

Tucker River Fellows Class of 2027a Summer Week 5 - 9 June 2023

Day 1 (Monday 5 June 2023)

by Emma Virginia Birnbaum

On the first day of our trip, we started by doing a mad-lib-style activity to get to know each other better. We also did an activity to figure out how comfortable we all were with different aspects of the Tucker River Fellows program. For example, we had to place a rock, bottle cap, or leaf to indicate our comfort level with a statement like, "I like solving 'nature' mysteries". Then, we got on a bus and headed to the Suck Creek boat ramp by the Tennessee River to eat lunch and launch our kayaks. We were met there by our



guides from Outdoor Chattanooga (Terri and Kierston). After kayaking for a while, we came across a rope swing that was hanging from a tree and saw an opportunity for a much-needed break. While on the river, we saw various plants and animals that are important to the ecosystem. We learned about the geography of the Tennessee River and how it's impacted by dams.



After we got to the cabin we were staying in, we played two rounds of Advanced Uno and then participated in team-building activities that Outdoor Chattanooga led that included finding the tree and the floor is lava.. To end our day of fun, we went on a night hike where we could listen to the sounds of the

woods. None of us fell and got injured so the hike was a success. We heard many frogs and discussed the connection between land and the river. Amphibians can often be a warning sign of an unhealthy ecosystem because they take in their environment through their skin and spend time on land and in water. We had so much fun and loved getting to know each other better!



Day 2 (Tuesday 6 June 2023)
by Meri-Madeline Sanders

On the second day of our trip, we woke up bright and early at Pot Point Cabin even though we were exhausted from the night's adventures. With *Outdoor Chattanooga*, we ate a healthy breakfast prepared by Outdoor Chattanooga staff Terri and Kierston with fruits and veggies to fuel our trip by



kayak. After packing our lunches with tasty sandwiches and many snacks, we went off to the river.

Paddling down the river, we had a conversation with a fisherman, and he told us about his college project related to microplastics. We noticed many different kinds of aquatic plants, which were tricky to maneuver with our kayaks.

We also came across birds such as a *Belted Kingfisher*, a few *Great Blue Herons*, and a *Bald Eagle*. Dr. Noel investigated an active *Osprey* nest which was awesome! This multitude of species shows the *biodiversity* of Tennessee's wildlife. We also got a nice group

shot with the Tennessee wall in the background while we navigated through the Tennessee River Gorge.

When we got hot from the hours on the water, we splashed around and had fun in the water while admiring the beautiful landscape.



After our journey in the water and stopping for lunch, we watched two short films about the *Hidden Rivers of Southern Appalachia*, and a short movie about *Brook Trout* which is the only

native trout species in TN. We learned that *silt* is a big problem for healthy waterways, and about some threatened species that we need to protect which set us up for the rest of the week.

Day 3 (Wednesday 7 June 2023)

by Zora Hammond

On the second day we started uploading everything we had learned and curated online. We left for the Moccasin Bend Environmental Campus mid morning and Mr. Arick joined us. When we arrived we met our guide, and put on safety gear. Our guide, Chris, showed us some items they had found over the years that people had flushed and that they had found while treating the water. There were rings and keys and even a radio!

Then Chris brought us into the lab where they took tests of the water and made sure there was nothing wrong in the water. We walked to the building where the 60 million gallons of sewage were piped in from all over Chattanooga and the surrounding areas.

Then we got to see the conveyor belt that took all the trash out of the sewage. We learned that flushable wipes can in fact be flushed and will go through your toilet, but they don't dissolve in the water so they end up being sorted out at the facility and just thrown in the landfill anyway. We got a tour of how finer sediment, solids, and oils were taken out of the water. We saw the giant vats of water that

helped slow down the water and we walked past where microorganisms (also known as bugs) were in the water to eat toxins and other chemicals. In fact, they are a critical step in helping



treat/clean the wastewater. We stopped and talked about how the solids from the sewage were taken and treated and the product, sludge, was shipped to farms as fertilizer. We also learned that many people blame the Moccasin Bend Environmental Campus for a bad smell that one can sometimes smell but it is not actually the sewage, it is the paper plant next to it.

Then we drove over to the bank of the river and we saw where the clean water that was once sewage was slowly diffused into the river. We learned that the water went through a pipe into the river with holes that faced up so that it wouldn't disturb the silt that could smother habitats. There was a guy fishing when we got there and he caught a healthy fish just downstream of the discharge point.



We then left and went to the Riverwalk along South Chickamauga Creek and ate lunch. We walked to the mouth of South Chickamauga where it meets the Tennessee river. On the way back we stopped on a playground and spun on this one piece of equipment until we were all nauseous.

To wrap up the day we went back to GPS and worked on a 3d model of the Chattanooga area. We traced and painted the Tennessee river, a relaxing way to wrap up the day.



Day 4 (Thursday 8 June 2023)
by Roee Chapin

On our fourth day we continued working on our shared learning document and left for the Tennessee Aquarium Conservation Institute (TNACI). When we arrived we met our tour guide, Helaina, and started to walk around learning about how TNACI helps our watershed. After a



basic overview of the center and Helaina's background, we headed to the propagation room where they can do a series of tests on different types of fish to make sure the Tennessee river stays healthy. One thing they do that's extremely important is helping to reintroduce lake sturgeon into the wild because they are an endangered species.



Next we got back on the bus to go to South Chickamauga Creek. There we learned how to seine fish from three additional guides, Alonso, Isabelle, and Adam. Collectively, Helaina and the other three guides helped teach us about a variety of habitats and showed us a diversity of fish in the creek. This was a really unique experience because it's not like traditional fishing. There is a net attached to two sticks (one on each end). They explained the different types of ways water can flow through a stream. A run is fast moving water where you have

to run with the current really fast. A ripple is very shallow water where the water runs just over shallow rocks. With this type of water, you and a partner hold the seine while another person kicks the water to scare the fish into the net. A pool is the slow moving part of the stream that can often be deeper than the rest. With this type, you and a partner hold the seine and run the net all the way up to the bank.

After trying all of these strategies, we talked about why we caught different types of fish in the different areas of the stream. Oftentimes in shallower water we caught minnows or other small fish. In deep, fast moving water we caught darters and other fast fish. In pools, we caught sunfish and other similar

species. When we started to finish up we talked about our takeaways. Some really important things we learned were that we have a very diverse amount of fish in our backyard! We learned that even though we can't see all the fish from the surface, there were hundreds of fish living just out of sight. A fun fact we learned was that a fish we did catch, the snail darter, was just recently removed from the Endangered Species List due to the work of many partners, including TNACI, and a fish we got to handle since it is no longer at risk of extinction. After that we loaded back on the bus and departed back home. We took hilarious 0.5 and panoramic photos, trying to get the silliest angle. We didn't stop laughing the entire time and through this day we had so

much fun and grew even closer.



Day 5 (Friday 9 June 2023)

by Lily Ownby



On our fifth and final day we headed out to Conasauga River to go snorkeling. All week anticipation had built up to this moment and we were all excited to go swim and see the fish in their natural habitat. The bus ride was very bumpy and had lots of twists and turns but it was worth it! With no service and almost sick from the bumpy ride we arrived at the river ready to snorkel. The guide gave a brief explanation of some species we might see and how to identify them. We were also warned to not throw rocks and watch out for snakes.



The wet suits were difficult to get on and made us laugh seeing each other in our big goggles and snorkel gear. The weather was oddly cool so the water was very cold! When I went under the water it was an amazing sight to see all the fish and organisms swimming around. It was cool to finally understand how many different species are living in our own backyard and how bio diverse our river is. We took a break for lunch and went out again later. Roe and I caught large tadpoles and named them for fun. Meri Madeline and the guide were looking at the different types of fish and there was even a snake! Overall, this week has been such a unique and wonderful experience that we all enjoyed. It makes us excited to start River Fellows in the school year. We all grew closer and can't wait for more adventures!

