

FOSSIL HUNTING REPORT

DAN WOEHR: JUNE 2005

Preface

First of all, let me explain some of the grainy outdoor pictures. I like to document the exposures I collect, but protect my digital camera in the process. I hunt many wet sites, so my good camera is not an option. Enter the cheap throwdown 35 mm camera. While not the best piece of equipment, its grainy pictures are better than nothing.

When the dust cleared from my May report, I found a couple more Brownwood specimens on my workbench which I've shown below.



FIGS 1-2: Brachiopod and compound leaf, Winchell formation, 300 MYA

June 5, 2005 Drawing Another Blank

This was another slow day, but I've come to expect some light hauls when I go out exploring. That's just part of the gig. I embarked on a Pleistocene, Pliocene, and Miocene bone quest with my jon boat and small outboard strapped securely in the bed of my truck. I hit some river terraces as well as exposures of the Fleming, Goliad, and Oakville formations, which were primarily sandstone. In short, my planned sites resulted in either no access or no fossils, neither of which makes a memorable day.

A creek half way between San Antonio and the coast was a nasty, stagnant mess. I took one look and never unloaded the boat.

A coastal river provided high adventure as I sped along the narrow river channel, rounding tight bends to see mullet jumping and turtles sliding into the water. The valley cut into 75 foot, steep sand and gravel banks loaded with large gypsum crystals, but not the coveted mammoth jaw I

was after. I found a large skull crumbling out of a sandstone bank and grabbed a couple teeth. I'm pretty sure however that this is recent material, possibly cow.

Still another river did not provide the piles of bones and teeth I was after, but I managed to scrounge contact information for some high potential sites which I hope the DPS can use to obtain group access at a later date.

Some road cuts broke the monotony with a few chunks of petrified wood. The highlight of the day was an ugly chunk of petrified palm wood, the state fossil.



FIG 3: Petrified palm wood

Oh well, I got to blaze my own trail into the unknown if nothing else. Undaunted, I plan on some more productive hunts in the near future. At least I didn't have expensive trouble with the truck or the cops this time!

June 12, 2005 Central Texas Sortie

Once again awash with irrational exuberance, I set out on a solo fossil collecting mission in Bell and Williamson Counties in Central TX. I based this trip on a number sites documented in 40-60 year old literature, but some of the better sites I found in transit between documented sites. My first two planned sites were creek exposures which proved overgrown and/or inaccessible.

The next site was a large borrow pit in the Georgetown fm which I happened to notice en route to another site. I walked through the scattered, pyrite laced blue-gray limestone and marl piles seeing very little at first. Then a perfectly weathered out 6 inch *Mortoniceras* ammonite caught my eye and was quickly deposited in my backpack. I continued finding numbers of black *Neithea georgetownensis* scallops with large cubic pyrite crystals attached to the shell. A sucker for pyritized fossils, I gladly bagged these as well. Soon I spotted a couple 2 inch *Mortoniceras* ammonites followed by a nice 6 inch specimen in situ. These ammonites are really nice due to sharp detail and sporadic dusting with fine pyrite crystals. A curious gleam as I walked over a small flat turned out to be a 5/8 inch long shark tooth blade, tough to ID due to lack of a root. My final find before leaving was a true heartbreaker. 50 yards from my truck I spotted a huge, inflated 4 ½ inch *Macraster* echinoid upside down...when I flipped it there was a huge chunk missing which took out most of the apical system. Catch and release! I'm glad I found this site since the next one was a bust.





FIGS 4-7: Georgetown fm fossils including *Neithea georgetownensis* bivalves preceding page left, pyritized *Mortoniceras* ammonites to their right, more *Mortoniceras* ammonites this page

Pressing north I set out in search of the Pepper type locality, documented as having “wavy tan limestone flags bearing abundant Eagle Ford ammonites overlying a gravelly, conglomerate Pepper rework zone bearing shark teeth and fish remains.” All I found was abundant concrete! This creekbed site was apparently completely cemented over to halt erosion when a subdivision was built decades ago. One must take this ancient locality info with a grain of salt at times.

A sandwich later I was in another creek exposure, this time in the 103 million year old Duck Creek fm. After 200 yards of slippery footing in 3 foot deep water I laid hands on a small *Mortoniceras* ammonite in matrix followed by a few small hematite replaced ammonites and gastropods eroding out of a marly layer. The micromorphs made it worth the stop for me.



FIGS 8-9: *Mortoniceras* ammonite, pyritized micromorphic ammonites and gastropods right

Pressing on, I hit a creek exposure in the Walnut fm and was quite content to find 4 *Phymosoma texanum* echinoids (2 being really nice) in addition to a few large *Hemiasters* of varying condition. I spotted 3 *Engonoceras* keels jutting from a bank, but all 3 specimens were broken at the juvenile whorls. Still, not bad for 30 minutes work. A nearby random road cut stop gave up a number of small *Heterasters* and cool corroded looking gastropods, and a stop at a schoolyard produced a perfect 2 ¼ inch *Engonoceras* just as I was leaving. All 3 of these sites were in the 105 million year old Walnut fm.



FIGS 10-11: Walnut echinoids *Hemiaster* sp. and *Phymosoma texanum* left, *Heteraster* right



FIG 12: *Engonoceras* ammonite from the Walnut fm

911 terror alerts over the past couple years have precluded access to the Stillhouse Hollow Reservoir Spillway when I drove by, so yesterday finally marked my first visit. Weaving between fishermen I was able to claw at the soft gray marly banks down in the gorge. The CTPS recently held a field trip there, so pickings were somewhat slim, but I still managed a cool black *Phymosoma* echinoid in matrix and a couple slightly damaged *Engonoceras* ammonites. But most notable was the plethora of well preserved gastropods and bivalves, so I pocketed some of them as well.



FIGS 13-14: Stillhouse Reservoir Spillway southwest of Belton, TX, Walnut formation



FIGS 15-18: Walnut fossils including *Engonoceras* ammonites top left, *Phymosoma texanum* echinoid bottom right, gastropods top right and bottom left

After another strikeout in the Georgetown fm, I moved on to an Eagle Ford site that I expected to give up a few shark teeth. After penetrating an insidious wall of poison ivy, I found and mined a thin, gritty glauconite layer between the limestone strata and I was able to produce a handful of teeth up to $\frac{3}{4}$ inch. I saw a some *Squalicorax falcatus* and *Cretoxyrhina mantelli* in the mix; a few of the usual suspects. While randomly flipping limestone slabs I was surprised to find one covered with about 25 little ammonites. While not exactly museum quality, this was my first such find in this formation in this part of the state and was a great find to wind up a long day.



FIGS 19-23: 89 million year old Eagle Ford shark and fish teeth *Cretoxyrhina*, *Enchodus*, *Ptychodus anonymus*, and *Squalicorax falcatus* above, unidentified ammonites remaining 4 frames (2 on following page)



June 18, 2005 Texoma Revisited

I tasted blood on the shores of Lake Texoma last month in seeing a few pearly ammonites in the upper Weno fm. Unexplored stretches of shoreline gnawed at me ever since, and last Saturday I finally broke down, loaded the jon boat into the bed of my truck, and headed north around 1:30 a.m. I was on the water by 7:30, my route carefully planned in advance. Running from bluff to bluff along the shoreline, I stopped to walk and scan the stretches of wave worked, brick red ironstone concretions that littered the water's edge. 3 hours of this action produced some nice finds. While skies were overcast, it was still easy to catch the iridescent nacre of ammonites peeking out of the ironstone. I landed 3 or 4 perfect or near perfect specimens, plus numbers of partials which warranted annexation into the Woehr Collection. The beautiful metallic yellows, greens, purples, and reds of the original shell material simply could not be left behind to weather further, even if just half ammonites.



FIGS 24-25: Ammonites *Engonoceras serpentinum* and *Mortoniceras?* from the 102 million year old Weno formation



FIGS 26-28: Upper Weno fm on Lake Texoma shoreline. All fossils found in and on red ironstone concretions weathering out of bluff and reworked by wave action



The area I was working spanned from several feet above to several feet below the hard to discern Weno/Pawpaw contact. Here the Weno fm is a gray clay interspersed with rounded, often flattened red ironstone concretions from inches to feet in diameter. This lithology grades upward into the red sands of the Pawpaw fm. It was hard for me to distinguish the boundary between formations, but one of my references cites some subtle faunal differences. Both formations are said to have “numerous mollusks extremely abundant and concentrated in reddish ironstone,” with the Weno faunal spectrum tilted toward distinctly cone spired *Turritella* gastropods, and the Pawpaw lacking *Turritella*.



FIGS 29-32: Weno *Turritella* gastropods



FIGS 33-35: Weno fish tooth above, bivalves below

In some areas I found slabs and chunks of extremely well preserved and densely packed *Turritella*, their white shells clashing with the deep red matrix in a fashion that will display quite nicely at home and in the office. I easily filled a 5 gallon bucket with these specimens alone. I suppose I'll sort out the best and give away the rest. It was this zone where I found most of my ammonites, many of which were *Engonoceras serpentinum*. Later I searched the base of another similar looking bluff where fossils were present but much more sparse. I found more gastropods and bivalves, just no *Turritella*, so I must conclude based on my references that I had ventured into the Pawpaw. My best find here was a 4 inch *Engonoceras* ammonite.