

Delaware Belemnites and More by Dave Lines



Three of us (Rich, Barry and Dave) from the Southern Maryland Rock and Mineral Club joined about 20 members of the Delaware Mineralogical Society for a Field Trip to the dredge spoil piles next to the C&D (Chesapeake and Delaware) Canal. Periodically, the canal is dredged to maintain safe navigational depth and the dredge material is dumped in designated locations adjacent to the canal.

We arrived about 10 am at the spoil pile area just east of the Rt 9 bridge on the north side of the canal. We introduced ourselves to those present and exchanged pleasantries for about 10 minutes. Then since our point of contact (Tom) was not there, we decided to take our sifting screens and buckets and head to the digging area ourselves.



The main thing we were trying to collect was the Delaware State Fossil --- belemnite. Wikipedia says: "Belemnitida is an extinct order of cephalopods which existed during the Mesozoic era,

from the Hettangian age of the Lower Jurassic to the Maastrichtian age of the Upper Cretaceous.”

In layman terms, fossil belemnites are 65 to 150 million years old and are the internal hard structure of a squid-like sea critter. They are made of honey colored calcium carbonate --- probably aragonite --- about the size and shape of a pencil. Most of them are found broken, primarily because the dredge material (sand, rocks, shells and fossils) is pumped through large steel pipes over long distances from the canal to the spoils area. Very few belemnites survive that rough trip intact. Thus, to find a complete belemnite is a matter of luck plus a lot of digging and sifting.



We split up and began finding belemnites pieces scattered randomly on the surface of the sand among weeds and grass. Rich wisely followed a young fellow named Ed who seemed to know exactly where to go and where to dig. We all eventually joined Ed and had good results. The surface indications (where we found the most) were more fossil shells and belemnites pieces than we had seen elsewhere. We simply picked a spot and started digging and sifting with our screens which were $\frac{1}{4}$ " to $\frac{1}{2}$ " mesh. One spot seemed just as productive as another. In the area where we were digging, the top 12 inches of dredge material seemed to yield the most belemnites. Also, the darker dredge material seemed better than the lighter, sand colored material. We all had pretty good luck finding belemnites.

During this time, Tom (who was also the Delaware Club trip leader) showed up and was very helpful to everyone. We kept at it until about 12:30 pm when we decided to go with Tom to check out a couple of places south of Odessa to search for petrified wood. Tom was a really great guide and took us to exactly where we actually found some wood. In fact, we stopped at 3 different sites --- one of which I had visited about 10 years ago. By simply looking on the surface in grass covered fields and in the woods wherever there was any bare ground, we all found some excellent specimens of petrified wood, although most were small. According to local experts, the wood itself was cypress and is anywhere from 25 to 85 million years old. It is very nice quality and shows excellent detail. The color was yellow to reddish brown. Growth rings are very clear. Features like knots and twists added interest. I found one outstanding limb section about 12 inches long that contained the center growth ring of the limb as well as a small knot.

We had a great trip and give our special thanks to Tom who generously shared his knowledge and expertise.