

2015 NANFA CONVENTION IN OKLAHOMA

Jenny Kruckenberg

Inver Grove Heights, Minnesota

WEDNESDAY, 6/3/15

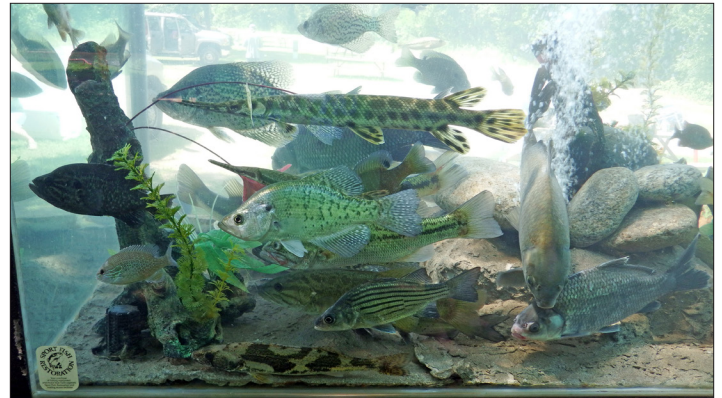
Traveling to Tahlequah, Oklahoma, with the Minnesota contingent—Konrad Schmidt, Bryan Stefansky, Evan Poellinger, and Bill Ellis—we made it to Nevada, Missouri, and are staying at a Super 8 motel tonight. We have around 200 miles to go!! I love driving this big huge Dodge Ram 2500 truck we rented from Enterprise. Takes diesel fuel and I sit way above most other truck drivers. Passing through Missouri, Kon was mentioning that Clear Creek has Plains Killifish (*Fundulus zebrinus*) and Ghost Shiner (*Notropis buchanaani*) in the Marais des Cygnes, near Butler. We saw what was apparently a small Great Plains Rat Snake at the hotel. It looked like a little Boa Constrictor. I don't mind mentioning, I don't like snakes!!!



Jenny and Her Truck. (Photo by Konrad Schmidt)

THURSDAY, 6/4/15

We met at the Eagle Bluff Campground in Tahlequah. This is in the northeast corner of the state. We were supposed to meet in Broken Bow State Park, which is much more south from here, but severe and prolonged flooding complicated things there. Luckily, our host Brandon Brown was able to move it up here at virtually the last minute. We went past some swollen waters. Meeting at noon on the banks of the Illinois River, we greeted one another and watched Richard Snow and Clayton Porter (ODWC-Fisheries Lab) demonstrate how to remove and read otoliths (ear bones) and pharyngeal teeth. Vicky, Brandon's wife, served a delicious hot dog lunch, and then we gathered for an electro-shocking presentation. Many of the fish were already in a big display



Display Tank. (Photo by Josh Blaylock)

tank. My favorites were the juvenile Paddlefish (*Polyodon spathula*). Also on display were Spotted Gar (*Lepisosteus oculatus*), Central (or Largescale) Stoneroller (*Camptostoma anomalum* or *oligolepis*), redhorses (including Shorthead, *Moxostoma macrolepidotum*), Smallmouth Buffalo (*Ictiobus bubalus*), Flathead Catfish (*Pylodictis olivaris*), what I thought were Channel Catfish (*Ictalurus punctatus*), but were actually Blue Catfish (*I. furcatus*), River Carpsucker (*Carpionodes carpio*), Northern Hog Sucker (*Hypentelium nigricans*), various basses, Rock Bass (*Ambloplites rupestris*), Orangespotted Sunfish (*Lepomis humilis*), Longear Sunfish (*L. megalotis*), and White Crappie (*Pomoxis annularis*).

In the small tank were: Red River Pupfish (*Cyprinodon rubrofluviatilis*), Red Shiner (*Cyprinella lutrensis*), and Plains Killifish in with a Snapping Turtle.

While collecting later that afternoon just across the river, we got: stonerollers, Bluntnose Minnow (*Pimephales notatus*), Ozark Minnow (*Notropis nubilis*), Bigeye Shiner (*N.*



Convention Mascot: Sunburst Darter (*Etheostoma mihileze*), Grand Lake trib. (Photo by Fritz Rohde)



Clayton Porter (left, at microscope) and Richard Snow (right, holding bass) from the ODWC Fisheries Lab conducting otolith and pharyngeal teeth demos. (Photo by Fritz Rohde)



NANFA on the Illinois River (from top): on the bank (photo by Casper Cox); seining (photo by Fritz Rohde); and checking the catch. (Photo by Jenny Kruckenberg)



Clayton Porter demonstrating how to count pharyngeal teeth. (Photo by Jenny Kruckenberg)



Dinner at Katfish Kitchen. (Photo by Jenny Kruckenberg)



Josh Johnston's Shovelnose Sturgeon presentation. (Photo by Josh Blaylock)

boops), juvenile redhorse, Northern Hog Sucker, Brook Silverside (*Labidesthes sicculus*), Banded Sculpin (*Cottus caroliniae*), Longear Sunfish, the very common Plateau Darter (*Etheostoma squamosum*), Sunburst Darter (*E. mihileze*), Speckled Darter (*E. stigmaeum*), some tadpoles, and crayfish. Bryan caught two skinks and some saw a Cottonmouth.

We ate dinner at a nearby place called the “Katfish Kitchen.” Dining with me were Ken Glackin (IA), Scott Carlson (IA), Phil Nixon (IL), Fritz Rohde (NC), Phil Farrell (CA), Jim Forshey and family (CA), Bill, Konrad, Evan, and Bryan. At another table were Brian, Julie, and Alivia Zimmerman, and Jared Burson (all from OH).

FRIDAY, 6/5/15

In the morning, after a half-hour drive from the Days Inn, we convened at the Illinois River Village Clubhouse.

Our host, Brandon Brown of the Oklahoma Department of Wildlife Conservation (ODWC), was the first speaker. He introduced two special guests, the Chief and Assistant Chief of the Fisheries Division, welcomed us, and gave an overview of the state and its fish diversity. There are 175 species in the state of Oklahoma and 80 in the Illinois River alone! Oklahoma has a diverse climate, geology, and topography, all of which contribute to (relatively) high species diversity.

Western Oklahoma, however, has low fish diversity and some streams contain only one or two fish species. Some of these streams have salinities exceeding seawater and can reach over 100°F for prolonged periods (102°F, similar to a hot tub, is not uncommon!). Dissolved oxygen levels are often very low in this extreme environment and only the Red River Pupfish and Plains Killifish are able to survive (thrive, actually). The pupfish are the most salt-tolerant species in Oklahoma, but during drought some streams can become too salty even for them to survive. Central Stonerollers are a very common and widespread species in Oklahoma (especially in the Ozark region), but are not to be taken for granted in the Ozarks, as the ODWC considers them a keystone species due to their role as algae grazers. Cardinal Shiners (*Luxilus cardinalis*) are another species common in the region and develop brilliant red and black colors during breeding season. Redspot Chubs (*Nocomis asper*) are also widespread in the southwest Ozarks and devote a tremendous amount of energy towards reproduction, sometimes building nesting mounds over 30 inches high. They are fiercely territorial, protecting these mounds from other Redspot Chubs, but graciously allow species like stonerollers, Cardinal Shiners, and Southern Redbelly Dace (*Chrosomus erythrogaster*) to spawn over them.

Many northeast Oklahoma streams also contain the “red stripe” Longear Sunfish, a unique color variant of Longear displaying a prominent red stripe down their nape, and brilliant red and blue coloration. Specimens have been given for

display at the Tennessee Aquarium and the Mississippi Museum of Natural History aquarium exhibits, and they have even attracted the attention of ichthyologists as far away as Germany. Brandon speculated that the ones found in upland streams might be genetically distinct from those in the Arkansas River, which typically lack the red stripe.

Brandon went on to talk about the Arkansas River and showed video taken in downtown Tulsa of large schools of Smallmouth Buffalo (*Ictiobus bubalus*) and Channel Catfish. Also, and most significant, were several Shovelnose Sturgeon (*Scaphirhynchus platyrhynchus*), a very rare and infrequently encountered fish in Oklahoma. It is surprising that such large numbers of fish exist in what is thought of as a “fishless, urban river” and just goes to show how much is really going on in our waters and how little we really know about it—even when it’s in our own back yard.

The second speaker, Jason Schooley, also of the ODWC, talked about the Oklahoma Paddlefish Research and caviar program. He started out by explaining that often the public and even publications such as *Outdoor Life* have a double standard for game fish such as trout versus non-game or so-called roughfish. He explained there’s a “social status” assigned to our fishes, a “value” that ranges from the game fish having the highest value because they are catchable by hook and line, and pupfish, which are vulnerable to extinction. Non-game fish are often perceived as having little to no value. In part, it’s due to the methods by which they are caught, such as snagging or spearing.

The people working at the Paddlefish Research Center wanted to change that. Value is not just about money, so they want to change the perception of these fish from having no value to something more spiritually and ecologically valuable, not to mention getting caviar lovers to try the delicious roe. In the process, they collect data, clean the fish, process the caviar, and sales benefit the entire non-game program for the state. It’s a win-win from several vantage points: for anglers, researchers, law enforcement (because anglers will turn in poachers), and for conservation in the state.*

The third speaker was Josh Johnston of the ODWC, who spoke on the Shovelnose Sturgeon project. He said there was a lack of historical data (from old timers) on the Arkansas River. In December, near Tulsa, the water is around 34°F degrees and is very clear and very dynamic, running from 70 cfs to 1500 cfs. Between floods, drought, and hydropower dams, it was very hard to catch any sturgeon, but they eventually used a trammel net to corral them. They tagged 29 individuals and used a hydrophone to track them. Research is on-going.

*For more on the program, see Brandon Brown’s article, “Oklahoma’s Paddlefish Research and Caviar Program,” in *AC* Vol. 39 No. 4, Fall 2014.

Clayton Porter of the ODWC spoke about Kiamichi River Diversity and Stream work. He talked about longitudinal gradients, species additions, and species zonation. This river varies greatly, depending on where you are on it. If one is upstream, the species richness is great whereas species density is low towards the middle of the river, but then downstream populations increase for only certain species.

He and his students used seines, electrofishing, and gill nets. They caught 13 species almost everywhere, 9 species in scattered numbers, and 7 species mainly downstream. Ten species were considered rare and were also found mainly downstream. He noted that species richness, diversity, zonation, and density were dependent on the time of the year.

The next talk, after a welcome coffee break, was by Richard Snow of the ODWC, who spoke about age, growth, and spawning of Alligator Gar (*Atractosteus spatula*). They use otoliths to determine the age of the gar. There are three parts to an otolith: the sagittae, laipili, and asteristus. The sagittae and laipili are more accurate for determining age, while the asteristus isn't. He showed how they remove, dry, mount and sand down otoliths to look at the growth rings, which start when the gar is only 5–8 days old.

Cheryl Cheedle of the Oklahoma Conservation Commission told us about her program, Blue Thumb—Citizen Focus on Streams. The goal is provide education on water quality and get volunteers involved with stream quality monitoring and groundwater screening. She stressed that adults and children need to be actively involved and the best way to do that is to get them in the field, get their hands wet, and give them a net. She likes to foster creativity and give her time, especially to the kids. I really liked her presentation because you could sense her passion for education!

Tim Patton of Southeastern Oklahoma State University next spoke about the Pecos River, which flows from Colorado through New Mexico to Texas. The river really changes along the route. It has a fast flow in the upper part, with high salinity, but a low flow down in Texas at the confluence with the Rio Grande. Creeks empty into it along the way, so

there's much less salinity in the last 50–60 miles. Tim talked about looking for the Rio Grande Silvery Minnow (*Hybognathus amarus*), an indicator species, in the remote territory of the lower canyon of the Rio Grande, where they sampled in December of 2012 and October of 2013. They encountered whitewater conditions, which was a great opportunity to learn to work together to get downstream safely. They also saw beautiful petroglyphs on private land accessible only from the river. During their survey they found good numbers of the Proserpine Shiner (*Cyprinella proserpina*) and were pleased to collect Gray Redhorse (*Moxostoma congestum*), which was uncommon in their samples. Tim speculates that many of the declining minnow species have semi-buoyant, semi-pelagic eggs.

Lunch was pizza in the nearby town of Little Kansas.

The next presentation was from Chris McAllister and T. J. Fayton of Eastern Oklahoma State College on helminth parasites of Oklahoma fishes. They have recently discovered 30–40 new species of parasites. Not much is known about parasites in non-game fishes. They have been studying trematodes in *Fundulus* species: *F. notatus*, *F. olivaceus*, and *F. catenatus*. They are also studying flukes and the relationship between a snail and a cyprinid (the first host), which then gets transferred to Largemouth (*Micropterus salmoides*) or Smallmouth Bass (*M. dolomieu*) (the definitive hosts). They have also discovered several new species of *Plagioporus*.

Next speaker was Curtis Tackett of the ODWC who spoke about Aquatic Nuisance Species, all of which share several key characteristics: rapid growth, a broad tolerance of conditions, the ability to disperse widely, and rapid reproduction. Oklahoma has Zebra Mussels, Bighead and Silver Carp (*Hypophthalmichthys nobilis* and *H. moltrix*), White Perch (*Morone americana*), Hydrilla, *Didymo* (commonly called rock snot), and Golden Algae. They are all about education and outreach, monitoring, research, inter-agency cooperation, eradication, and decontamination. Oklahoma has 10 federally-endangered aquatic creatures within the state. Five are fish, including the Leopard Darter



Arkansas Darter (*Etheostoma cragini*), Northeast Oklahoma. (Photo by Fritz Rohde)



The Banquet. (Photo by Casper Cox)

(*Percina pantherina*) and five are mussels. Their goal is to continue to maintain their critical habitat. Field surveys have been occurring from 1998–2013. One has been on the Arkansas River Shiner (*Notropis girardi*) in Oklahoma, Texas, and New Mexico. Dewatering is an issue (taking too much water for agriculture). Curtis also spoke of the National Fish Hatchery and breeding program there. Oklahoma also has two widely-separated populations of Arkansas Darter (*Etheostoma cragini*). One occurs in small, spring runs in the Ozarks and another has disjunct populations in western Oklahoma, in and along the Cimarron River. Arkansas Darters are considered “rare” in Oklahoma and their current status and distribution are being studied.

After a break, Brian Zimmerman of Ohio State University gave two talks. The first was on breeding fish in his outdoor ponds. He started his ponds in 2003 and added a stream in 2014. When he started, his goal was to raise Grass Pickerel (*Esox vermiculatus*) and Longear Sunfish for the aquarium trade. The stream has three drops and pumps move about 10,000 gph. Brian discussed the advantages and disadvantages of raising fish outside. One thing he likes is that the fry eat whatever they want. He has had success raising 60 species! He does have to thin out the numbers of fry so they don’t get stunted. The fish and fry get eaten by raccoons and birds. He has made some interesting observations such as that his Redear Sunfish (*Lepomis microlophus*) eat snails, which sometimes are a host to parasites. He is hoping to raise good numbers of Saffron Darters (*Etheostoma flavum*) in his stream.

Brian’s second talk was on updating *The Fishes of Ohio*. He spoke about the Gilt Darter (*Percina evides*), River Darter (*P. shumardi*), and Northern Studfish (*Fundulus catenatus*) and how better distributional data have been gathered since 1980. Eight fishes are endangered, but others have expanding ranges.

Brandon Brown was back and he gave an overview of fishing for the state’s suckers, often called gigging. The species they are after are: Golden Redhorse (*Moxostoma erythro-*

rum), Black Redhorse (*M. duquesnei*), Shorthead Redhorse (aka the “pea lip redhorse”), River Redhorse *M. carinatum*), Spotted Sucker (*Minytrema melanops*), Northern Hog Sucker (which has excellent camouflage when one looks down into the water for it), and the (extremely rare in Oklahoma) White Sucker (*Catostomus commersonii*). Every year they have a gigging contest. Thirty-eight two-man teams fish for four hours. About half of what they gig are Common Carp (*Cyprinus carpio*) and White Bass (*Morone chrysops*). The other half is Spotted Suckers. The redhorses and Northern Hog Suckers are the most highly prized and are assigned more points than the carp. Some people worry about over harvesting, but this contest has been going on for many years. The Ozarks cover a larger territory in Missouri and Arkansas with a smaller portion in Oklahoma. Many giggers are from the Cherokee Nation and Oklahoma allows gigging for two more months than the other two states.

The final presentation was by James Frank and Josh Porter of the East Bay Regional Park in California. Their talk was about their Mobile Fish Outreach Program, which began in 2009 in the San Francisco Bay area. In 2010, they added tanks to an area, which was devoted to rearing mosquitofish. Josh knew about fish, husbandry, and also about systems needed to run multiple tanks, but what they really wanted to do was take the show on the road to showcase the diversity of native and non-native fish. The goal was to educate both adults and children. They devised a Fish Friends Club and invited all of us to take the pledge, which we did!

After the talks we had our usual rousing auction led by the master, Phil Nixon. I learned later that he squeezed over \$2,000 from us. The “banquet” followed, with fried catfish, fried Paddlefish, baked potatoes, baked beans, cole slaw, hush puppies, banana pudding, and ice cream. The smell was so enticing that a local young boy showed up and got in line. The meal was followed by President Fritz regaling the group with tales of his recent trip to the Peruvian Amazon with Dustin Smith.



(Left to right): Brian Zimmerman’s talk; taking the Pledge, led by James Frank; auctioneer Phil Nixon. (Photos by Josh Blaylock)



Trip leaders Brooks Trammel and Brandon Brown. (Photo by Fritz Rohde)



Slender Madtom (*Noturus exilis*), Beaty Creek, Oklahoma. (Photo by Isaac Szabo)



Carmine Shiner (*Notropis percobromus*), Honey Creek, Oklahoma (Photo by Fritz Rohde)

SATURDAY, 6/6/15

Field trips were led by Brooks Trammel (to the South) and Brandon Brown (to the North).

My group went south. Our first stop was Sallisaw Creek at Shagbark. We collected Central Stoneroller, Redspot Chub (which is kind of like our Hornyhead Chub, *N. biguttatus*), Bigeye Shiner, Carmine Shiner (*Lythrurus percobromus*), Cardinal Shiner (which had a blue nose and some red), Bluntnose Minnow, Creek Chub (*Semotilus atromaculatus*), Slender Madtom (*Noturus exilis*), Brook Silverside, Blackstripe Topminnow (*Fundulus notatus*), Western mosquitofish (*Gambusia affinis*), Rock Bass, Longear Sunfish, Redear Sunfish, Largemouth Bass, Greenside Darter (*Etheostoma blennioides*), Fantail Darter (*E. flabellare*), Redfin Darter (*E. whipplei*), and Plains Darter (*Etheostoma pulchellum*). On the trip were Jahna Hill (OK), Jim Leach (OK), Candice Miller (OK), Julie, Alivia, and Brian Zimmerman, Phil Nixon, Scott Carlson, Matt Delavega (OH), Ken Glackin and Josh Blaylock (KY), and Jared Burson. Also Kon, Bryan, Evan, and Bill.

The second location was Little Lee Creek. We collected stoneroller, Steelcolor Shiner (*Cyprinella whipplei*), Cardinal Shiner, Ozark Minnow, Bluntnose Minnow, Creek Chub-sucker (*Erimyzon oblongus*), Northern Hog Sucker, Blackstripe Topminnow, Western Mosquitofish, Redear Sunfish, Longear Sunfish, Greenside Darter, Fantail Darter, Redfin Darter, Plains Darter, Banded Darter (*Etheostoma zonale*), Ozark Logperch (*Percina fulvitaenia*) (a lot of orange on the dorsal), and Channel Darter (*P. copelandi*).



Ozark Logperch (*Percina fluviatonia*), Saline Creek, Oklahoma. (Photo by Michael Wolfe)

Our third stop was Little Pea Creek where we collected Central Stoneroller, Redspot Chub, Cardinal Shiner, Southern Redbelly Dace, Creek Chub, Western Mosquitofish, Banded Sculpin, Green Sunfish (*Lepomis cyanellus*), Smallmouth Bass, Sunburst Darter, and Plains Darter. There were also lots of crayfish and I found a very nice fossil.

SUNDAY, 6/7/15

This time we went north with Brandon. Along for the ride were the Zimmermans, the Minnesota Crew, Josh and Lauren Porter (CA), James Frank (CA), Jahna Hill, and Vicky. At Blackbird Creek we collected stonerollers, Southern Redbelly Dace, Creek Chub, Cardinal Shiner, Fantail, Plateau and Sunburst darters, two huge tadpoles, an Oklahoma salamander, and a Northern Water Snake.

Our second site was the confluence of Saline and Little Saline creeks. We found Ozark Minnow, Southern Redbelly Dace, Slender Madtom, Neosho Smallmouth Bass, lots of Least Darters (*Etheostoma microperca*), Plateau Darter, and Sunburst Darter. I dropped my camera after trying for a good picture of a beautiful crayfish. I caught it in my dip net and the memory card was fine, but the camera (which has served me well for many years) was toast.

Next up was Spavinaw Creek at the Laverne Hole. We found stonerollers, Ozark Minnow, Cardinal Shiners, Creek Chub, young-of-the-year White Sucker (a great find, thanks to Konrad!), Northern Studfish, Rock Bass, Bluegill (*Lepomis macrochirus*), Green Sunfish, Largemouth Bass, Neo-



Plateau Darter (*Etheostoma squamosum*). Tahlequah Creek, Oklahoma (Photo by Michael Wolfe)



Confluence of Saline and Little Saline creeks (Photo by Fritz Rohde)



Cardinal Shiner (*Luxilus cardinalis*), Saline Creek, Oklahoma. (Photo by Isaac Szabo)



Least Darter (*Etheostoma microperca*), Saline Creek, Oklahoma. (Photo by Fritz Rohde)

sho Smallmouth Bass, Plateau Darter, Orangespotted Sunfish, a really cool horse leech (with young), and little black tadpoles. Five-year-old Alivia Zimmerman caught many shiners while snorkeling with a dip net, and Evan observed spawning Orangethroat Darters.

Our fourth location was Spring River, where we found the greatest abundance of Bluntnose Shiner (*Cyprinella camura*), a species of special concern in Oklahoma, that Brandon had ever seen. It looks to me like a Spottfin Shiner (*C. spiloptera*) on steroids, with the line on the dorsal and deep body, but much bigger. We also caught Red Shiner, Gravel Chub (*Erimystax x-punctatus*), Ghost Shiner, Bluntnose Minnow, Brook Silverside, Blackstripe Topminnow, Bluegill, Green Sunfish, Orangespotted Sunfish, Longear Sunfish, Redear Sunfish, Spotted Bass (*Micropterus punctatus*), and White Crappie. Bryan caught a Goldfish (*Carassius auratus*).

Brandon asked us if we wanted to go to one more location. We were a bit tired at that point, but if it's only 15 minutes away...and almost in Kansas... Sure! Brandon calls Five Mile Creek a snorkeling paradise: "If you have masks, dig 'em out and use 'em!"

I had a mask and snorkel. I was timid, but once I entered the creek, oh my gosh! It was like entering the Lost World or some sort of sacred garden. The current moved me along, but not so fast that I wasn't completely captivated, enthralled by my surroundings. The fish seemed to have no fear of me—I was just another aquatic being.

I saw Largemouth and Smallmouth Bass, as well as Spotted and Rock Bass. I saw Bluegill, Green, and Longear Sunfish. I floated over some Black and Golden Redhorse and spied a Northern Hog Sucker. Putting my feet down and surfacing, I turned towards Evan, who was farther downstream from me, looking at him through my mask with a "Can you believe this?" look on my face. I saw a beautiful logperch, a Plateau, and a Sunburst Darter, some Ozark Minnows, Carmine and Cardinal Shiners just being playful, and a group of Bluntnose Shiner and studfish, going against the current, hanging out behind some rocks. Evan took videos, but for some reason my lack of camera didn't bother me. I suddenly understood the Casper Snorkel Camp! I took up my tiny aquarium net and scooped up a Longear Sunfish, the most beautiful red color I've ever seen, right in front of me!

Still on some sort of euphoric high, we said our goodbyes to the group and drove away from Five Mile Creek. My main goal was to find some food and a place where I could change out of my wet clothes. But in my haste, a trooper pulled me over as I entered some small town, just before the highway. The trooper was totally serious, but the guys in the truck were all laughing. I tried to remain cool as a cucumber, because I literally was COLD and needed to change out of my wet t-shirt! I'm sure each of the guys has his own version of what exactly happened, but needless to say, I did NOT receive a ticket for speeding. I got a warning. Later after find-



Bluntnose Shiner (*Cyprinella camura*), male with deformed dorsal fin, Five-Mile Creek, OK. (Photo by Fritz Rohde)



Urban Snorkeler Casper Cox. (Photos by Michael Wolfe)



Bulldozing Stoneroller. (Photo by Casper Cox)

ing the Interstate, we all had a warm dinner and found a room for the evening. Nuff said.

Editor's Note: I was curious as to how Jenny avoided getting a ticket, so asked around. The guys weren't clear; it may have involved her saying she had to use the bathroom or being wet and cold. I contacted the trooper, who stated that Ms. Kruckenberg claimed she was late for a wet t-shirt contest. Once he stopped laughing, he felt compassion.

Two other groups, the Snorkelers and the Micro-fishers, went off on their own trips. Here are their stories.

SNORKELERS

Reported by Casper Cox

I was unsure of the response to my invitation to Michael and Isaac to snorkel downtown Tahlequah early Friday morning. Though I am generally eager to snorkel clear water just about anywhere, I was worried that they would not share the same enthusiasm in an odd, urban setting. But it is here, to me, the epicenter of the NANFA OK gathering that I wanted to immerse myself and the bonus was the historical significance of the site... the stream and springs the Cherokee gathered at after their terrible walk of forced relocation.

Standing on the road we could see very few fish but when I laid in the water, vibrant life erupted. Hundreds of Southern Redbelly Dace swarming among the pit-digging mighty Stonerollers.

After the gathering along the Illinois River, Michael, Isaac, Cyan, and I visited Spring Creek about 30 minutes away in the late afternoon. The water was pretty and inviting. We quickly got in and began to work ourselves upstream, pulling ourselves along the right edge close to the stream bank. We found a few steep pyramidal mounds, not quite active but the locals were still cruising about waiting for stimuli by man or chub.

Working further upstream I came to a chute and began to catch glimpses of faint coloring on the shiners. Surely something special was ahead and I expected to see a series of mounds but I found nary a one. However, plenty of chubs, shiners, hog suckers, and other species appeared to be resting in the shadows of the log jam behind me. Confused and disappointed I rose up out of the water to orient myself for a downstream speed float, but twisting in the current I stumbled and fell catching myself on my hands as my face plunged into a swirl of gravel and whirling color. Color flashed to the right and left as the stream's flow sheared off a steep gravel bar that provided prime spawning ground, creating a wall of living color. Cardinals, Redbelly Dace, Stonerollers, Ozark Minnows, Carmine Shiners, and hungry darters... all told, hundreds gathered in the day's last light.

On Saturday morning we headed to the confluence of Saline and Little Saline creeks with a team of fellow snorkelers.

I had hoped for a bareskin snorkel but the morning water was very cold demanding a return to the van for my wetsuit. It was an inviting site, promising a long snorkel session and I wanted to be comfortable and shiver free. Captain Wolfe deposited \$20 in the lockbox for our four vehicles. Lots of Ozark Logperch working the gravel, their fins sporting the red margin I see back home with the Mobile Loggies (*Percina kathae*). These Okie Logperch's side markings are more fuzzy, blurred, and indistinct than the sharp markings I see on the three species common in my home range.

We finished the day at Beaty Creek. Locals were gathered at the creek crossing, so after a quick look and grope through the flowing pool, we headed upstream to clearer water. James, Cyan, and Seth continued upstream, mostly wading, playing, and skipping stones, but Isaac, Michael, and Josh eyed a watercressed, spring-fed side channel full of studfish, mohawked Longears, Bluegills, and bass. They pushed in tight and I walked to the far end of the channel and flushed a school of 20 or so studfish to the trio blocking outflow to the creek. Several high males were in the pod, their eyebrows glowing in the sunlight (see Isaac's photo on the back cover for the "eyebrows"). As the trio of snorkelers moved ever closer, the studfish would get nervous and set themselves to flee. I would raise my hands, heron-like, from the high gravel berm and they would reconsider their flight. The guys were able to take some stunning video and images of these beautiful fish.

All in all, a good day.

MICROFISHERS

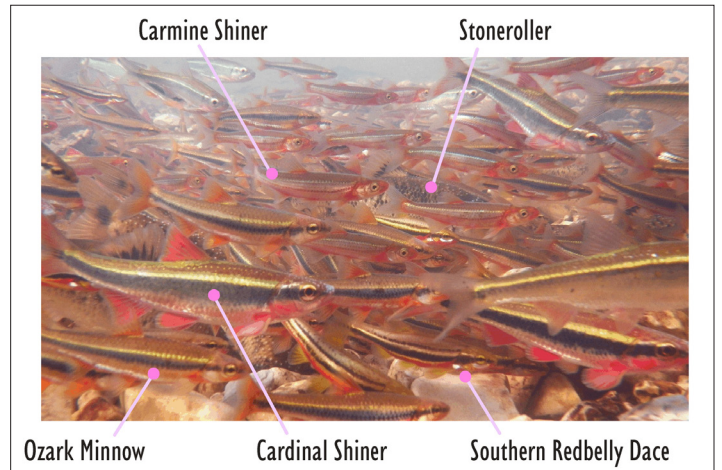
Reported by Ben Cantrell

With the first half of our trip complete, Pat Kerwin and I crossed the border into Oklahoma. The land of flooded waters and NANFA conventions! I'll admit, I'm a better trip planner than a trip improviser, so it was a struggle to find last-minute spots for us to check out since the southern half of the state was still affected by flooding. I figured we'd head to Tahlequah and figure things out from there. Our first stop was a park in Park Hill with a tributary of the Barren Fork, Park Hill Branch, passing through it. We soon found the local Orangethroat Darter split, the Plateau Darter. We also found a few Fantails hanging out under larger rocks.

We had one more spot to try, a road crossing on Spring Creek. Spring Creek was an awesome spot. We had plenty of space to park our cars, and the road crossing made it easy to access the creek. Oklahoma, if you're paying attention, protect this creek because it's a real gem! My first catch was a big Largescale Stoneroller with full body tubercles. We could see schools of them hugging the bottom towards the back of the pools. A large Redspot Chub took my bait, but I couldn't keep it hooked with the tiny Tanago hook I was using. I re-



Redspot Chub (*Nocomis asper*) mounds. (Photo by Casper Cox)



Wall of Color. (Photo by Casper Cox)



Team Snorkel: Seth DeLaVega, Cyan Cox, Josh and Lauren Porter, James Frank, Michael Wolfe, and Isaac Szabo. (Photo by Casper Cox)



Ozark Logperch (*Percina fulvitaenia*) working the gravel. (Photo by Casper Cox)



Plateau Darter (*Etheostoma squamosum*). (Photo by Ben Cantrell)



Spring Creek. (Photo by Ben Cantrell)



Pat Kerwin and his Longnose Gar (*Lepisosteus osseus*). (Photo by Ben Cantrell)



Wedgespot Shiner (*Notropis greenei*). (Photo by Ben Cantrell)

placed it with a #20 hook, put on a small chunk of redworm, and cast into the same pool. Right away I hooked another chub! It didn't have any tubercles, but it was still a good-looking fish. I switched back to the Tanago hook and spent the rest of my time targeting shiners and darters. I caught a few Plains Darters as well as quite a few Cardinal Shiners. Didn't see much red in the Cardinal Shiners, but I heard from some of the NANFA folks who snorkeled the spot the next day that there were a few colorful ones mixed in the schools.

For our second day in Tahlequah, we decided to stay in town, fish a couple spots, and then meet up with the rest of the NANFA folks in the afternoon. In the morning Pat and I headed down to a lower stretch of Tahlequah Creek. Right away we noticed dozens of Longnose Gar spawning. The water was crystal clear. Pat and I tied on rope lures to target some of the gar that weren't spawning, but by the time we started fishing for them the water had started to become cloudy. What was going on? Pat got a hit on his rope lure. He walked with the fish downstream for a bit to let the rope fibers tangle in its teeth and then tightened up his line. All he had to do at that point was walk the fish back to shore and land it. Pat was pretty happy, as this was the longest fish of the trip! By now the water was completely opaque. Something was going on. We could see a white-colored film on the surface of the water. I couldn't get any hits on my rope lure, so we packed up and left. As we drove away from the

spot, we realized that the J. M. Hicks Wastewater Treatment Facility was directly upstream of the spot we were fishing. Gross!

On our third and final day in Oklahoma, Pat and I joined forces with Miciah McNeilus and Levi Cain to fish some spots an hour south of Tahlequah. Our first stop was a tributary of Sallisaw Creek. The combination of crystal-clear water and rock walls made this a very scenic spot. We spent a little time in the main Sallisaw Creek, but soon moved east to Little Lee Creek near the Arkansas border. This spot had great access and wide variety of habitats. My first catch was a shiner that I've been looking for each time I've visited the Ozarks, a Wedgespot Shiner (*Noropis greenei*). It was easy to tell apart from the more common bigeye shiner—it had a more silvery body and a clear triangle-shaped wedge at the base of its tail. In the deeper section of the creek above the riffle we found Steelcolor Shiners. They are very fast swimmers, and in order to catch them you have to call them over to you. What I would do is smack my split shot against the water several times. When the Steelcolor Shiners would race over to investigate, I'd put my bait in front of the biggest male I saw. We found logperch sitting on the bottom in a shallow smooth section of the creek above the riffle. Once you got your bait past the shiners, they were pretty easy to catch. The orange in the dorsal fin suggests that they're Ozark Logperch, but from what I hear the taxonomy of the Midwest logperch is pretty messy.



NANFA Microfishers (left to right): Mike Berg, Miciah Mc-Nelius, Mike Channing, Greenwood Champ, Levi Cain, Josh Leisen, Joy Leisen, Ben Cantrell, and Patrick Kerwin (Photo by Josh Leisen)



Josh Leisen with his first Ozark Bass (*Ambloplites constellatus*). (Photo by Joy Leisen)

Three new lifers were much better than I was expecting! In the late afternoon we packed up our vehicles and drove back to Tahlequah to get ready for the NANFA banquet. At the banquet we assembled a pretty large crew of species anglers. It must have been the largest group of people who can catch darters on hook and line together in one place at one time!

A NOTE FROM JOSH LEISEN:

Joy and I fished our way to the 2015 NANFA convention, chasing new species along our route from northern Michigan to Tahlequah. We camped on the Buffalo River and fished hard for Ozark Bass (*Ambloplites constellatus*), weeding through Longear Sunfish and Smallmouth Bass before we found them.

On the morning of the NANFA convention we woke early and drove to Tahlequah. Thanks again to Ben, Levi, and Pat for tipping us off on a spot for Sunburst Darter! We also stopped to fish a gravelly run in the Illinois River and caught a mix of silvery minnows that turned out to be several new species: Gravel Chub, Cardinal Shiner, and Wedgespot Shiner. Then it was on to the convention! We

enjoyed the food, presentations, auction items, and, most of all, geeking out with other native fish enthusiasts.

On the long haul back to Michigan we fished two final spots in southeastern Missouri. It was an amazing trip—for all the new species, the company, and the beautiful scenery. In just eight days of lifelist road-tripping, I added 26 new species to my lifelist, but was eclipsed by Joy, who caught 30 new species.

IT'S A FAMILY AFFAIR

While compiling this report, the editors noted the high percentage (almost 50%) of attendees who were related to each other. This included fathers and their children: Fritz Rohde (NC) and Bill Ellis (MN), Konrad Schmidt and Bryan Stefansky (MN), Casper and Cyan Cox (TN), and Matt and Seth DeLaVega (OH); entire families: Jim Forshey and family (CA) and Brian Zimmerman and family (OH); husbands and wives: Brandon and Vicky Brown (OK), Josh and Joy Leisen (MI), Josh and Lauren Porter (CA), and Amy Wales and Evan Crews (TN); and cousins: Zach Fippinger and Bryce Powers (TX). We find that impressive!



Darter and Madtom Fishing in Northern Arkansas (left to right): Joy Leisen, Ryan Crutchfield, Levi Cain, and Ben Cantrell. (Photo by Josh Leisen)





FRONT COVER: Southern Redbelly Dace (*Chrosomus erythrogaster*), Tahlequah Creek, OK. (Photo by Isaac Szabo)



BACK COVER: Northern Studfish (*Fundulus catenatus*), Beaty Creek, OK. (Photo by Isaac Szabo)