

## **Fossil Wood and Fossil Belemnites from Odessa and the C&D Canal (Feb 26, 2022)** by Dave Lines

Have you ever found something that, upon closer examination, you realized was *extraordinarily rare*? I did --- just recently. This “something” was a piece of petrified wood that tells a story. A story that is millions of years old and yet is still surprising. I have been very fortunate over the past 25 years to have found hundreds of pieces of petrified wood in several states across America. In Texas I found petrified palm wood as well as several varieties of grained wood that had become chert and flint. In Colorado, I found petrified wood that had become solid jasper in colors of mustard yellow, red and black. Some of this Colorado wood showed the smoothed edges of wear from tumbling in rocky streams. In Arizona, I have found on a private ranch near the Petrified National Forest, beautifully colored flint (petrified wood) in bright reds, yellows, grays and black with some containing black dendrites in tiny tree branch patterns. In North Carolina, I found petrified wood that was fine grained sandstone, and I was given a whole log at least 15 feet long --- which is still there because I have no way to move it. From Virginia, I have petrified wood that had thousands of tiny quartz crystals both inside and out that sparkle brightly in sunlight. In Maryland, I have found petrified wood on the shores of the Potomac and Patuxent Rivers and on the beaches of the Chesapeake Bay that were almost white and relatively light in weight --- yet in another part of southern Maryland, I found petrified wood in a stream that was black and very heavy while showing every detail of the wood grain and, in another case, had turned into a very solid chunk of chert or jasper. And in Delaware, where I have found the largest quantity of petrified wood, each piece shows the sharp detail of the wood grain. Some of the Delaware specimens show knots, twists in the wood grain and anomalies like a break that was healed including tree sap that had turned to rock. Yet in all these petrified wood specimens, none have matched the special uniqueness of the recent one.



(Lorna and Rich searching for fossil belemnites by digging and sifting the sand)

But first, let's back-up to the beginning of this story. About a week before the trip, I sent out an email to our Southern Maryland Rock and Mineral Club members (SMRMC.org) inviting them to a field trip in Delaware --- for both petrified wood near Odessa and for fossil belemnites at the C&D (Chesapeake and Delaware) Canal. At that time, I was not sure of a date, so I asked if anyone would be interested. I received only 2 replies --- from Rich and from Ray. I also spoke with Lorna and asked if she wanted to --- yes, she did! We eventually decided on Saturday February 26<sup>th</sup>. Ray had to back out due a foot injury, so Rich and I picked up Lorna in Annapolis that morning. We arrived in our first location south of Odessa about 10:30 am and promptly headed into a wooded area to search for petrified wood. We found some as well as other items like jasper and some old bottles, but frankly, we were disappointed. The problem was too much ground cover (primarily fallen dead leaves). We had been spoiled on past visits there when we found significant quantities of petrified wood with minimal effort. So, at about 1 pm, we moved to another likely location in a woods that we had visited several years before. This time the ground cover, bushes and briars were very heavy, so we were limited to looking in a small stream. Lorna elected to remain in the truck while Rich and I split up,

with him going down stream and me going up stream. For the first 100 yards the water was simply too deep, and I found nothing. Then I came to an area with pieces of rock and large gravel that had been arranged in the stream (by kids?) to create a series of dams and pools of water. "Ah hah!" I thought "...a great place to find a piece of wood." But no luck. Then I spotted a "long skinny" rock in one of the pools about 10" to 12" under the somewhat cloudy water. As I soon found out, the water was ver-r-ry cold (we had seen some ice on puddles earlier) --- but I rolled up my sleeve and reached down and grabbed it. A nice chunk of petrified wood weighing about 2 pounds! Success!



(This one-of- a-kind piece of Odessa petrified wood is about 9 inches long and weighs 2 pounds)

That was enough to keep me going and in the next 100 yards of the steam, I found about a dozen more pieces --- half of which were at least as large as the first one. Due to the air temperature of 39 degrees combined with my wet hands from reaching into the stream, I quit about 2 pm because I was getting cold. I headed back to the truck and compared notes with Rich. He had had good luck and spread out a bag of his petrified wood finds up to 5 inches long. I spread out my finds on the tailgate and took a picture. Then we called Lorna from the truck and when she saw our finds, she was thrilled. Before giving some of my finds to them, I checked over the pieces a bit more carefully and noted that one --- the first one --- seemed especially nice. Then I turned it over and whoa! It had *termite holes all over it!* Wow!! In all the petrified wood I had, I had found only one tiny little 1-inch piece with a single termite hole. This new piece had at least 25 termite holes which were of several sizes. This was TRULY A PRIZE. A *museum quality specimen* --- indeed, a rare one!

Think about it. This petrified wood --- according to the best estimates of the Delaware Geological folks --- was a variety of cypress tree that had been living during the Miocene period (over 5 million years ago) --- and was somehow covered and became petrified. Geologists believe the pieces of petrified wood were later uncovered and re-deposited at some time during the Pleistocene era (as much as 2.5 million years ago). A few of the pieces show signs of water wear due to tumbling in rocky streams. In the vicinity around Odessa, the petrified wood may be found over an area of two- or three-square miles. Just imagine --- in all those pieces scattered all over that large area --- what are the odds of finding one showing extensive termite damage? Termite damage that occurred *before* it was petrified?! Termites only eat *dead* trees. In this case, the dead tree had probably been lying on the ground for an extended amount of time. Time enough for it to have been infested with living termites. Then --- and only then --- it was covered up quickly and catastrophically with the rest of the living cypress trees which may have been blown down and buried. Perhaps in a hurricane? Or knocked over and buried by a tsunami? Termites have been around for a long, long time and this petrified wood specimen is proof. Scientists today say termites existed long before the dinosaurs. Anyway, I am delighted to have found this specimen and will display it prominently in my collection.



(Side view of a termite hole penetrating the petrified wood)



(Close-up of termite holes)

Continuing our adventure, we headed north to toward Delaware City and crossed over the C&D Canal on DE Rt 9 Reedy Point bridge. We turned left at the end of the bridge and followed the road back south and onto the gravel road running east alongside the canal. We reached our destination about 2:30 that afternoon and parked out of the way with 4 other vehicles already there. When we walked up the gated access road to the spoils area, we were surprised to see a several parked pieces of heavy earthmoving equipment and a large dug out "basin" at least the size of a football field.



(Newly dug "basin" ready to receive new dredge material. The previous fossil-containing dredge material was removed and sold.)

Obviously, something big was going on. Our little group walked east about 200 yards until I spotted some fossil shells on the surface --- a good indicator that more fossils lay underneath. Looking around, I spotted a piece of belemnite - so we all stopped and started digging and sifting. In a few minutes we found several good pieces of

fossil belemnites which, by the way, are the Delaware State Fossil. After about 30 minutes, a young fellow came by and chatted with us --- turns out that he was from Maryland and had heard that this location would soon be covered with dredge spoils from a location that had no fossils. He said everyone was panicking and collecting as many fossils as they could find before the area was covered up and lost. That explained the 4 other vehicles there. He went on to say he had been having good luck finding the fossil oyster shells a bit further east. I invited him to join our club. After he left, I decided to do some looking further east as well --- but it was mostly a waste of time --- except for a single fossil oyster shell that I found. It was nicely shaped and in good condition. (Later, some research online from the Fossil Guy said it is an *exogyra cancellata* oyster fossil from the Mount Laurel Formation of the Late Cretaceous period and was 85 to 65 million years old. Amazing what a person can find on the computer.) Anyway, we continued digging and sifting the sand for more belemnites until 4 pm when we decided to call it a day. We all had a good time, and we all found some good specimens.



(Fossil oyster shell from C&D Canal area (65 to 85 million years old))



(Dave's take-home finds for the trip --- wood, fossil belemnites, fossil oyster, Patuxent River Stone, and a piece of agate.)

