

## Friends of the North Fork and White Rivers Member News



VOLUME 1, ISSUE 2

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### President's Message

When air temperatures are in the high 90s with a heat index above 100 degrees and the surface temperatures of Bull Shoals and Lake Norfork are 90 degrees we are fortunate to have cool spring waters for kids of all ages to enjoy and cool off.



Big Spring at the Cotter Park is one place in particular that is a true blessing in the hot Ozarks summer.

Big Spring's clear 55 degree water is a great relief from the summer heat.

### WELCOME NEW MEMBERS

Don Thomas  
Matt and Jaren Beavers  
Lisa and Sam Brannum  
Nan DeVries  
Cyndi Duda  
Rick Moore

### NEW LIFETIME MEMBER

Jennifer and Dan Cooke

### PARTNER

John and Cindy Cooke

But what's the source of this water? Most of the water comes from underground sources but some also comes from Crooked Creek. Crooked Creek headwaters are in Newton County south west of Harrison. It flows north to Harrison and then east to Yellville and joins the White River about 7 river miles downstream from Cotter.

How does water from Crooked Creek find its way to Big Spring in Cotter? South of Yellville some of Crooked Creek water flows underground.

Dye testing showed the water in Crooked Creek which flowed underground resurfaces at Big Spring which also means it flows under the White River.

This is a great example of the karst topography underlying much of the Ozarks Region. Karst topography allows for ample underground water movement, as well as caverns, sinkholes and numerous springs.

## FACTS ABOUT CROOKED CREEK

- Crooked Creek travels some 70 miles from Newton County to its confluence with the White River 7 miles below Cotter Arkansas
- Some Crooked Creek water joins subsurface water beneath the White River and surfaces at Big Spring in Cotter
- Crooked Creek is listed as "impaired waters" by ADEQ due to various pollutants
- Butterball Company is planning to construct a \$50M feed mill near the confluence of Georges and Crooked Creeks and is advertising for more turkey growers in Marion County

There is more information in this newsletter regarding Crooked Creek and the Blue Ribbon small mouth fishing, floating and other recreational benefits it provides.

Let's all contribute to keeping Crooked Creek, this Blue Ribbon treasure clean and healthy.

Thank you.

Steve Blumreich, President  
[Sblum1326@gmail.com](mailto:Sblum1326@gmail.com) 417-839-0193

"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."

*Aldo Leopold - A Sand County Almanac - 1948*

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*"I ask for your help, if you are able."*

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## CROOKED CREEK

Crooked Creek is one of Arkansas's most cherished creeks. Its Blue Ribbon small mouth fishing, its scenery and appeal to floaters and its gin clear water attract thousands of people each year.

As its name suggests Crooked Creek has many twists and turns as it works its way from its headwaters near Marble Falls in Newton County north into Boone County and then east through Marion County to its confluence with White River some 80 river miles downstream.

<https://www.google.com/maps/place/Crooked+Creek/@36.2334068,-92.9926674,13z/data=!4m5!3m4!1sox87ce3e28b0555d85:oxbf538460873a3155!8m2!3d36.2210628!4d-92.8001995>

Crooked Creek has long been respected among anglers as the premier smallmouth bass stream in the state of Arkansas. Although smallmouth bass grow slowly in the Ozarks - an average of 6 years required to produce a 12" bass - smallmouth in Crooked Creek grow faster than average due to quality habitat and abundant prey. Given favorable weather and water conditions, anglers can expect to catch bass in the 10-14" range, and specimens of 16-18" are not uncommon. Another common catch is the Ozark Bass, often referred to as "goggle eye," which interestingly, is only found in the White River watershed.

Fishing guide and resident of Crooked Creek Gabe Levin says, "I am continuously surprised by the fishery's resilience. In-stream gravel mining was a serious threat to the creek in the 1980s and 90s, and has since been regulated, although the most heavily disturbed areas will need many more years to stabilize into good smallmouth habitat. Stream bank erosion, agricultural runoff, and wastewater discharge all contribute to Crooked Creek's status as "impaired," for carrying too much dissolved solids. Smallmouth bass are relatively intolerant of dissolved solids, requiring cleaner clearer water than their cousin the largemouth bass. Despite these threats, I would have to say the quality of fishing in Crooked Creek remains high, for now at least."



A growing reputation for quality fishing combined with ever improving stream access may be creating a new threat to Crooked Creek's smallmouth population in the form of excess fishing pressure. Having fished the Creek consistently for many years, Gabe sees more and more bass with injured mouth parts, mortalities due to swallowed baits and hooks, and heavily visited access areas that are nearly void of "keeper" sized fish - suggesting unsustainable harvest rates. "I'm a fan of public water and public access, but there comes a point when increasing access and fishing pressure actually threatens the target species and reduces the quality of the angling experience for everyone."

“Based on the quality of fishing I have experienced so far in 2017, I would judge Crooked Creek's smallmouth fishing as outstanding. However, Crooked Creek is a relatively small and definitively finite resource. If water quality continues to decline and fishing pressure continues to increase, something has to give.”

Due to the work and funding provided by Mid-South Fly Fishers ([www.msff.org](http://www.msff.org)) and Southern Council of Fly Fishers International, signs have been posted at Crooked Creek access points regarding the small mouth bass regulations and proper handling and release of the fish. According to Frank Sospenzi, president of MSFF; “we believe many people fishing Crooked Creek are not aware of the special regulations relating to Crooked Creek. We are hopeful these signs will inform fishermen about the regulations and proper handling and release procedures and help protect and preserve this wonderful species for future generations to enjoy.”



*Arkansas Game and Fish recently completed a small mouth survey of Crooked Creek. The results are included in this newsletter.*

## **THREATS TO CROOKED CREEK WATER QUALITY:**

Crooked Creek is now and has for a number of years been on Arkansas Department of Environmental Quality's (ADEQ) list of Arkansas impaired streams (303d). Impairment of Crooked Creek is due to several factors:

### **Nutrient runoff from poultry and cattle waste**

Butterball Turkey recently announced construction of a \$50 million feed mill just east of the Georges Creek and Crooked Creek confluence. This also suggests an increase in turkey houses and liter application in Crooked Creek watershed.

### **Cities of Harrison and Yellville wastewater treatment facilities**

As the populations of Harrison and Yellville increased over the years, more demand has been placed on their respective aging waste water treatment facilities. These treatment facilities are not able to meet the demand and as a result, under-treated waste water is being discharged into Crooked Creek.

### **Sediment from stream bank erosion, gravel roads and past gravel mining**

Arkansas Game and Fish has been active in protecting Crooked Creek stream banks from erosion by various methods. You'll see, in the article on the next page, AGFC's past activities, results and future plans for reducing Crooked Creek stream bank erosion.

## **ARKANSAS NATURE CONSERVANCY AND CROOKED CREEK**

For over 35 years the Nature Conservancy in Arkansas has worked to protect the lands and waters on which all life depends. On Crooked Creek the Nature Conservancy acquired and protects for the public use approximately 74 acres west of Yellville. This land is open to the public for camping and fishing. See links for location maps. In addition to their Crooked Creek efforts Nature Conservancy in Arkansas has many other projects aimed at protecting Arkansas lands and waters. <https://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/arkansas/index.htm>

Thank you to Mid-South Fly Fishers, Southern Council of Fly Fishers International, Nature Conservancy in Arkansas, Jeremy Risley and Tim Burnley and their teams with AGFC, Gabe Levin, Duane Hada and all Friends of the North Fork and White Rivers who have a love for Crooked Creek and work to protect its water quality and inhabitants.



## CROOKED CREEK BANK STABILIZATION

In the fall of 2010 the Trout Habitat Program (THP), Commission Construction Crew (CCC), and Stream Team Coordinator Dave Evans stabilized approximately 1,000 feet of severely eroded streambank (between the new bridge and old slab) at the Fred Berry Conservation Education Center near Yellville. The project involved the installation of Longitudinal Peak Flat Stone Toe Protection (LPFSTP) and rock vanes. Partial funding for this project was received from the American Recovery and Re-Investment Act (ARRA). The project has functioned as designed and has withstood several flood events in the past 7 years, however, some rock from the tips of the vanes have been washed downstream. So the THP will be conducting repairs to these structures during the last week of July and first week of August 2017 to alleviate these concerns and protect against future erosion.

The Bank Erosion Hazard Index (BEHI) and Near-Bank Stress (NBS) assessment were developed by David Rosgen and can be used to predict annual erosion rates by utilizing the Bank Assessment for Non-point source Consequences of Sediment (BANCS) model. Rosgen's BEHI uses multiple bank characteristics to determine the erosion risk or potential of a stream bank to erode. Rosgen's NBS estimates potential energy distribution in the near bank area that may accelerate erosion. In 2013, the Trout Habitat Program of the Arkansas Game and Fish Commission utilized this methodology to prioritize eroded stream banks on Crooked Creek between the Pyatt and Snow Accesses. The results are summarized in Table 1.

### Crooked Creek #1 and #2



*Figure 1. Severely Eroded Bank Before Construction-July 2010*



*Figure 2. Same Bank During Construction-July 2010*



*Figure 3. Same bank July 2017*

Crooked Creek, Marion County, AR Pyatt Access to Snow Access 6.5 miles												
Site	GPS UTM	Length(ft)	Ht(ft)	L/R Bank	BEHI	NBS	Notes	BER(ft/yr)	cubicft/yr	tons/yr/ft	Ranking	
1	15 S 0514836 4011214	100	8	RL	Extreme	Very High		7	5600	2.6963	2	
2	15 S 0514701 4011083	200	10	RR	Very High	High		0.58	1160	0.2793	9	
3	15 S 0514680 4010905	150	6	RL	Moderate	N/A			0	0.0000	16	
4	15 S 0514752 4010812	150	8	RR	Very High	High		0.58	696	0.2234	12	
5	15 S 0514906 4010782	150	6	RL	Moderate	N/A			0	0.0000	16	
6	16 S 0514906 4010782	300	6	RR	Moderate	N/A			0	0.0000	16	
7	15 S 0515141 4010720	300	8	RL	Very High	Very High		0.78	1872	0.3004	4	
8	15 S 0515762 4010655	60	8	RL	Very High	High		0.58	278.4	0.2234	15	
9	15 S 0515557 4010234	200	8	RL	Very High	Very High		0.78	1248	0.3004	7	
10	15 S 0515321 4010158	100	8	RR	Extreme	Very High		7	5600	2.6963	2	
11	15 S 0515292 4009375	75	8	RR	High	High		0.58	348	0.2234	14	
12	15 S 0515640 4009181	250	8	RR	Very High	Very High	Pics1,2	0.78	1560	0.3004	6	
13	15 S 0515928 4009062	85	10	RR	High	Extreme		1.4	1190	0.6741	8	
14	15 S 0516007 4009063	80	8	RR	Very High	Extreme		1.4	896	0.5393	11	
15	15 S 0516124 4009187	400	8	RL	Extreme	Extreme	Pics3,4	10.7	34240	4.1215	1	
16	15 S 0516309 4009723	350	8	RL	Very High	High		0.58	1624	0.2234	5	
17	15 S 0517122 4010188	300	8	RL	Very High	Very High		0.78	1872	0.3004	4	
18	15 S 0517673 4010030	250	8	RR	Very High	Very High		0.78	1560	0.3004	6	
19	15 S 0517712 4010856	150	6	RR	High	High		0.58	522	0.1676	13	
20	15 S 0517833 4010978	150	8	RL	Very High	Very High		0.78	936	0.3004	10	
21	15 S 0517846 4010984	400	8	RL	Very High	Very High		0.78	2496	0.3004	3	

## FRIENDS “ON” THE RIVERS

### MID-SOUTH FLY FISHERS

By Frank Sospenzi, President



The Mid-South Fly Fishers ([www.msff.org](http://www.msff.org)) is a club of about 225 members headquartered in Memphis, TN. We are an FFI club and are part of the Southern Council of the FFI. The purpose of the organization is to improve and increase the sport of fly fishing in the Mid-South; to encourage and advocate conservation in the waters of the Mid-South; to encourage and assist others to become fly fishers; to promote the pleasure and fellowship of its members; and to engage in such activities as may be necessary and expedient for the achievement of the above stated purposes.

*ED: Friends of the Rivers appreciates working with MSFF on our shared home waters and especially for their support of Friends stream team, which in 2017, begins its focus on Dodd Creek.*

Many MSFF members enjoy smallmouth fishing in Crooked Creek. Crooked Creek has good access points, is easy to wade, and has plenty of shade making it a great place to fish. And as anyone who fishes the White River tailwaters knows, having an alternate place to go when they turn on the generators is always a good plan. The warm water allows for wet wading just about year-round, so waders are not required, which not only can be a more refreshing way to fish on a warm day, also allows for someone to experience wade fishing without the need for waders. Combine this with the fact that you are just about guaranteed to catch fish, makes Crooked Creek a perfect place to bring a child for a day of wet wading, and get them interested in fly fishing.

The picture of my grandson, Joel, showing off a nice Arkansas bluegill at the 101-bridge access point is evidence of this. Another aspect of Crooked Creek that is important to the Mid-South Fly Fishers is it is relatively easy river to float fish from kayaks and canoes. We have at least one club float trip per year, and Crooked Creek is one of our favorites – easy access, generally easy float, and willing fish make this a perfect place for all levels of kayak and canoe experience.



## MSFF FRIENDS “ON” THE RIVERS continued

### HOW DID THE CROOKED CREEK REGULATION SIGNS COME ABOUT?

The stresses that this fishery is under are well documented. Natural events, such as floods; and man-made events, such as gravel mining, farm land run-off, and diverted flows, have all led to a decline in the quality of the fishery. In addition, club members witnessed many instances of people not following the Smallmouth Catch and Release & Trophy area regulations.

Crooked Creek is a favorite float and fishing destination for one of our past presidents, Lesley Allen. As such, protecting these waters became a passion of hers. Lesley realized that the majority of the people who weren't following the regulations weren't aware of the regulations. We have all experienced that when awareness is raised, compliance with regulations increases.



Lesley worked with the AGFC to get a price to purchase and install smallmouth bass regulation signs on Crooked Creek. Lesley proposed to the board that the MSFF purchase the signs and the AGFC would install the signs. The request was approved and the signs were purchased. Then a few months later, we learned that the Southern Council of Fly Fishers International (FFI) was considering proposals for grant money. The club's Conservation Director, Victoria Johnson, wrote up and submitted the grant request. The Southern Council approved the request, and as a result, we are purchasing additional sign posts to be used as replacements for signs damaged from floods or vandalism. We want to thank the Southern Council of the FFI for

supporting this effort too! Along with clearly stating the regulations, the signs also have information on how to safely handle and release fish.



The first step of any conservation project is communication and raising awareness, and we hope the new regulation signs on Crooked Creek are the start of more, and larger smallmouth bass in this great fishery.

A great resource for fishing information that includes maps showing all access points for not only Crooked Creek, but all the major waters in the Mid-South can be found in the Mid-South Fly Fishers book, Home Waters. These books can be purchased at local fly shops or ordered online at

<http://www.msff.org/product/homewaters-book/>



Visit [Friends of the Rivers online calendar of events](#). Mark your calendar and plan to bring your kids, grandkids or any kid to the **Annual Hatchery Outdoor Adventure** hosted by Friends of the Norfolk National Fish Hatchery Saturday, September 9 – 10 a.m. – 3 p.m. and then be sure to attend the **Fly Fishing Fair** scheduled for Thursday through Saturday, October 5, 6, 7 at the Vada Sheid on the Arkansas State University Mountain Home Campus.



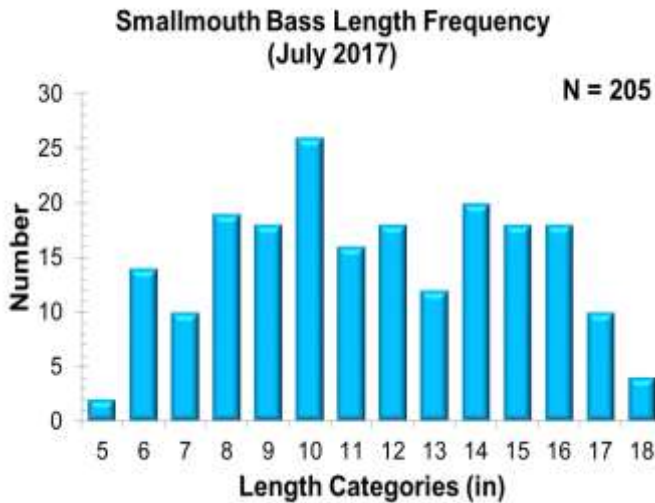
## RECENT AGFC SMALLMOUTH BASS SAMPLING ON CROOKED CREEK

According to Jeremy Risley AGFC District 2 Fisheries Supervisor “Crooked Creek has long been respected among anglers as the premier smallmouth bass stream in the state of Arkansas. Although smallmouth bass grow slowly in the Ozarks - an average of 6 years required to produce a 12" bass - smallmouth in Crooked Creek grow faster than average due to quality habitat and abundant prey. Given favorable weather and water conditions, anglers can expect to catch bass in the 10-14" range, and specimens of 16-18" are not uncommon. Another common catch is the Ozark Bass, often referred to as "goggle eye," which interestingly, is only found in the White River watershed.”

Crooked Creek SMB Estimated Age at Length Data

Inches	Average Age at Length (years)
10	2.25
11	2.68
12	3.18
13	3.77
14	4.5
15	5.46
16	6.84
17	9.37
18	10+

In the 1980s, the Arkansas Game and Fish Commission (AGFC) began sampling the Smallmouth Bass (SMB) population in Crooked Creek (CC) in response to angler concerns about increased fishing pressure and a perceived decline in the quality of the SMB fishery. Samples were conducted to 1) monitor the SMB



population over time, 2) evaluate SMB regulations, 3) assess the potential impacts of gravel mining operations and increased angling pressure on the SMB population, and 4) determine SMB angling effort, harvest, and satisfaction.

Most of the historical SMB sampling occurred at two fixed sites: Pyatt and Kelly’s Slab. Earlier this year, access to CC was improved with the completion of the Mark Oliver George’s Creek Access. This made it feasible to sample the middle section of CC, which historically hadn’t been sampled. Using geographic information system (GIS) software, the stretch from Snow Access to Kelly’s Slab was broken into 32, 600-meter segments. We randomly selected half the segments to be sampled. Similar methods are used to

determine samples sites on reservoirs and tailwaters around the state. However, this was the AGFC’s first attempt at random sampling in CC. Initially, we made two failed attempts at sampling CC due to low water levels and equipment problems. After a significant rain event in mid-July, there was enough water to complete our electrofishing sampling efforts. We sampled the stretch from Snow Access to George’s Creek on July 12<sup>th</sup> and George’s Creek to Kelly’s Slab on July 13<sup>th</sup>. A total of 205 SMB were sampled ranging in size from 5.7 to 18.3 inches. This resulted in a catch per effort of 75.2 SMB/hr. Thirty-four percent of the SMB sampled were 14 inches or greater. The SMB population in CC appears to be in good shape based on the quality and quantity of SMB sampled.

It is difficult to compare these results to historical samples due to the difference in site selection (random vs. fixed sites) and the fact we hadn’t previously sampled this section of CC. With the improved access, we can increase the amount of sampling on CC. We plan on incorporating night-time electrofishing and angling surveys in the upcoming years. These efforts will improve the monitoring of the SMB population in CC and help sustain a quality SMB fishery for anglers to enjoy.