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September 2020

# Stream Smallmouth Bass Migratory Behavior





**Editors Note:** As we move into colder weather, discussions about smallmouth bass fishing abound. "What are smallmouth doing as the temperature drops and can we still fish for one of our favorite species." NKFF member Dave Votaw sheds some science on the topic of smallmouth migratory behavior.

## **Stream Smallmouth Bass Migratory Behavior**

#### By Dave Votaw

Here in the Midwest we regard smallmouth bass (Micropterus dolomieu) as 'our' fish. After all, smallies are native to the rivers of the Midwest, having occupied them about 14,000 years ago following the last ice age. Eventually they found their way to the Great Lakes, including Lake Erie, the smallmouth bass capital of the world. One would think we



Midwesterners had patterned the behavior of these river fish we love so much by now, but much remains to be learned about migratory behavior, especially through the cold weather months. Current research is shedding new light on winter habitat and migratory behavior of smallmouth, finding variable behavior between populations of these fish: some populations are primarily sedentary, while others migrate long distances to winter habitat, returning to reach spawning grounds in the Spring.

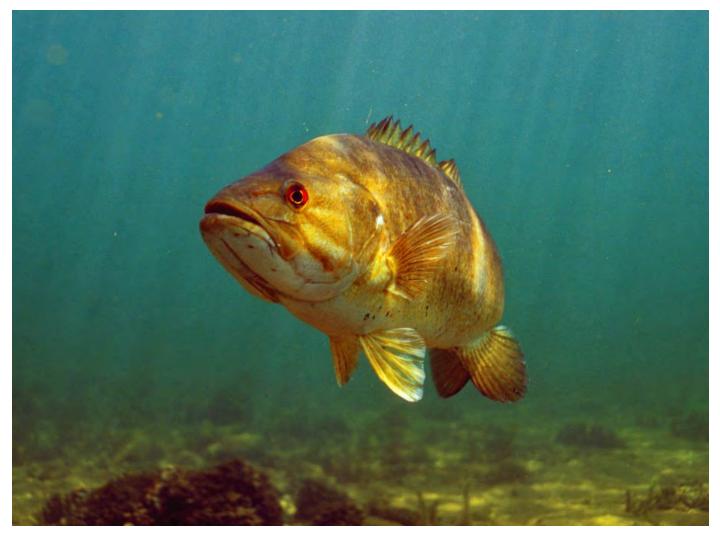
Studies of smallmouth movements rely on either radio telemetry or recovery of marked individuals. Studies of post spawn summer movement have found that adult smallies remain within a relatively small area; for example, in two southern Michigan streams, smallmouth moved less than 1 km (.62 miles) over the summer. Smallmouth bass fry can be displaced downstream under flood conditions, probably suffering high mortality; survivors likely populate downstream areas since fry move little. However, several studies of recovered juvenile smallmouth suggest that a percentage are mobile in summer moving as much as 40 km (~25 miles). Lyons and Kanehl's seminal 2002 review concluded:



(Continued from page 2)

Nearly all stream dwelling smallmouth bass populations are largely sedentary during the summer, and some populations appear to be sedentary throughout the year. However, other populations undertake migrations, mainly in fall and spring, and there may be substantial variation among individuals within a population in the extent of movement.

Although movement during the transition period from warm to cold water conditions is of great interest to fishermen, few studies during this season have been conducted. Some studies suggest that northern reaches of the smallmouth bass range exhibit long distance migrations possibly due to the severe winters experienced in





(Continued from page 3)

the north. Long distance migrations of 35 to 109 km (22-68 miles) have been documented in northern Wisconsin, beginning when water temperatures fell below 60F and particularly when accompanied by rainfall and increased flows. Young of the



year and age 1 fish did not migrate. Many fish were observed to return in spring to the same general area they had occupied the previous summer.

Recent studies have also given us new insight into winter movement of stream smallmouth bass. Most of us know the conventional wisdom that smallmouth move to the deepest slow water within their migratory range and settle under some kind of cover for the winter. In some populations, smallmouth were found to occupy the (Continued on page 5)



(Continued from page 4)

deepest water available during winter. However, other studies have found that winter activity levels vary among populations. For example, Huron River smallmouth have often been observed in open water away from deeper water or cover and moving as much as 100 m (328 feet) regularly in water near 32F. Lyons and Kanehl confirmed the winter movement patterns and habitat use using radio telemetry, finding regular short-range movements of several hundred meters in water less than 2 m (6.5 feet) deep over rocky substrates. However, these fish also did not associate with the usual instream summer cover.



Finally, to complete the cycle, both

river and lake smallies move into tributaries in spring to spawn. These tribs then provide nursery habitats for fry. In some instances, these spawn migrations are not long, and spawning may even take place in the same general area where adults spend the rest of the year.

Interestingly, stocked or transplanted fish tend to leave the stocking areas quickly and move large distances downstream. Pond-raised fish and native captured smallmouth were stocked in Ohio's Little Miami River [Brown 1961]. The native fish remained within approximately 0.8 km (.5 miles) of the release point, compared with the hatchery fish that moved as much as 113 km (70 miles) downstream. Thus, if stocking is to improve populations in streams, wild caught fish from the same drainage should be used. Research has demonstrated that some smallmouth bass populations make specific fall and spring migrations. Biologists hypothesize that



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this behavior is controlled genetically, making it important to preserve this adaptive behavior by not mixing populations.

Stepien, Murphy, and Strange [2006] investigat-

ed the fine-scale population genetic structure of smallmouth bass because it is so important to preserving genetic integrity and diversity. They note that because smallmouth demonstrate a homing tendency for spawning, smallmouth have the potential for significant population genetic structure and fine-scale genetic differentiation. In short, these authors found that despite the opportunity to mix genetically, close geographical sites often showed marked genetic differences, especially among river smallmouth bass populations because adults return to their own natal sites to spawn. In practical terms for fishermen, this means the smallies in adjacent but separate watersheds are possibly genetically distinct, and thus may exhibit distinct migratory behavior through the seasons.

#### **References:**

John Lyons and Paul Kanehl. Seasonal Movements of Smallmouth Bass in Streams. American Fisheries Society Symposium 31:149-160, 2002.

Carol A. Stepien, Douglas J. Murphy, and Rex Meade Strange. Broad to Fine-Scale Population Genetic Patterning in the Smallmouth Bass Across the Laurentian Great Lakes and Beyond: An Interplay of Behaviour and Geography. Molecular Ecology 2006.

E. H. Brown. Movement of Native and Hatchery-reared Gamefish in a Warmwater Stream. Transactions of the American Fisheries Society 90:449-456, 1961.



## A Message From The President

### By Sheila Meyer

We are all very proud of Josh Lillard for being appointed as Fish & Wildlife Commissioner by Governor Beshear. We are certain that in his 4 year tenure, Josh will do an outstanding job as he does with everything he undertakes. If you would like to send him a note of congratulations, you can do that <u>HERE</u>.

We had great attendance at our August virtual meeting and congratulate our door prize winners. Tom Tveten, \$50 gift card for Delamere & Hopkins; Lou Class, Tenkara Rod; Eric Weinberg, Fishin Plyers and



David Votaw, flybox and bakers dozen of flies.

Our survey of members clearly indicated that it is way too early to get back together for face-to-face meetings. Out of 120 respondents, 66% thought it was too early. So we are listening to our membership and will be having our September and October meetings as virtual meetings.

If you have thoughts about what criteria should be met before we get back together for our face to face monthly meetings, please let me know by emailing me at <u>shei-la@nkff.org</u>. Also, what about our local fishing outings and our educational classes? Please let me know your thoughts.

What else can we do? I would like your ideas for other things we might do in a virtual way until we can get back together face-to-face. Please contact me at <u>shei-</u> <u>la@nkff.org</u>.

Calendar events for September and October are all cancelled.

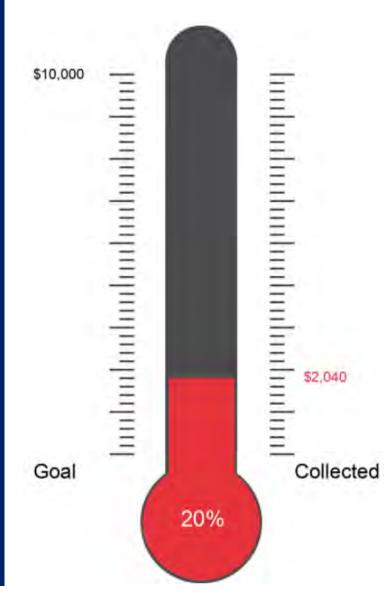
Take good care of yourselves and your families and wash your hands !!



## Banquet 2020 Update - Josh Lillard

I have been fishing on the Cumberland River for the last week and having a blast while trying to put the pandemic in perspective.

I would like to thank all of those that have made donations to our banquet, we realize during these uncertain times that how and where you choose to spend your money has been limited and you are probably focusing more on your savings (wish I always did that) right now.





*We are still taking donations*, if you would like to help us meet our goal by September. We currently only have \$8,000 left to reach out goal!

To be honest, we don't know at this point if we will actually have a banquet that resembles previous events. *However, we have to do some sort of fund raising. The banquet represents about 65% of our operating revenue and although our costs are down, we will have to generate some revenue from sources in addition to membership dues.* 

I'd like to remind you that you can donate a prize as well, please just contact me first so we can discuss it.

Please help our fund raising efforts where you can.

Thank you.....Josh Lillard Josh@nkff.org





Banquet Date: Saturday November 7<sup>th</sup>, 2020
Offsite social hour: 5:00pm – 6:00pm (TBD Location)
Banquet Start Time: 6:15 pm
Banquet Location:

St. Barbara's Sterling Event Center

4042 Turkeyfoot Rd.

Erlanger, KY 41018

## **Keynote Speaker:**

Karen Waldrop, PhD, National Conservation Director Ducks Unlimited

## **Prize Highlight:**

A \$165 Rod & Reel Outfit Donated by Mike Arnold and Don Stewart:



- Cabela C.G.R. 6'2" 2 Wt. 3 Pc. Fiberglass Rod in Cordura-covered Tube
- Maxcatch Avid 1-3 Fly Reel with 20 yds backing, 60' WF3F Fly Line,
- Three 7' leaders (4X, 5X & 6X) and a spool of 6X Tippet Material \$55
- Double-Sided 15-compartment J Stockard Fly Box
- 6-Compartment Plano Box with several dozen jigs of various colors





### From NKFF Member Stan Hastings

My grandson, Kristopher and I go out on the Ohio from Craigs Creek in Warsaw. Last weekend we were out on the river fly fishing for bass and carp and noticed a lot of gar coming up along the bank about 30 yards from shore. I assumed they were feeding on the shad minnows we were seeing everywhere. I tied on a small white rabbit strip fly and we watched them come up and eat it. Of course we couldn't sink a hook in so after a short fight including a couple jumps they got off.

I came home and tied some rope flies as <u>shown on the internet</u> and went back. We caught 3 gar Sat. morning. Kristopher caught his on a 6 wt rod with a sink tip line. I caught 2 with floating line. Unfortunately with the rain, the water turned off color and by Monday they were not as active and not at all cooperative. It was great fun and now when we come across them feeding we know what to do.

A couple important points, if you cut the fly off you kill the fish because they cannot get untangled from the rope fly. To land the fish, I bought Kevlar gloves on Amazon with the rubber palm. I would grab the snouts then use needle nosed pliers to remove the rope before I released them. It is important for them to be able to open their mouth!





#### By NKFF Member Randy Arrowood

### Lighting

I use a USB powered circular LED light for even illumination. I made this with an adhesive LED light strip that, at the time was \$8 on Amazon. It's served me well, but it is very bright, and it is a very cold or blue toned light source that both iPhone and Android struggle with. Sometimes I'm lazy and I use the blueish images, other times I use the Google Photos app to correct the white balance quickly and easily.

The hoop that I used is a 12" wooden needlepoint hoop that I picked up at Michael's for less than \$5. I went cheap here, and I really wish that I



had not. The adhesive on the LED light strip does not stick well to the wooden hoop, so the first few months of using this setup I had to add some gel superglue in several spots to improve adhesion. It is not a problem anymore, but when I make my next lighting hoop, I'll spend a few dollars more and get one of the plastic ones.

In the picture that I've included I clamped my lighting hoop directly to my vise stem. I also have some 3/8" wooden dowels that I put into a second vise pedestal



(Continued from page 11)

base to clamp the hoop to. In some cases the light is better if it's positioned a little behind or in front of the fly. Having a secondary mounting option makes that very easy to do

#### Camera

In a previous life I was a sports photographer, I have proper cameras and lenses to



do macro photography. It's a total pain to drag all of that stuff out, so I always use my phone. I have a Google Pixel 3a XL currently and it has an amazing camera that I use quite a bit for closeup photos without any additional hardware. If your phone (Continued on page 13)



(Continued from page 12)

doesn't do so well for closeup photos, I bought a smartphone lens add-on kit for about \$20. It includes wide angle and macro lenses and a little clip to hold the lens over the lens of your phone or tablet camera. The results are great, and I've used



several of the lenses for other things.

#### Background

Finally, for the background. I use a sheet of black foam paper that you can but at Michael's or any other craft store for less than \$1. I place it right behind my vise and hold it with a set of magnetic third hand material clips that I picked up for \$12. I also use these during fly tying for parachute posts or just to hold things out of the way, so something like this is a surprisingly good pickup.

I'm also not afraid to pull out my phone and do a picture with no lighting, lens or



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background added all. It may not be my preferred method, but if you ever see my countertop or desk, I was being lazy that day and took the casual way out.

Amazon Links LED Light Strip <u>https://www.amazon.com/dp/B015R87GQK/</u> Phone Lens Kit <u>https://www.amazon.com/dp/B07FWSWRT5/</u> Third Hand Set <u>https://www.amazon.com/dp/B07SBZRF6S/</u>





## 2020 NKFF Rod Building Classes - Pre-Covid

The January-February, 2020 rod building class was led by Mike Arnold and included students Linda Franklin, Dennis New, Richard Bushman, Tom Gier, Scott Hull and Joel Moon.

The February-March class was led by Tom Tveten and included students Joan Geohagen, Bruce Lane and Matt Breeze.

You can see pictures taken by Linda Franklin of both classes held earlier this year by clicking <u>HERE</u>. Linda has put her rod to good use already....picture below.





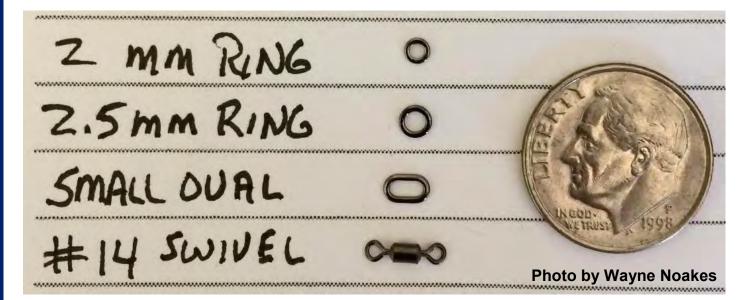
## A Tool to Help Keep Your Fly on the Water

#### By NKFF Member Wayne Noakes

#### Lets talk about Tippet Rings!

Tippet Rings are, in my opinion, so useful in helping the angler stay in the hunt that I recommend them to everyone. However, if your fingers don't work like they used to, tying the ring to the leader can be a challenge and we will address this later.

If you are not familiar with tippet rings, at a minimum they will help you accomplish 2 things. 1) If tied on to your leader properly your tapered leader should last a much longer time than usual. 2) They will make it so much faster and easier to add tippet when needed.



Tippet Rings are simply tiny metal hoops made out of either stainless or mild steel and normally come 2mm, 2.5mm or 3mm. The breaking strength is rated from smallest to largest at 25, 30 and 45 lbs. If you research them the prices will somewhat vary from how well there made (Chemistry) to where you buy them. They are so light that they will float when using monofilament leaders and tippet fishing a dry fly. Also they wont add any noticeable drag during pickup or when fishing in current.



## A Tool to Help Keep Your Fly on the Water

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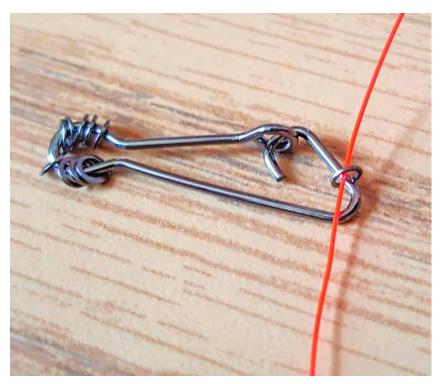
#### Now a few words on the initial installation on your tapered leader!

For discussion lets assume you are going to put a ring on a (new) 4X tapered leader. From the end of the leader cut off 18 to 24 inches and then tie on the ring. The rea-



son for this is to add more breaking strength to the leader at the point where the ring is attached. I have found when putting on a new ring it is much easier to tie it on at your house. You will have better lighting and can be sitting down which will help with control. Remember those fingers!

Normally when you purchase the rings they are on a safety pin or a swivel so while



keeping the ring on the Swivel thread the cut off end of your leader and tie the ring on with a clinch or improved clinch knot. Then open the swivel up and slide the newly knotted ring off. Tighten the moistened knot really well and trim leaving just a very tiny tag. The tippet ring is now ready for the tippet. That was easy wasn't it!

I like to wait until I'm on the water to put on my tippet but as always, that's your call!



## A Tool to Help Keep Your Fly on the Water

(Continued from page 17)

### A couple of closing observations!

If the ring is installed properly the leader should have enough strength to allow for hang ups where you may lose your fly and break the tippet but the ring should be fine. I have found that the leaders with tippet rings will last a couple of seasons for most of us. Another thing is that given the cost of quality tapered leaders the initial cost of the rings will be absorbed pretty quickly.

I've been using tippet rings along with furled leaders with rings for over ten years with great results. If you have any questions about tippet rings and other types of micro terminal tackle give me a call! Wayne: 859-743-3750





### Population Sampling in the Smokies Reveals Lower Brook Trout Populations and Larger Sizes

**By Ian Rutter** (*Ian & Charity Rutter own and operate R&R Fly Fishing in Townsend, TN*) We've recently done some volunteer work with fisheries biologists in the Smokies

and we now have concrete evidence of what we suspected. Two consecutive years of massive winter flooding has had an impact on native brook trout in the Smokies, but it's not all bad news.

Action seemed a bit light on our favorite brook trout streams, but we've caught some really nice ones. This is usually a result of depressed reproduction. The past two winters have seen extreme floods in the Smokies. Most brook trout fry were likely washed out as they were-



n't large enough to hold in their own in such massive flows. This means that the overall population is down for the time being. A positive result is the bulk of the population is composed of adult fish and a large percentage of those fish are older fish. That means the average size has gone up and the potential for an exceptional brookie is as good as it gets. Brown trout also have the same spawning season so you can expect the same thing in their population dynamics.

A typical year would find something in the range of about 1500 or more brook trout per mile in Lynn Camp Prong. This year's sample showed 500 or less. That's still plenty of fish, just not the exceptionally high numbers we're used to. Also, since the



### **Brook Trout Populations in the Smokies**

(Continued from page 19)

trout are mostly adults there are more than enough fish to successfully spawn this fall.



Great Smoky Mountain National Park fisheries biologists and volunteers shocking Lynn Camp Prong

Fishing has been good in the brook trout streams, but there are times when it has been spotty. We haven't seen many of episodes with five or six fish coming from a single small pool. Those are mostly smaller fish when that does happen in years with high populations. This year we are finding fish in the absolute best spots (not (Continued on page 21)



### **Brook Trout Populations in the Smokies**

(Continued from page 20)

always large pools) and they usually have that piece of water to themselves.

With fewer fish we are seeing larger fish, though. One reason is that fewer fish have more food to go around. Another is that there are simply fewer small fish in the mix. That also means that larger fish have a better opportunity to eat your fly with fewer small fish to beat them to it.

Regardless, this is a result of natural events so there isn't any reason to panic. We'll likely see high numbers of small to medium fish in a couple of years. Also, keep in mind that rainbow trout have a spawning season that is completely different, so you can expect streams with rainbow trout to be in great shape right now. We're seeing good number of rainbows across the park.



Our kids, Boone and Willow, measure and weigh brook trout under the supervision of park biologist Caleb Abramson. Note the solid fish Boone is measuring.





### Pescador on the Fly El Jefe Packable Fly Rod Combo

#### By Dennis Pastucha

Six-piece rods that fit in your carry-on for business trips, or stash in a backpack for long hikes, ensure you always have a rod with you. The <u>Pescador on</u> <u>the Fly</u> El Jefe Packable Fly Rod Combo (\$399, ) is a six-piece, fast-action rod that breaks down into a 22-inch padded rod tube with a rod sock, carry strap, extra tip section, and a machined aluminum reel—all with a lifetime warranty. As far as packable rod and reel combos go, this one really is "the boss."





I fished the 5/6-weight combo on Pennsylvania's Yellow Breeches and Conodoguinet rivers and found the fast action of the rod handles light-duty smallmouth bass fishing, as well as the accuracy and presentation demands of trout fishing.



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