

ROCK OF AGES: WRESTING FOSSILS AND ARTIFACTS FROM THE TEXAS TERRA FIRMA

July 10, 2004

With no honeydods on the ledger and mama and baby gearing up for an afternoon nap, I seized the opportunity to peruse a local construction site once last time as the encroaching line of concrete was just days from permanently entombing recently excavated Pecan Gap chalk once and for all. This particular site was the single most fossiliferous of its formation I have found in the area. Its swan song was one for the books.

Following my own rule for working this formation, I randomly cracked open chunks of weathering chalk to see what had been protected from the elements inside. I was soon rewarded with a special surprise...my first fish tooth from the Pecan Gap, standing out pinkish tan against the white matrix. But that's not all. I whacked another slab off a nearby hunk of chalk and revealed some curious black blobs...which I soon recognized as my first pycnodont mouth plate (articulated crusher teeth from the palate of a fish). Another slab had a broken *Pachydiscus* ammonite showing, so I half heartedly split the rock again...this time to reveal a separate specimen completely hidden from view a dorsoventrally compressed *Pachydiscus*. A small, compressed *Trachyscaphites* also made it into my clutches, accompanied by another *Pachydiscus*. On top of this, I was fortunate to lay hands on several *Hemiaster* echinoids.

So with bittersweet affection, I bade this site goodbye...time to find another.



FIGURE 1: Left to right: Unidentified tooth, pycnodont mouth plate, *Hemiaster texanus?* echinoid from the Pecan Gap formation



FIGURE 2: Pecan Gap *Pachydiscus* ammonite, ornamented gastropod

July 11, 2004

I interrupted my fossil hunting rhythm on Sunday to hunt artifacts in Uvalde with brothers Mike and Marc Walkden and a half dozen other members of the Texas Amateur Archaeological Association at the dig site in Laguna, TX. Hand digging soon after daylight, I was pleased to lay hands on a Lerma style Archaic knife which flew off my shovel on the way to the screen. When I saw a lady walking around with a whiskey bottle at 8 a.m. I knew this would be an interesting day.

Nobody did exceedingly well that day, but good finds were made sparingly by most in the group. I landed another Archaic Knife, a convex based triangular point, a serrated Scallorn bird point with about 1/8 inch missing from the tip, a tip from a fire treated bone awl, and assorted other partials. The Walkdens snagged a few Frios, Ensors, Friday blades, and Marc's stunning Sabinal and Edwards points. One lady found a nice 5 inch white base tang which was by far the find of the day. Again, not a bumper crop of artifacts, but enough to hold my interest and justify expenses.



FIGURE 3: Clockwise from top left: Broken base, fire treated tip of a bone awl, sweet bird point base (dang!), unidentified triangular point, Scallorn bird point, Lerma blade, scraper, Archaic knife

Around lunchtime I tried to take a nap on the screen, but my slumber was soon interrupted by the staccato “rat-a-tat-tat” of machine gun fire in the distance. I settled back in only to be shaken awake by a thunderous BOOM! in the distance. Some folks said they felt the ground shake. Machine guns, dynamite, those country folks sure know how to have fun!

The 3 of us were the last on site, hand digging long after the backhoe had shut down. We found a few more artifacts and chunks of bone. By dusk we were a broken down bunch. We are all in our early 30s, but hard labor tends to exacerbate prior injuries, and we hobbled out like a bunch of old men.

July 16-17 2004

The DPS cancelled a Lake Texoma collecting trip scheduled for 7/17 due to high lake level. I had already researched several area sites, so I proceeded to the area as planned with my kayak jutting out the back of my truck. Much of my research references were 50-100 years old, so localities may be overgrown, built over, private property, picked over, or on renamed roads since the initial research was done. I’m used to this and took it on the chin.

First stop: Dallas area, Britton formation. Results: Abysmally poor! I couldn’t muster anything better than a few broken *Baculites* and some nacreous ammonite halves. Sure wish I could land a whole one! I tried to find California Crossing to look for crustaceans, but a preponderance of “ne’er-do-wells” loitering the area in the wee hours of morning prompted me to press on to other sites.

I dropped into a creek in the Sherman area and landed a modest number of bashed up shark teeth, including one large blade about 1 ½ inches long. An intact tooth this size would be a dandy. Of more interest to me at this particular site was the terrestrial vertebrate material in the creek. I'm very skeptical of the true age of unmineralized bones and teeth found on the gravel bars, but I pulled several mammal and turtle bone and shell fragments from densely packed gravel in the vertical creek banks, giving me more confidence that I perhaps found Pleistocene material. I'm not sure how often and how drastically these banks change, but I had to dig some of this stuff an inch or so out of the gravel, dirt and reworked oysters. By context, I'm willing to believe this stuff is Pleistocene.



FIGURE 4: Eagle Ford shark teeth, Pleistocene? bones and turtle shell fragment

Moving on, I dropped into a Duck Creek exposure in a creek feeding Lake Texoma. There were so many ammonites I had to practice “catch and release.” Anyway, I loaded my backpack with ammonites from 1 to 12 inches diameter as well as a handful of irregular echinoids. Later on while prepping one ammonite I found a little brown shark tooth hitch hiking in the deep in the ammonite’s cingulum. Collecting the fossils was easy, getting back to the truck in 100 degree temps without enough water was a drag. I was too stubborn to drop my stuff, so I could only go about 100 yards at a time and take breaks in the shade. A kind soul in a pickup gave me a lift with his pickup along with an ice cold bottle of water, and I thanked him for preventing a heat stroke!



FIGURE 5: Texoma area ammonites *Adkinsites?*, Duck Creek formation



FIGURE 6: Duck Creek formation echinoids *Macraster denisonensis?* (left and center), *Macraster nodopyga?* (right), and shark tooth extracted from ammonite

Down but not out, I pressed northward to the Oklahoma side of the lake. In May I had visited a Duck Creek site far north in a long arm of Lake Texoma as detailed in McKinzie's [Oklahoma Fossil Localities](#). I chickened out last time due to poison ivy, so I had to stare at the marly banks from afar. Not so this time as I had my kayak in tow. The banks were steep, so steep in fact that in my depleted state the yak got

away from me, shot down the bank and into the lake with my tools, wallet, and keys strapped on board. Of course the paddle went the opposite direction, and the water was flowing, carrying the yak away. With a running start I entered the muddy water with grace, doggy paddling all the way and ultimately straddling my trusty yak. A truly ludicrous scene. Good thing I was alone!

The site is detailed as primarily an echinoid locality, and I found a few, but I did better on ammonites. I got 5 with 3 or 4 keepers and one a give away. At one point I started getting lazy, and I wouldn't climb the banks unless I could see fossils from the water. One big slab had slid to the water's edge, and from it I was able to extract 2 nice 4 inch ammonites without even sliding out of the yak! Talk about lazy!



FIGURE 7: Duck Creek formation ammonites including *Mortoniceras equidistans*, *Drakeoceras wintoni*, *Hamites comanchensis* and possibly others

After a day of hapless mishaps and heavy backpacks, I broke my routine and caved in to my body's outcry for comfort by actually getting a room (I had left home early the previous night and slept in my truck).

The next day I was hoping to find micromorph zones and/or shark teeth in the Weno, Paw Paw, Duck Creek, or Denton formations at Lake Texoma, Gainesville, Fort Worth (Sycamore Creek), and Rio Vista. I was rewarded with for my efforts with a swift kick in the britches.

I'm glad I headed to Decatur between the above mentioned destinations as I found a little redemption there in terms of ammonites and echinoids. A road cut in the Goodland formation gave up a cute little 1

½ inch ammonite and small mortality slab of about 30 echinoids protruding from both sides. I've been wanting one of these slabs for some time, so I found this specimen particularly pleasing.



FIGURE 8: *Hemiaster whitei* echinoid slab from the Goodland formation

I visited a large borrow pit in Decatur, I believe also in the Goodland formation. It appeared to have received a good amount of prior collecting traffic, but I found a nice little 1 ½ inch *Oxytropidoceras* ammonite and a handful of irregular echinoids, with 3 being quite small, but perfect.



FIGURE 9: Goodland echinoids *Hemiaster whitei*, ammonites *Oxytropidoceras* (right) and *Mortoniceras?* (left)

Since I struck out on the pyritized micromorphic ammonites in North Texas, I made a last minute adjustment and slipped into the Lake Waco Spillway. Recent water releases have scoured the bottom of the valley, knocking down all the cat tails and other vegetation and providing an easy walk to the opposite wall for those interested. I didn't make any finds that would rival Robert Bowen's sensational discovery of a brittlestar nest a few weeks ago, but half a film canister of pyritized ammonites and shark tooth got me pretty stoked. With fading light came the drone of mosquitoes and the end of my 1000 mile road trip.

With all these fossils now prepped out, it is time to curate the best and give away the rest.



FIGURE 10: Del Rio formation ammonites including *Plesioturritites*, *Mantelliceras*, *Scaphites*, and shark tooth *Cretolamna appendiculata*

7/22/04

I'm fortunate enough to have a good creekbed exposure in the Dessau member of the Austin group near my office, and after good rains I like to give it a look. It sure is humbling to walk over a place you've trodden several times before, and see something you should have seen the first time. I think I'll display this cute *Parapuzosia* in my office since it was collected close by.



FIGURE 11: *Parapuzosia* ammonite from the Dessau member of the Austin Chalk, Bexar/Comal county line

Coming up: Pennsylvanian exposures I've never explored and a kayak quest for Pleistocene megafauna.