Meandering along the Myakka River – a variety of river habitat within Triangle Ranch

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As part of the ABS Bioblitz held on April 28, 2023, I had the unique opportunity to spend the day kayaking and walking along most of the Myakka river within Triangle Ranch. I"ve been walking and travelling on rivers since childhood, and few other pursuits offer me greater pleasure.

As a large number of other biologists focused on recording fish and amphibian species, I decided to instead explore the river to note the different habitats present and connect that with the surrounding land use and elevation. The river flows into Myakka River State Park, and thus maintaining a healthy and diverse river within the Ranch would be a great opportunity for conservation of this free flowing river. I was very kindly offered the use of the Ranch kayaks, which then allowed other interested folks to join me (and keep me safe from alligators – which potentially exist in every freshwater and brackish waterbody in Florida).

10 AM. Starting off downriver from the camping area, the river meandered through oak hammocks that shaded the river in many places, keeping the water temperature cool. Swarms of whirligig beetles skimmed around on the surface in every shaded spot. At channel bends, deep pools existed on the scoured outer bend, while beaches were formed on the opposite bank – the universal fluvial geomorphologic pattern. The shallow depths had schools of small fish – various gambusias, minnows and shiners, with the occasional flagfish with iridescent tails. Vegetation growing adjacent to the beaches provided habitat for myriad aquatic insects (diving beetles, pond skaters, dragon and damselflies). Mid-channel we saw centrarchids – various sunfishes and bass. The deep pools had groups of spotted and Florida gars – I counted 18-20 individuals between 1-2.5 ' in several groups. Cichlids (blue tilapias, mayan cichlids, possibly others) and centrarchids built nests along the straight courses of the river, between bends – craters of sand cleared out, and presided upon by a male, who often chased off other males. Cichlids being bigger here (10" – 12"), made nests 2-3' in diameter, possibly competing with native centrarchids for real estate on river bottoms. Bass nests were smaller, like 1.5' diameter.

Kayaking on a hot sunny day, it would be a chilled-out thrill to arrive at a shaded part of the river, the live oak canopy sheltering the water, keeping it cool, with small breezes set off possibly by the difference in cooling between land and water. Riparian vegetation not only keeps the water temperature low, thereby enabling higher dissolved oxygen for the fishes to breathe, there are also leaves that drop into the stream, a source of nutrients for the various aquatic communities (macroinvertebrates, tadpoles and grazing fishes). Their roots bind the bank (3-4' high), keeping that stable, decreasing sediment erosion and wasting into the river. A large part of the river course in this ranch is forested, a very fortunate situation responsible for maintaining water quality and habitat diversity. Fallen trees in the river constituted additional habitat for fish, with gars and cichlids drifting between the submerged branches, and armored catfishes perching on them.

The predominantly sandy soils enable clear water, albeit colored brown with tannins from pines and oaks. The flat landscape results in the river meandering constantly, taking advantage of the least bit of topography. High flows then scour out deep pools on bends, and it is this range of deep pools and shallow stretches that lead to different aquatic communities. Shallow stretches also have faster flows.

Out of the wooded area, the land elevation gets lower, the banks less high (6" – 1.5') with pastures and cows grazing. The river is joined by several tributaries that were still fast flowing, gushing almost - a

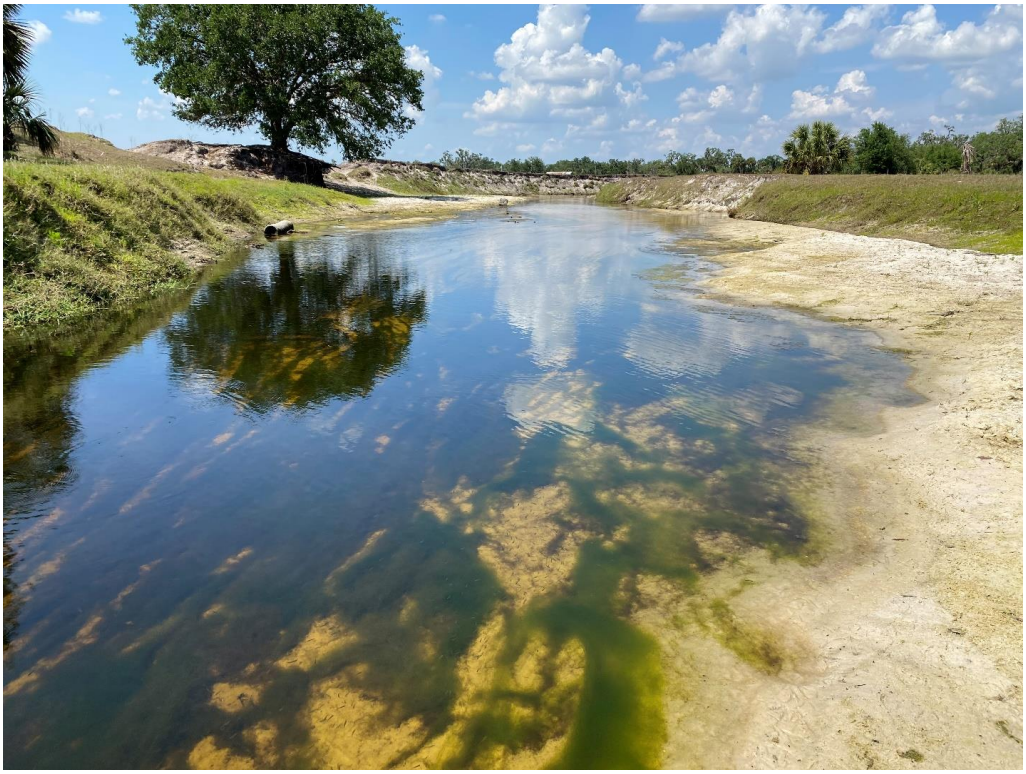
wonder given that we are in the middle of the dry season (Dec – May). Perhaps the large wooded area maintains the baseflow, due to trapping rainwater and promoting infiltration into the groundwater. It's a lazy river, one drifts along without paddling at a speed of a foot in 3-4 seconds. That's fast for Florida ! Even though there are several areas where cattle access the river, the water is still surprisingly clear and free of algae. A variety of wetland birds (egrets, herons, sandpipers, coots, limpkins, etc.) mill about. We kayaked all the way to the booms by the bridge that's the boundary of the ranch. Saw an alligator sunning on a sandbank. By the time we reach the booms before the bridge, that's the boundary of the ranch and the state park, the banks are barely 1-2 inches above the river. This place must be entirely flooded in the rainy season.

Time to head back for lunch..it was noon by now, and we have to paddle upriver against the flow. Made it back in an hour of steady paddling, to a most sumptuous and abundant lunch cooked by our hosts. A small rest under the shade of a tree, and then off we go walking upriver from the campsite. Our aim was to look at river habitats from the bank (as it was drier here – while we did have to portage kayaks in the morning at sections that were less than 6" deep, here there were many more shallow and wide spots).

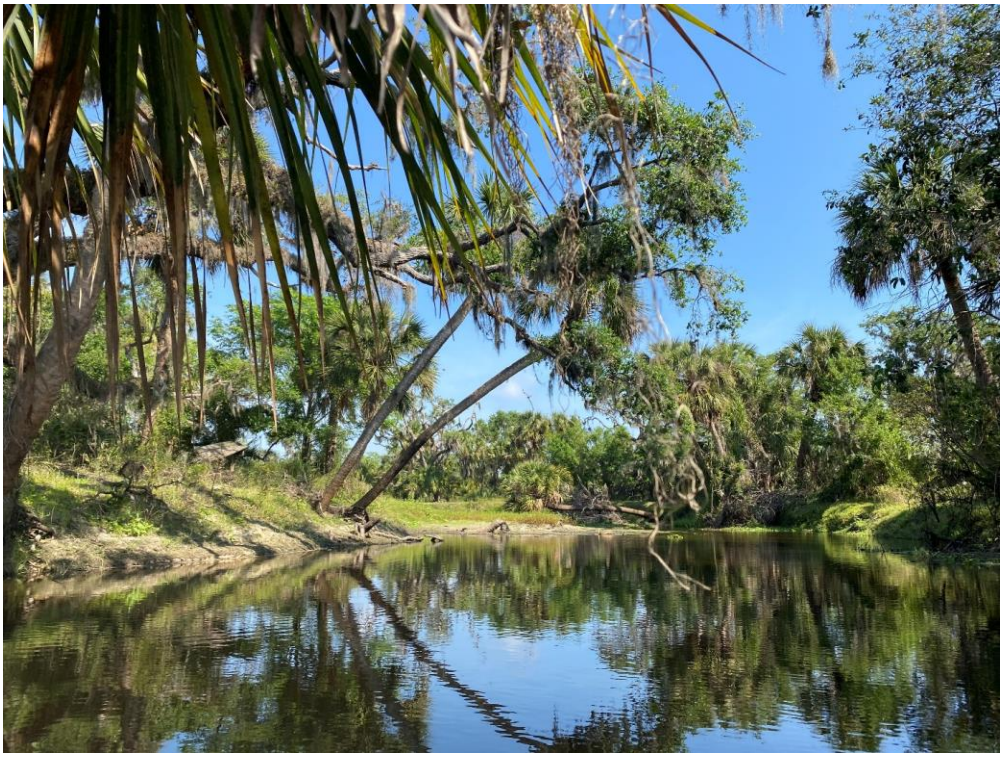
We stop at a deep pool, that was characteristically (for this ranch) full of fish, like an aquarium – bass, cichlids, gars, armored sailfin catfishes (Plecostomus)..and then I saw a snook, quite big, a little under 3 feet long. That blew my mind when I realized that this estuarine fish must have swum about 30 miles upriver from the Gulf of Mexico estuary near Port Charlotte, suggesting that this river still has habitat and the flow necessary for the snook to swim so far upriver. Talk about river continuity in this day and age.

We walk on, till we reach an old, old oak with a giant trunk, hollowed out but still alive with a few green branches. The bank here was about 7 feet high from the river. Looking at flood marks on tree trunks, the water level would rise another 3-4 feet in the wet season from current levels. We decide to stop walking there, and instead wade barefoot in the cool stream and pools on the sandy bed, observing insects and fish closely, unhurriedly…

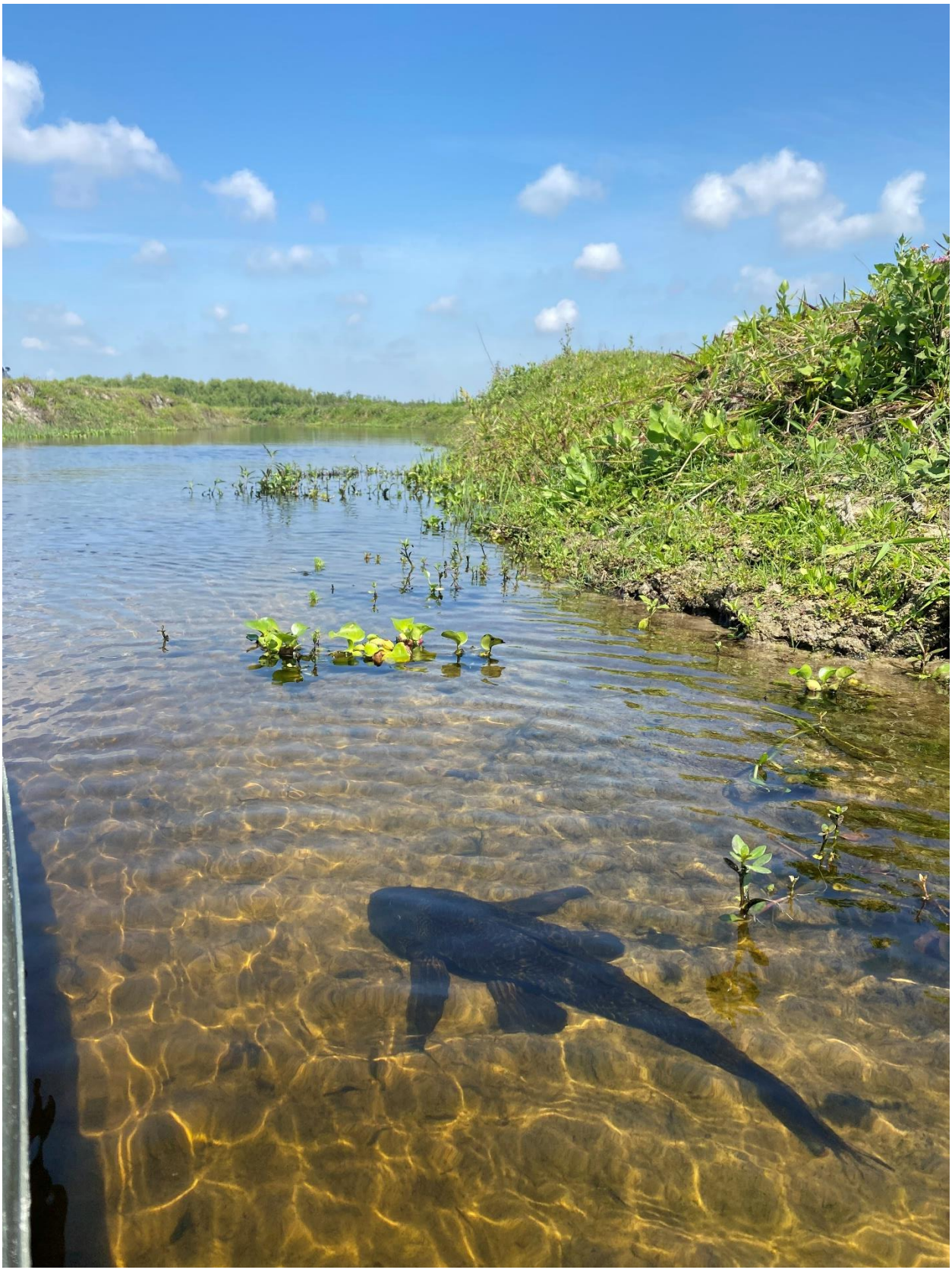
The trip today was almost like going back in time, given that free flowing rivers and unspoilt riparian forested corridors are increasingly getting rare, in Florida and globally. The landowner mentioned that the river was the main reason to buy this ranch. Maintaining the woods and current land use will continue to nourish the river in terms of flow regulation (resisting high flash floods, providing dry season baseflow), nutrients and maintaining channel morphology and the habitats thus created. And it is this diversity of habitats that enables the diversity of aquatic creatures within the river, and the floodplain, which in turn maintain water quality for generations of people to enjoy the river downstream in the Myakka State Park.



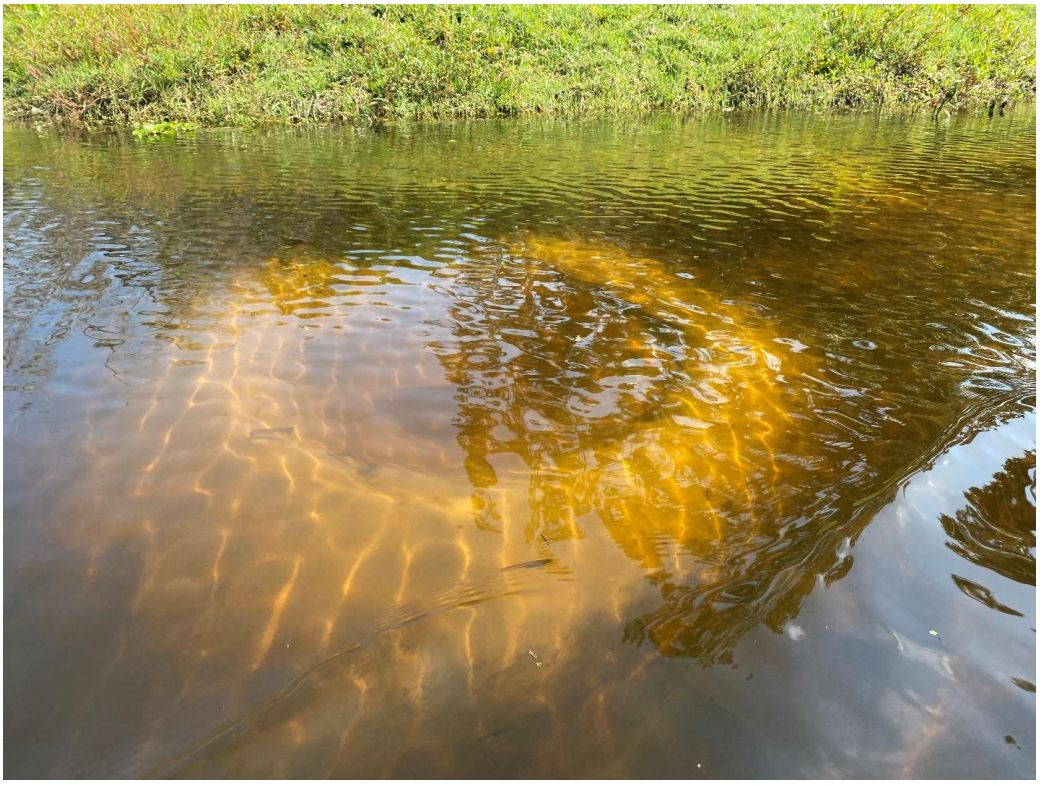
a rare spot of algal growth in the otherwise pristine river



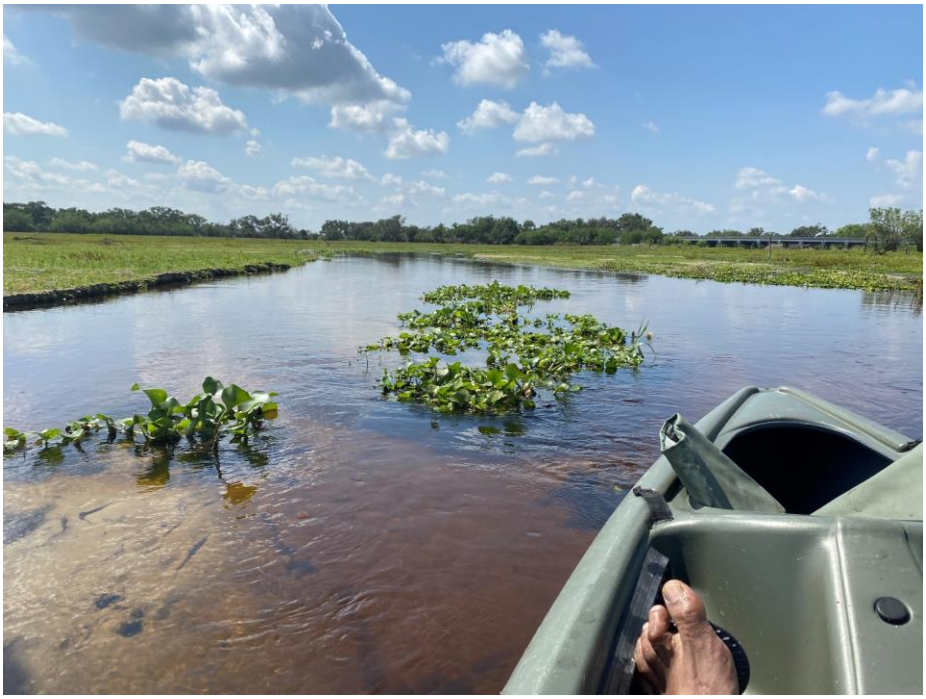
Riparian forests shade the river, keeping water temperature cool



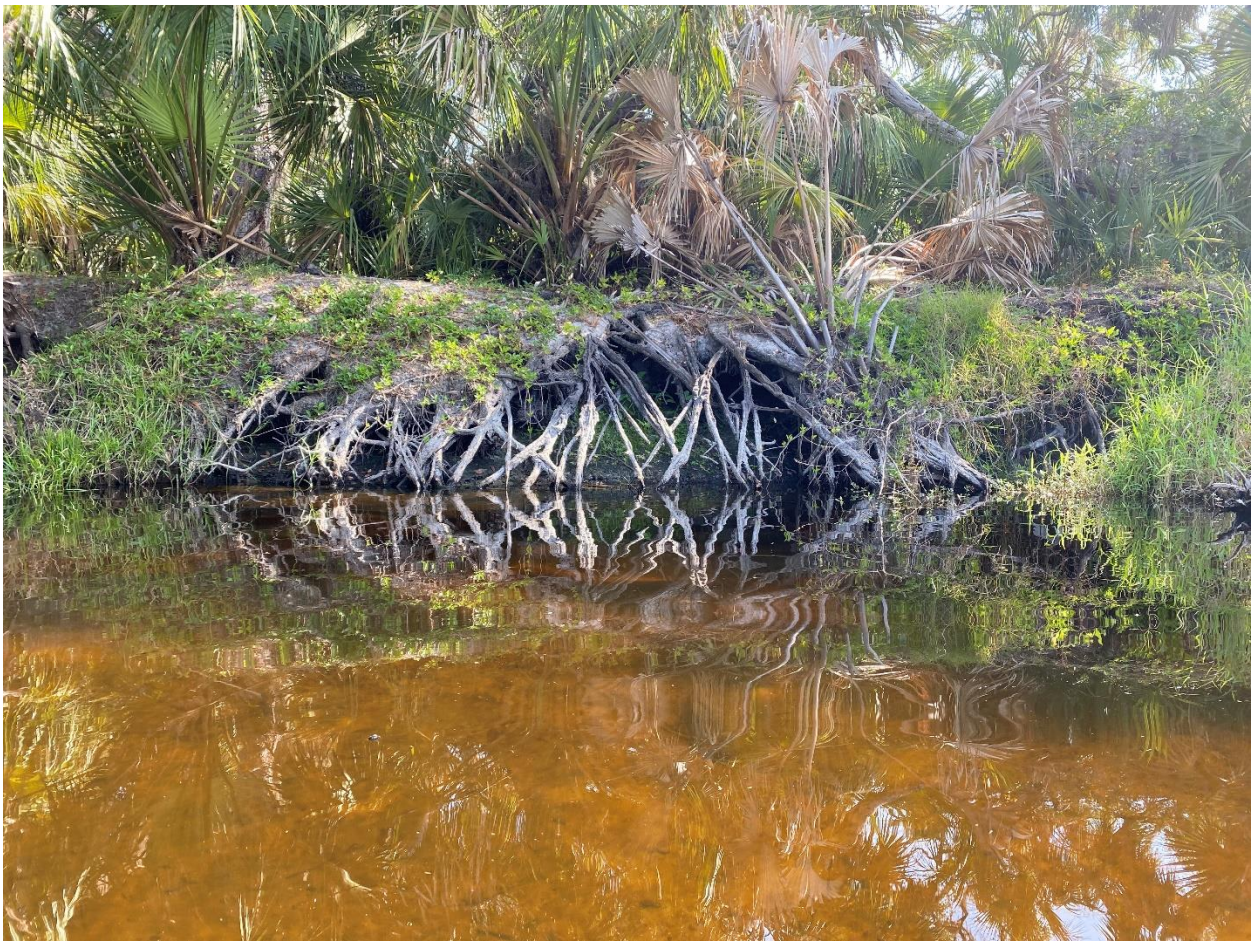
A sailfin armored catfish on the sandy bottom. Exceptionally clear water



A cichlid nest



Down to where the river flows into a wetland pasture. Bridge in distance is where the river enters the State Park.



Riverbank stabilized by riparian forest plant roots