

July 21, 2007: The High Price of Fossils

On Saturday morning I picked up an enthusiastic Bill Morgan in San Antonio and headed north for the North Sulphur River in faraway Fannin Co., perhaps 90 miles NE of Dallas and a half hour south of the Oklahoma border. Bill was so pumped up that he drove the first 3 or 4 hours while I reclined in the back seat. Bill is the guy who heads Fossilmania each year, perhaps the biggest and best known fossil show in the state. He was gung ho to explore the 75 MYA Ozan formation exposed at the NSR, perhaps the largest and most productive source of Taylor age mosasaur material and ammonites in the state. It is also one of the best known and heavily hunted by enamored collectors from several states. This prompted our dawn arrival at the first site timed right after a big flood had subsided within the previous few days.

As predicted we found footprints. Locals, retired folks, and seasoned collectors with a little vacation time to spare tend to reap the firstfruits when best collecting falls mid week. Undaunted we charged a mile or so along the riverbed, only to have Bill turn back as his long unused fossil shoes disintegrated on his feet, the footbeds delaminating from the uppers. This makes for cumbersome footing!

Before long after running back to the truck he caught up with me in the red zone, an 18 inch condensed layer of well preserved ammonites and sparse vertebrate material. By the time he caught up with me I had a few cool black phosphatic *Baculites* molds, some gastropods, and 2 perfect *Trachyscaphites spiniger* ammonites from the red zone. Fortunately it looked like only 1-2 guys preceded us so we managed to secure several more ammonites. Bill got 3 nice *Pachydiscus paulsoni* specimens while I got 3 or 4 more *T. spiniger*, with one being perfect. On the way out I spotted a mosasaur vertebra entombed in the red zone, which I readily exhumed and pocketed. It was split in half lengthwise, but had the redeeming character of being dusted by small pyrite crystals – very cool.





FIGS 65-68: Ozan fm ammonites *Trachyscaphites spiniger spiniger* followed by unidentified compressed ammonite, half a mosasaur vertebra dusted with pyrite, and several gastropods and phosphatized *Baculites* fragments (Site 54)

On the march back to the truck I looked down and said, "Now that's cool!" as I picked up a compressed ammonite on a slab of fracturing shale. With a good dousing of Bill's diluted Elmer's glue we were able to arrest the inevitable disintegration of a wonderful specimen.

We next pressed on to a creek which I had never explored. Gravel bars near the bridge were pocked with the footprints of a methodically grid searching collector. We almost bailed out until I decided to peruse a small bar up against the wall of the channel and promptly appropriated a decent mosasaur tooth. From there we charged upstream and the footprints stopped. A big gravel bar produced a big mosasaur vertebra centrum, my biggest yet. I slogged through quickmud while Bill turned back to grid search the better looking bars we glanced over. In short we found nothing more despite valiant effort.









FIGS 69-72: More Ozan fossils including a mosasaur tooth and the centrum of my biggest mosasaur vertebra to date (Site 406)

Our next site was downstream in the main river channel and produced a wonderful ammonite in a nodule for Bill and a nice sandstone gastropod and a palm sized section of turtle plastron (belly plate) for me. The water was up farther at our remaining sites so we pulled the plug and called it a day.



FIG 73: Turtle plastron section and gastropod from Pecan Gap fm Site 204

I drove first and with the sun in my face I guess I didn't see the 40 MPH sign as I cruised along at 57 MPH, but one of the ladies of law enforcement in Commerce, TX saw it fit to yank me over and force a ticket on me, my second in 3 weeks – OUCH! Well, at least I have that big mosasaur vert to use as a paperweight to hold down all my tickets!

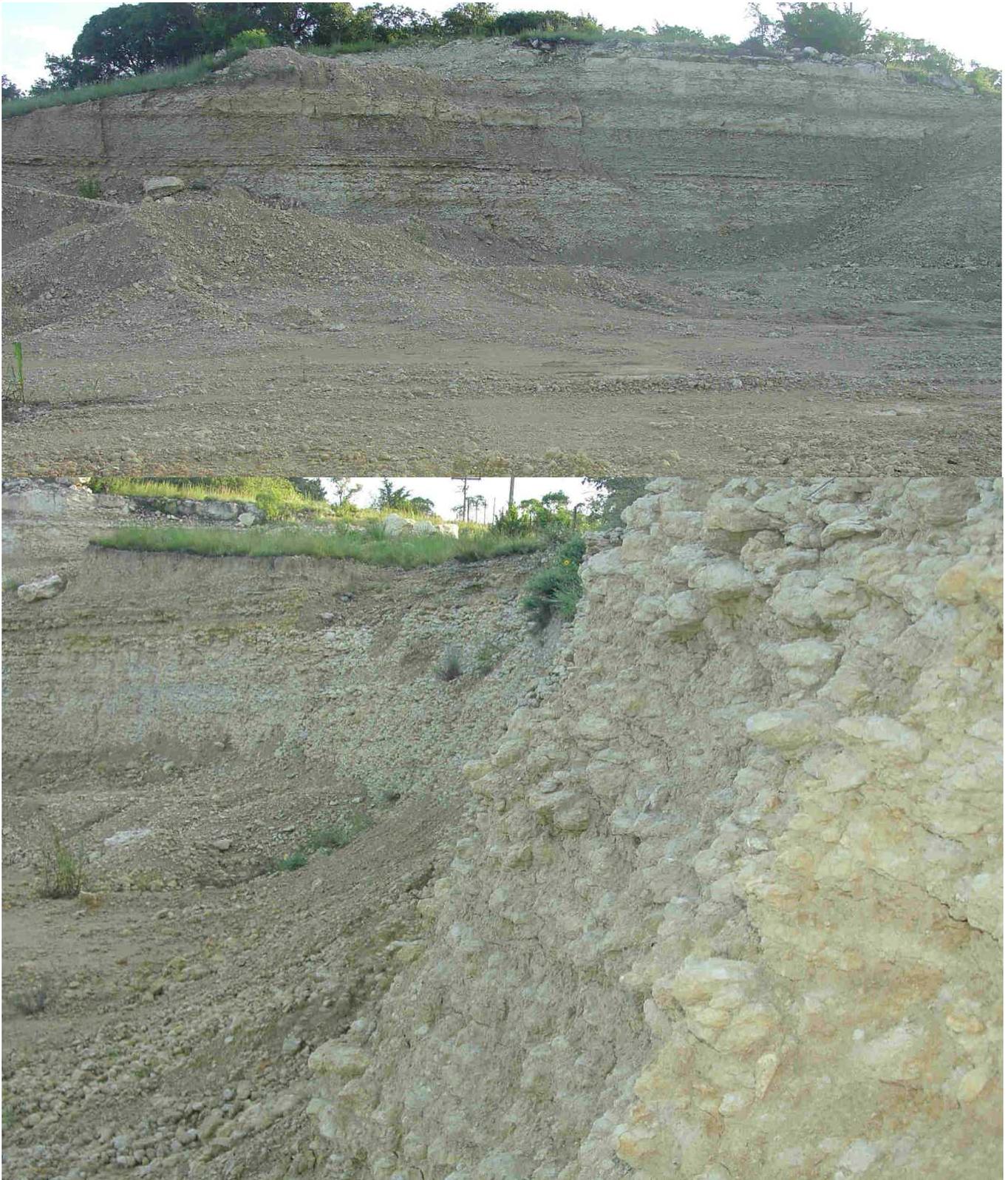


FIG 74: A very expensive paperweight

July 28, 2007: Brownwood Blitzkrieg

I had a couple buddies lined up to visit the Brownwood area with me on Saturday but incompatible schedules sent me on my way alone. Not a problem as this gave me the opportunity to visit a recently rain washed Walnut site shown to me by my friend Robert Bowen who has been mining Eocene fossil fish in Kemmerer, WY for the summer and he has been cool enough to let me visit a few of his sites in the meantime.

Anyway I overslept my alarm by an hour and a half and my loving wife let me know I was going to be late. 3 hours of light footed driving later I stopped at Robert's Walnut fm site exposing 108 MYA cream colored nodular limestone and marl bearing a bevy of echinoids. While walking toward the wall of the pit I glanced down and picked up a 25 MM *Coenholectypus* echinoid, not a bad way to start the day. The wall soon produced a double presentation of *Phymosoma texanum* echinoids stuck together, both a little rough in condition but well worth keeping being a double. The next half hour of working the wall brought about a dozen nice *P. texanum*. Along the talus of the slope I spotted a similar large echinoid with more finely spaced tubercles...this was my first *Tetragramma texanum* from the Walnut. It was split in half with the halves shifted but in good detail and complete, so in the bag it went. Crawling around the floor of the pit produced 3 or 4 *Salenia mexicana*, 2 immaculate *P. texanum*, and one *Loriolia* before I decided to pull the plug.







FIGS 75-80: A couple views of Walnut fm Site 50 along with several *P. texanum* and one *S. mexicana* echinoid found there



FIGS 81-82: Damaged echinoid *Tetragramma texanum* flanked by *S. mexicana*, *Coenholectypus* sp., *Loriolia* sp., *Heteraster* sp., and a crab claw (Site 50)





FIGS 83-85: Bottom view of the *Tetragramma* and *Coenholectypus* along with several nice *P. texanum* echinoids (Site 50)

Onward to the Lake Brownwood Spillway I went. Being late July I opted to make it a quick hit on the black shales of the Winchell fm. This is a 300 MYA Pennsylvanian marine exposure known world wide as a lagerstätte (mortality bed) of well preserved echinoids *Archaeocidaris brownwoodensis* complete with spines. My quick hit produced 4-5 specimens worth keeping.







FIGS 86-90: From the Pennsylvanian Winchell limestone at the Brownwood Spillway several echinoids *Archaeocidaris brownwoodensis* and one small more scarce ?*kiwiensis* echinoid (Site 65)

From there I pressed on to the Wilson Clay Pit, another exposure of similar age producing obscure shark teeth. Lithology of the rocks there presents a delectable mélange of colors. Massive beige, hard limestone slabs give way to soft, nodular shaly limestone in hues of wine, green, and turquoise, a welcome diversion for these fossil-wearry eyes. I found shark teeth in all lithologies mentioned, but my best find came early in the game. I was ecstatic to lay hands on a perfect serrated tooth *Peripristis semicircularis* with the root intact, all set in a lavender nodule with a

crinoid stem and fusulinid on the reverse side. I saw some guy on the internet recently trying to sell an identical tooth for \$170, but mine will not be subjected to that fate.

Later I found an exploded *Petalodus ohioensis* tooth missing a few chunks, a couple flat *Deltodus* teeth that I had to meticulously chip out of hard matrix, and the base of a *Symmorium* tooth whose main cusp unfortunately remains deep in a limestone slab. I continued tiptoeing around the summer growth looking out for rattlesnakes and peering under shady limestone overhangs before getting too close. I saw one trilobite pygidium (tail) and picked up a few nice crinoid stems and crown plates before pulling the plug on this site.









FIGS 91-95: Several panoramic views of the Wilson Clay Pit and my best find of the day, a rare and nearly intact tooth of the enigmatic "shark" *Peripristis semicircularis* (Site 108)







FIGS 96-99: In situ shots of Pennsylvanian (Harpersville) shark teeth *Deltodus* sp. and *Petalodus ohioensis* followed by prepped shot of both plus the base of a *Symmorium* sp. tooth and a suite of crinoid stem and crown elements, a brachiopod, and a possible nautiloid (Site 108)

I knew that the Houston and Austin paleo clubs had visited this site this spring, but with all the recent rain I had to have a look for myself. It is a slow weathering outcrop that is being hunted faster than it can weather. I enjoy better pickings at little known sites, but for certain material finding hidden sites is rather difficult, such as for these teeth. I feel fortunate to have taken home what I did.

My final site put me in another pit in the Walnut fm, this site a personal find. I spent a half hour there and took home a couple good *P. texanum* echinoids and one more nice little *Coenholectypus*. No complaints at this end concerning the day's spoils. And my newly adopted cop paranoia put me over the crest of a hill at 60 MPH. The cop hiding on the other side flashed his bubble gum machine and ticketed the guy behind me for once.









FIGS 100-105: Walnut Site 181 and some of the *P. texanum*, *Coenholectypus* sp., and *Heteraster* sp. echinoids found there including a couple *P. texanum* specimens left out in the elements too long