

The Art of Ocean Conservation
VOLUME 11, ISSUE 38
FALL 2021
\$6.95

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CATCHING PREHISTORIC SHARKS

BY NICK HONACHEFSKY

My fascination with dinosaurs, like most people enamored by the prehistoric fauna, started at a young age, fantasizing about creatures of epic proportion with ever-chomping jaws. As a die-hard saltwater angler, I also entertain a strong love for sharks and everything related to the marine environment. So how could I match up the two into a new passion?

In my youth, I always heard stories about prehistoric shark teeth being found in the freshwater streams in coastal New Jersey, so one summer afternoon around six years ago, I decided to do some research to hit an often cited shark-toothy brook. Equipped with a homemade sifter, I stepped knee deep into the brook hoping to dig around and maybe pull up an ancient treasure. My first couple of pulls gave up zilch. After

an hour, I didn't seem to have any luck so I decided to take a quick breather to sit on an exposed gravel bar strewn with stream pebbles. As I sat down I looked down into the island of rocks, staring blankly, mesmerized by the rock patterns — and there it was. Standing out, betrayed by a gleam of sparkle from the morning sun, sat a shiny, black pointed feature.

I reached over and pinched it with my fingers. The blood rushed to my head as I realized I just found a *Scapanorhynchus texanus* “goblin shark” tooth, extinct for 75 million years, and now I held its timeless spirit. What did this thing gnaw on before it died? What kind of experiences did it have in a Cretaceous Period setting? Fifty other shark teeth of various species found their way into my pockets that morning, and I was completely, utterly hooked on hunting for fossil shark teeth.

HISTORY LESSON

Mother Earth is an ever-changing organism. Throughout millennia, tectonic influence and natural geologic activity push and pull continents and oceans in a forever shifting skin of planet Earth. Seabeds turn into mountains, glacial influence carves deep gouges into buried geologic epochs, all exposing time capsules of ancient sea beds containing long-buried fossils of terrestrial and marine organisms.

Various shark tooth fossilizing arenas exist across the United States, in places you would least expect. From the Peace River in Florida to the phosphate mines of North Carolina to the farm streams of New Jersey, hot spots are aplenty. The Peace River in Florida and surrounding Venice Beach delta expose Miocene and Pleistocene fossils that range from 10,000 years to 15 million years old, including the ultimate shark — megalodon — along with ice age fossils of mammals, including vertebrae, teeth and claws from giant sloths, mastodons and saber-toothed tigers. The North and South Carolina saltwater sounds along the Crystal Coast and the phosphate mines inland at Aurora each unearth Miocene deposits of megalodon teeth and extinct gigantic great



white shark predecessors, along with preserved stingray barbs and sea turtle scutes. Jersey's Cretaceous treasures in freshwater creeks harbor ancient beasts, including 75-million-year-old goblin sharks, shortfin makos and crow sharks. There's also the chance of finding parts of true monsters, such as mosasaur, plesiosaur, enchodus and xiphactinus.

FINDING PEACE

Courtney Marie Martin is a dedicated fisherwoman and marine artist based in Charlotte Harbor, Florida (OhanaCreationsFL.com). She garnered serious attention when posting her Meg finds on social media the past few years. Martin's prehistoric playground is the epicenter for Megalodon teeth — the Peace River. Though the area gets plenty of pressure from day-tripper fossil hounds, she finds out-of-the-way spots on her own. "Google Earth is your friend," says Martin. "I scan the area via satellite to search out hard turns in the river, log jams and debris fields, find a close parking spot, then hike into the section of the river. Of course, if crossing private property,

you should get permission from the land-owner first. I usually barter with my artwork, fishing trips or flat out cash money for access. Those hard-to-reach spots are where you'll find many more Megs."

The best times to hunt for prehistoric shark teeth is during the rainy season, but that can be a double-edged sword. Rushing waters will literally move the ground, uncovering teeth below the surface mud, extracting them out of the riverbanks and pushing teeth downstream. But if there's too much riverflow, you can't access the grounds. "The dry season from February to May is prime Meg hunting conditions on the Peace," says Martin. "There's only occasional storms running through, just enough to get things moving but not shut it down."

TOOLS OF THE TRADE

Your best tools to scan for shark teeth are your hands and eyes, used for visual scanning and picking through exposed rock, but even they can use some help. Sifting screens will allow dirt and mud to pass through while rocks





and fossils stay in the screen for inspection. Construct a sifter screen with two-by-fours, roughly 16-by-24 inches with a metal mesh tailor-made to the size of the fossils you will be sifting for. As an example, if you're targeting teeth a half inch or greater, you should have no less than ¼-inch mesh. If targeting small teeth or microfossils, drop down to a 1/8-inch mesh. A small folding camp shovel with about a 6-inch blade or a simple garden trowel will do the trick to scoop mud into the screen. Fingerless gloves help when diving in deep river pools to feel around the mud while protecting you from sharp rocks and sticks. Just remember, most states do not allow you to dig into the riverbanks, only on the river floor.

SCAN GRAVEL BARS

Gravel bar islands accumulate after heavy rains. If shark teeth are the primary target, program yourself to recognize angular shapes that stand out. In a river full of mostly smooth, water-worn orange or brownish oval rocks, a blackened point or jagged edge of a fossilized tooth will pop out to you — they'll do the same when it's wet or sunny, as the patina omits a shine like a beacon. All material collects in pockets of the same density. Where you find a gravel bar full of 2- to 3-inch larger rocks, you may find a large 2-inch goblin shark tooth or mosasaur tooth. Likewise smaller ¼-inch teeth will end up on sand bars mixed in with finer silt and small pebbles.

DIG DEEPER

The good stuff is always down below. Martin looks for deeper pockets in the dry season. "While most people are happy standing knee-deep to scour gravel banks, I target the deep pockets that average 4- to 6-foot deep, sometimes down to 13 feet. The big stuff is always stuck in the underwater root systems or deep under the silt of a log jam. It's not easy, it's pitch black down there, and I always end up scratched and bruised after my trips." Riverbends tend to collect and amass

heavier stuff as debris has a tough time turning the corner, instead getting rooted down into the riverbend. Look for logs damming up a river and search both up-current and down-current sides.

BACK BAYS AND PHOSPHATE MINES

North Carolina is a hotbed of exposed shark teeth that flow in and out and down with the tidal influence. Wayne Justice, activities organizer of the N.C. Aquarium at Pine Knoll Shores along the Crystal Coast, (NCAquariums.com/pine-knoll-shores) hits the Bear Island sound islands in Swansboro on his free time. “Shell piles collect on the islands off Swansboro. There’s a place called Shark Tooth Island there that seems to attract teeth that come spilling out of the Bear Island sound.” The easiest way to find fossils in the river is to get down on your knees and simply run your hand over the white shells, looking to expose the black teeth.”

The Phosphate mines along saltwater rivers in Aurora, North Carolina, are brimming with Meg teeth and various other species of extinct sharks. Cynthia Crane, director of the Aurora Fossil Museum (AuroraFossilMuseum.org), operates a hands-on program for visitors to find the shark teeth of their dreams. “Phosphate spoil pits are located just outside the museum for visitors to dig out various species, including megalodon (*carcharodon megalodon*), snaggletooth (*bemipristis serra*), and giant great white (*carcharodon subariculatus*),” says Crane. “The phosphate miners remove the overburden, pumping the layers through pipes to screen it through water, and the ‘reject’ material is brimming with fossil shark teeth.” Meg teeth sit generally above the Pungo River in the Yorktown formations. “At the museum, we offer the ability with displays not only to study and see the history of prehistoric shark population, but with some luck you can go home with a few shark teeth for your collection.”

Prospecting for prehistoric fossil shark teeth can spark the same passion and excitement anglers often find in pursuit of their quarry. There’s something inherently cool being able to “hunt” dinosaurs, holding in your hand parts of some of the baddest creatures ever to exist on Earth.





REGULATIONS

Fossil hunting regulations for shark teeth and other fossils vary greatly from state to state, and even town to town — some rules being circuitous and some cut and dry — but it's mandatory you do some research first according to the area you plan on fossiling.

FLORIDA: Dr. Richard Hulbert, collections manager of vertebrae paleontology for the Florida Museum of Natural History, offers insight: “As long as you are only just collecting shark’s teeth, you do not need a fossil collecting permit. But if you find any other bone, like a shark vertebrae or ground sloth fibula, you need the permit and must report the find, otherwise sans permit, you must put any non-shark tooth fossil back.”

Regarding general access to fossil grounds, Hulbert states, “You cannot fossil hunt in any non-navigable waterways or body of water that exists within any Florida State Parks or Wildlife Refuges. “You can generally enter waterways through public boat ramps or via permission from private land owners or at bridge crossings, where there is usually an easement for public access. It can get pretty tricky crossing lands to access waterways as

many of the water management districts do not allow you to walk across their land to get to the river. Some areas will have signage that prevents fossil hunting, it is best to go to individual Water Management District websites in the area you plan to hunt for more clarity. Without a doubt, if you plan on hunting shark teeth in Florida, contact the local area Division of Fish and Wildlife for local specific rules as there may be special regulations between towns, counties and municipalities.”

“One, obtain a permit. Though not needed for shark teeth, it will have all general collection rules, regulations and instructions on the back as well as allow you to keep any other potentially spectacular fossil finds. Two, contact the Division of Fish and Wildlife beforehand to understand if there are any management restrictions in the specific area you plan to fossil hunt.” The full regulations for Florida fossil collecting can be found at FloridaMuseum.ufl.edu/vertpaleo/amateur-collector/fossil-permit.

NORTH CAROLINA: “Shark tooth hunting is pretty much in a limited area in North

Carolina, with most of the meg and tertiary teeth found in rivers along the southeastern coastline at spots like Palmico Sound, Tar River and Edisto Beach,” states Dr. Christian Kammerer, research curator of paleontology at the North Carolina Museum of Natural Sciences. “Regarding any regulations for hunting shark teeth, there is no license or permit required to search the riverbanks or beaches, as they are considered public property. I would however recommend checking with local municipalities regarding their laws regarding what they consider ‘altering of the landscape and destruction of public property’ before you start digging in any riverbank. It’s kind of a vague notion and generally is not enforced, but it’s best to check.” Kammerer adds, “If you do happen to find yourself on any N.C. State Park land, you do need to obtain a permit from the parks system, but there aren’t many rivers containing shark teeth that run through them along the coast. One more resource for prospective fossil hunters is the North Carolina Fossil Club (NCFossilClub.org), They are the state’s primary association of amateur fossil hunters and run a number of collecting trips annually.” 🐡