

Crocodile Teeth over 56 million Years Old by Dave Lines



The group from left to right -- Dave, Arion, Orion, Rich, Erin, Cheryl, Charlie. Tim joined us later.

Eight of us (Orion, Arion, Rich, Erin, Cheryl, Charlie, Tim and I) met about 10 a.m. at the small parking area for “Nanjemoy Wildlife Management Area” along Riverside road in western Charles County, Maryland for a fossil collecting trip along the Potomac River.

Erin had joined us as a guest --- having traveled from Vancouver, Canada to watch her daughter play in a hockey tournament in Washington. She belongs to a Rock Club in Vancouver and collects mostly minerals, so searching for fossils was new for her. Since this was also a “first” for four of our members, we spent a few minutes looking at some sample specimens to familiarize everyone with what to find.

Then after our Safety Brief --- “don’t dig in the cliffs, beware of our surroundings and avoid where the cliff is heavily eroded and has created an unstable area” --- we walked about a half mile to the beach and began searching for sharks teeth.

Though the predicted low tide was several hours away, everyone found some small fossil sharks teeth laying on right on the surface of the exposed beach. The weather was cold (35 degrees F) and sunny with a northeast wind (from the land toward the river). This made for exceptionally good conditions because the water was flat calm and clear near the shore. The most productive portion of the beach seemed to be right at the waterline --- we could watch the teeth gently wash out of the sand. Most were the narrow ones that reportedly were from an extinct

goblin shark. We also found pebbles of Patuxent River Stone which can later be tumble polished into beautiful specimens.

After an hour or so of getting everyone oriented to finding sharks teeth, we moved along the beach about a mile to where many sections of the cliffs had recently fallen into the river. There we concentrated on finding fossil oysters and turritellas – actually the internal, screw shaped “fossil molds” of turritellas.

Everyone found some nice ones. We also kept looking for teeth and, eventually, I found a nice “otodus” shark tooth which was very clean and sharp --- with “feeding damage” on the tip. This specimen appeared to have just washed out of a section of fallen cliff. Judging from the symmetrical shape, the tooth was from the front center portion of the shark’s jaw. One can appreciate that it is an actual “fossil record” of the animal losing the tooth while biting a hard bone during feeding. Since we were looking in the “Aquia” geological formation from the Paleocene era, it happened 56 to 59 million years ago. Incredible.

Sometime around 1 p.m., Erin thanked each of us and said her goodbyes and started making her way back so she could attend her daughter’s hockey game. We very much enjoyed having Erin join us as a guest --- she was an outgoing person, a great collector and quickly learned what to look for and diligently kept at it the entire time. She certainly will be welcomed back in the future.

Shortly afterward (I forget exactly?), Cheryl asked me to identify a black conical tooth with a hollow base that she had found. Wow! It was a fossil crocodile tooth. Super! Everyone wanted to see it. Within 30 minutes, Tim found another one in the water --- still clear and calm --- at the water’s edge. This tooth was even nicer. I also found a small one – maybe two of them --- as I am not certain about one.

Another interesting find was by Charlie. He called it a “Japanese Philosopher's Stone”. It is a relatively smooth fist-sized chunk of light tan colored quartzite that resembles typical Southern Maryland gravel --- except that it contained the fossilized tracks of a tube worm named “skolithos”. A little research on the web shows that it was formed when the quartzite rock was “sand” which had a colony of tubeworms living in it in the Cambrian era --- some 500 million years ago. These tracks are “trace fossils”. Another website from Virginia said “skolithos” were Virginia’s oldest trace fossils. Now we know a little bit more about “the rest of the story” (as Paul Harvey used to say).

Around 2 p.m. the weather changed --- rather dramatically --- as it quickly clouded over and began to sleet --- albeit just for a short time. Three from our group decided to start back --- it was a long walk. Four of us remained about half an hour longer as we were hooked on the idea of finding croc teeth. When it started to mist, we took the hint and started our hour long return. By the time we reached the parking area, it was raining lightly.

Overall, it was an excellent trip. It was fun and everyone stayed safe and weather conditions were perfect for collecting (although Charlie reported later that his return drive on the Beltway was slowed to 35 mph due to the snow and rain). We certainly all found some great specimens as confirmed by the following pictures.



Charlie and Tim on the beach finding fossils. Cheryl in background.



"Cheryl's fossil teeth --- the crocodile tooth is on top."



"Cheryl's shells --- modern moon snails at top, fossil clam mold on lower left, 3 fossil oysters, and a fossil mold of a (not sure?) moon"



"Cheryl's sea glass."



"closeups of Cheryl's croc tooth."



"Rich's turrifera fossils in matrix will be a great display specimen when cleaned up."



"Rich's turritella finds."



"Rich's shark teeth and sections of fossil ray plates."



“Charlie’s Japanese Philosopher’s Stone --- a fist sized quartzite rock with trace fossil tracks of a Cambrian era tubeworm.” (photos by Charlie).



“Some of Charlie’s finds.”