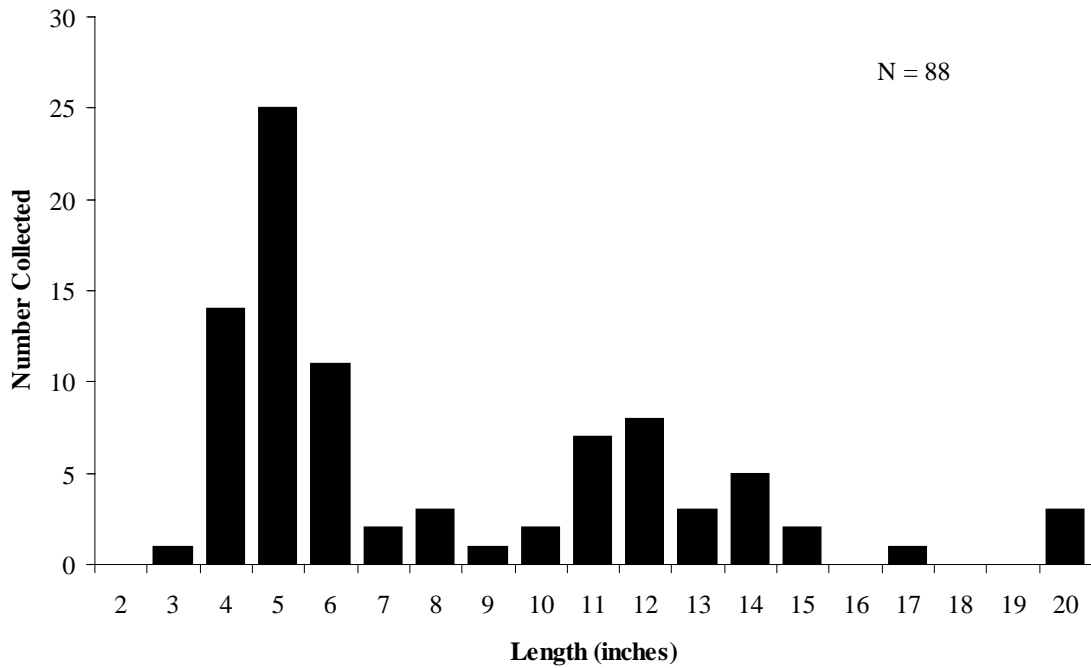


Figure 2. Length distribution of smallmouth bass collected throughout the Fall-Line section of the James River, November 2010.

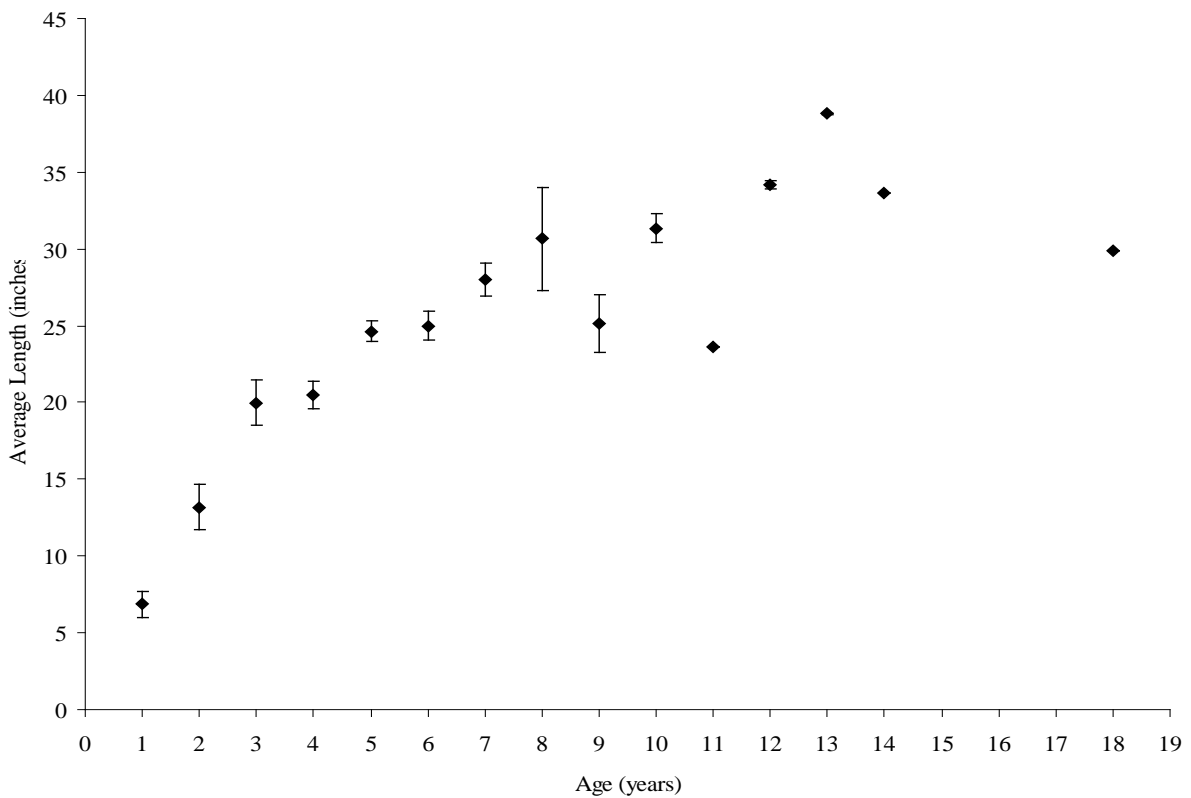


Figure 3. Average length-at-age of flathead catfish collected throughout the James River, 2010.

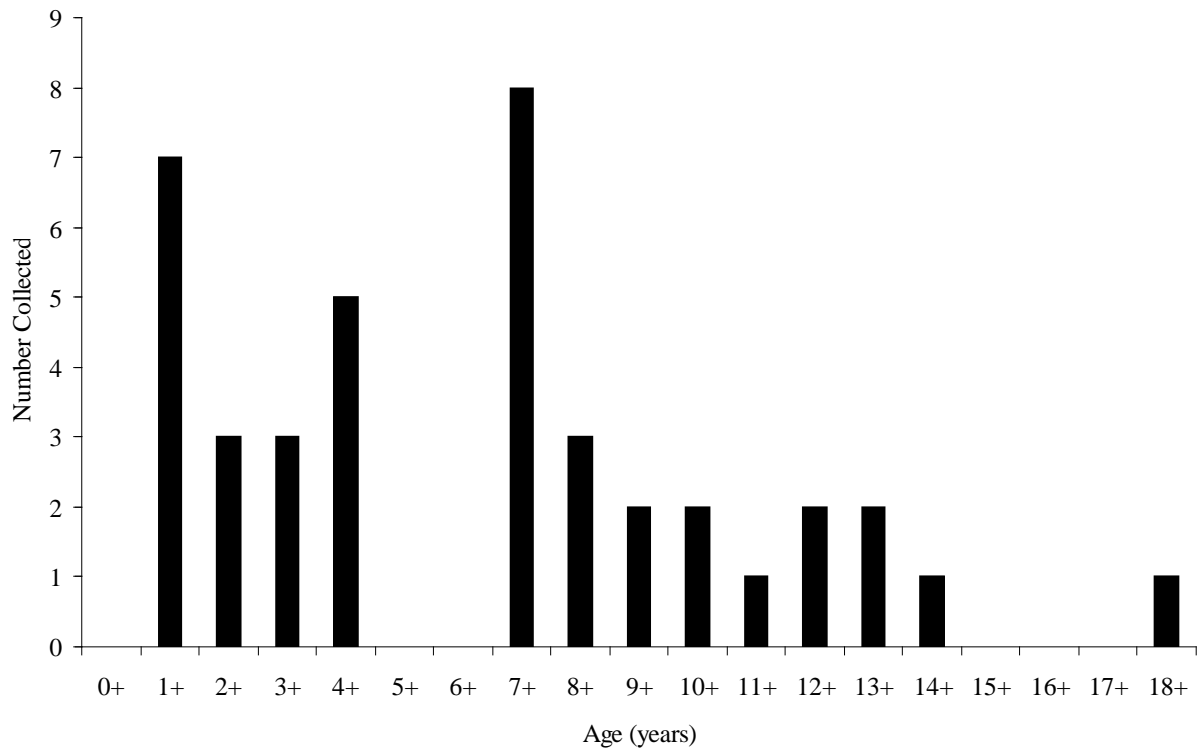


Figure 4. Age distribution of flathead catfish collected throughout the James River, 2010.