

**Fossil Collecting Report**  
July, 2009  
Daniel A. Woehr and Friends and Family

July 4, 2009: Texas Coast Cornucopia

The boy was with his mama all weekend, so with a little time on my hands I hopped in my at 3 a.m. Saturday, kayak and all gear packed the night before, and made a run to the Port Aransas area with a couple breakfast tacos to keep me company. Around daylight I bought 30 live shrimp and went about investigating a stretch of Corpus Christi Bay that I had never before fished.

After a couple hours spent poking around various oil field channels and drawing a blank I opted to follow one of my favorite approaches to fishing: find a piece of structure in deep water, lob live bait down to the bottom, and lazily kick back until the action starts. I found a concrete work dock in probably 8 or 10 feet of water that was protected from that 20 knot winds so I dropped my mushroom anchor into the outgoing tide and began dropping baits around the wall in fish finding mode.

It didn't take long for my quarry to show itself and soon I had a feisty 12 inch mangrove snapper on the stringer. I tossed another shrimp out in the same spot and thought I had snagged the bottom. I often reel up to the snag and release it by tugging from a different angle and attempted to do the same this time. However it felt like I was dragging a car battery across the bottom this time, and soon my line began to move – the fight was on! After pulling my kayak around a bit the 19 ½ inch black drum finally yielded to the constant tension of my 10 LB line and I was able to ease him into the net and slip the stringer in one gill and out the mouth.

The action stayed pretty constant and I picked up 4 more mangrove snapper in short order, losing the biggest one boat side as I fumbled for the net. Out of bait, my attention focused on a 4 inch pin perch I had caught and thrown in the kayak "just in case". I cut a chunk out of its side with my fillet knife, lobbed it against the base of the wall, then let it fall slowly down the water column. Almost instantly came a massive hookup which resulted in a breakoff on bottom structure. I pitched another chunk of cut bait overboard and was again met by a big hungry fish, this one ripping line off my reel. I stuck my rod half way underwater as it did circles around the boat, and finally the line robbed on my floating bait bucket and popped....I never saw the fish.



**FIGS 1-3:** The author on Corpus Christi Bay with a redfish, black drum, and several mangrove snapper



With my bait bucket and net now in the boat, I pitched another hunk of cut bait. This too was enthusiastically engulfed by a ravenous denizen of the deep. This time I was bound and determined to reduce this leviathan to possession, so accordingly I loosened my drag slightly and didn't try to horse the fish boatside. It too did circles around the boat and soon flashes of gold came into view, followed by upwelling water fanned by a broad tail. The copper colored back revealed the true identity of my worthy adversary: a 24  $\frac{3}{4}$  inch redfish. After several aborted attempts to net this water borne pugilist I finally coaxed it in....and my favorite All Star rod snapped in half just as I scooped up my prize! Oh well, if that rod had to break at least I didn't slam it in a car door. I'll repair that rod in some fashion, but it may not be pretty.

Out of bait but with a decent stringer I loaded up my cooler and car and proceeded on the next leg of my adventure.

A certain spoil island had been on my mind since the last hurricane. I've collected many fossil sand dollars there over the years and hadn't been back since the last big storm surge, so I figured another look was in order. The only problem was that winds had kicked up to 20-25 knots and the bay was white capping. I went anyway, following a course that was more or less protected for 4 or 5 miles, but the last mile would be open water.



**FIGS 4-5:** Pleistocene sand dollars *Mellita quinquesperforata* this and next image (Site 228)





**FIGS 6:** The author, happy to be off the water despite the brine blasted “Flock of Seagulls” hairdo...

With waves quartering from behind me it made for a rough ride but I made it. Maybe 50 good *Mellita quinquesperforata* sand dollars came to hand as a reward for my valiant (or stupid) seamanship. Quartering into those big whitecaps was no fun. They broke over the hull of the kayak and I took bucket after bucket of spray directly in the face, spitting out brine all the while. My bow would rise up and then slam down on the back side of each wave. The wind ripped the hat off my head and my “waterproof” GPS failed due to saltwater infiltration. At one point I told myself that this was in fact a poor decision, it wasn’t worth the discomfort, and that I’d kiss the ground when I got back. Turns out I didn’t have to kiss the ground; Ma Nature brought it directly into my mouth in the form of a sandstorm back by the car.

After a bird bath in a bathroom sink I was “presentable” enough to enjoy some fine dining at a nice restaurant (Hey! Who let that bum in here!) My day culminated in fish cleaning duties followed by watching fireworks over the bay, kicking back and watching some live music, then finding a secluded spot and crashing in the passenger seat of my car for the night.

#### July 5, 2009: The Adventure Continues

I woke up to roaring surf and through the dunes and weeds saw crashing whitecaps. While I had no plans to fish the surf, surely the wind had made a mess of the bays as well. I drove to an inland pit and found a few fossil gastropods but failed to locate the fossil sand dollars I was after.

I pressed on to a river I had been meaning to explore for some time. Deploying my motorized kayak it was soon apparent that water was too low for a constant motorized run so I broke out the paddle and got to work. In the process I found one Pleistocene deer calcaneum (angle bone) before packing up and moving to my final put-in.



**FIG 7:** Pleistocene deer calcaneum (Site 358)

Lightly loaded I found paddling to be a breeze. Soon I arrived at a sandstone bank with big gravel and charismatic chunks of petrified wood. This material was Miocene in age, possibly from the Fleming formation. I was just happy to collect an era not well exposed in Texas. In the end I walked off with 3 good chunks of pet wood and a fist sized chunk of peanut butter colored palm wood, the Texas state gemstone. With its distinctive grain pattern this was a welcome find.



**FIGS 8-13:** Miocene sandstone exposure followed by palm and other petrified wood chunks and Pleistocene deer calcaneum found there this and next 5 pages (Site 358)











With such varied adventure under my belt I was content to head home a few hours early. Young Weston and I enjoyed a pan of sautéed snapper, redfish, and black drum with more of the same fried on the menu for tonight. Maybe soon I'll get to coach the boy through landing one of these whopper reds....

#### July 16, 2009: Mid Week Paleo Escape

Having fished with Weston the previous weekend, I was beginning to get the itch to do some collecting mid week. I elected to scratch this itch after work one day at a Glen Rose site I had found in Comal County some time back, and that site has given up over time not only the highly sought after Glen Rose (108 MYA) echinoid *Salenia texana*, but also several of its more rare counterparts.

There were no rare finds on this particular day, but I did pocket a handful of *S. texana* plus a single *Coenholectypus planatus* in rough condition. Once another big rain rolls through this site will once again present a viable venue.



**FIG 14:** Glen Rose formation echinoids *Salenia texana* and *Heteraster obliquatus* (Site 445)

July 18, 2009: Slipping Down the Cretaceous Dip

John Jackson and I had several possible trip scenarios ready for the weekend....in the end weather conditions dictated where we'd pull the trigger. Due to rain chances along our priority canoeing route we opted for Plan B, an exploratory paddling route that would take us from the Duck Creek Formation (103 MYA) through the Austin Chalk (85 MYA) of Central Texas. Soon after our put-in we grabbed three 4-5 inch *Mortoniceras* ammonites from the base of a bluff - not a bad start. Swift current made for quick runs between exposures and the cool water temperatures made of for a cool boundary layer between the 65 degree water and 100 degree air above us - "coolishness" as John called it, thus adding one more colloquialism to my lexicon of Texas vernacular.

Paddling up a side creek we continued to see more and more broken ammonites, and the heavy detergent smell in the air as we continued upstream spelled only one thing: treated wastewater effluent dumping into the creek. We hiked upstream and saw more and more enticing worn ammonite sections, harbingers of things to come the next day, but in the interest of time we needed to head back to the boat. We soon doubled back to the main stream and let the current hurdle us downstream across minor riffles. We slowed our drift by a low wall of Georgetown limestone and instantaneously spotted fossils in the water. I hoisted a perfect *Macraster* echinoid while John raised a beautiful *Mortoniceras* ammonite from its watery grave. I'm guessing that this section of the Georgetown constitutes approximately the Fort Worth member of the formation, perhaps 102 MYA.

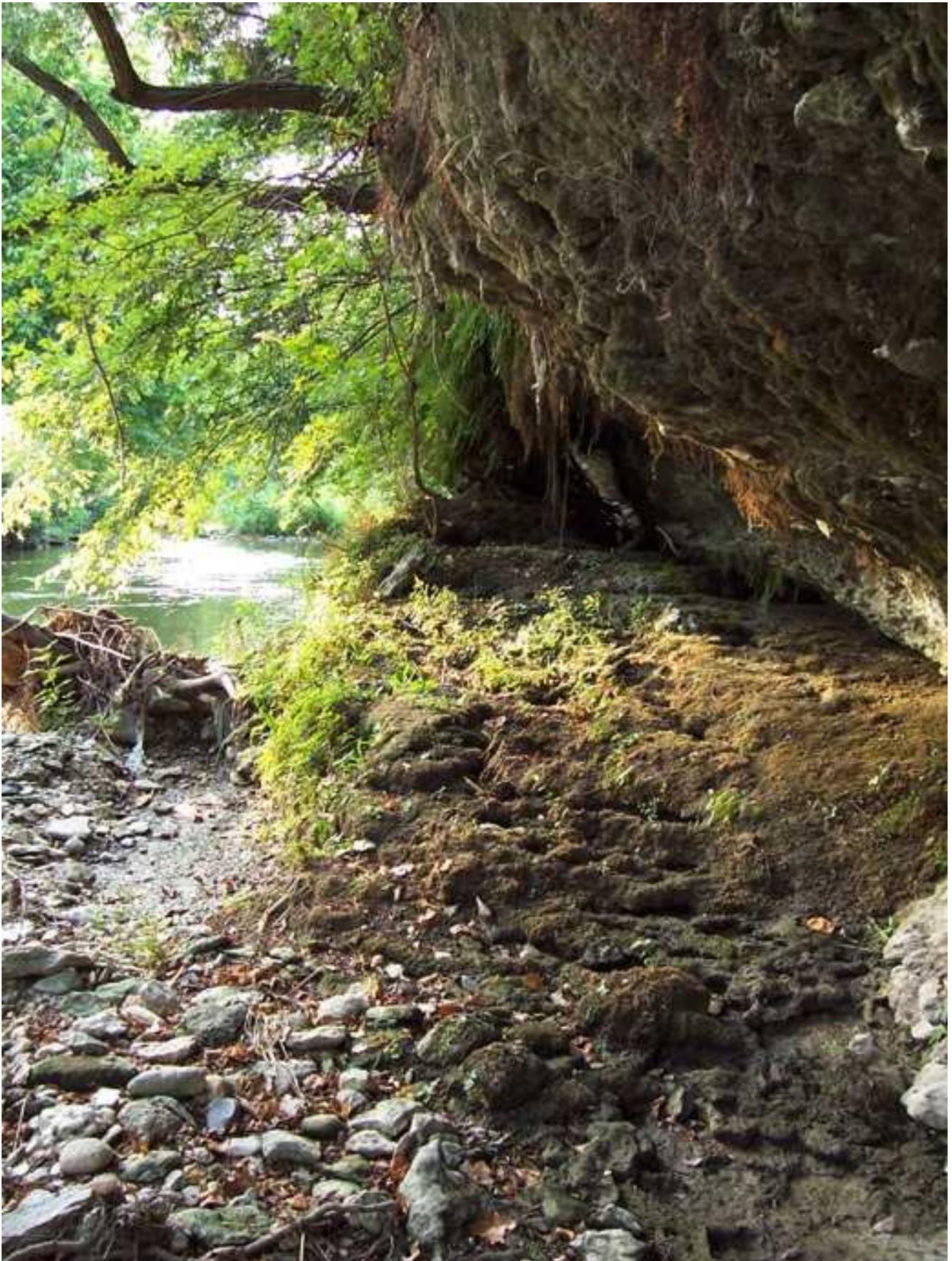


**FIGS 15-19:** The author paddling downstream followed by a nice *Macraster* echinoid and small *Mortoniceras* ammonite found in the Georgetown formation exposed there (Site 509), this and next 3 pages









**FIGS 20-22:** Fern lined springs and spring fed pools at Site 510 followed by the *Mortoniceras* ammonites (left and center) and *Eopachydiscus marcianus* (right) ammonites found in the Duck Creek limestone exposed there



We continued to pick up ammonites here and there, then at a bend in the stream we encountered an exposure of Mainstreet Limestone, thus marking the uppermost member of the Georgetown Formation at roughly 99 MYA. The presence of *Paracymatoceras* nautiloids and *Plesioturrillites brazoensis* ammonites made this hard, massive limestone bench easy to pinpoint in the local geological context. Pressing on to another stream bend we happened upon a weathering exposure of South Bosque Formation, Eagle Ford in age, roughly 90 MYA. Here barren gray shales were overlain with tan limestone and shell hash (noted for shark teeth), some of this limestone having toppled down to water level from above. The first slab I looked at gave up a spectacular *Ptychodus anonymous*

tooth, a big *Cretoxyrhina mantelli* tooth, several *Squalicorax falcatus*, and one *Pachyrhizodus* tooth. Another slab surrendered yet another *Ptychodus* tooth, and John got a few *Squalis* and a slab of small fish vertebrae for his efforts as well. At this site I also found an Indian campsite weathering out of the bank, no good artifacts were found but the flint debitage, shells, etc. made it clear to us that we weren't the first humans ever to visit the area.



**FIGS 23-24:** From the Mainstreet member of the Georgetown limestone a *Paracymatoceras texanum* nautiloid in situ then pictured alongside a heteromorphic ammonite *Plesioturrilites brazoensis* (Site 509)





**FIGS 25-26:** Shark and fish teeth counterclockwise from right *Ptychodus anonymus* (2), *Cretoxyrhina mantelli*, *Pachyrhizodus* sp., and *Squalicorax falcatus* plus an *S. falcatus* in matrix next page, all from the South Bosque fm of the Eagle Ford group (Site 509)



The Austin Chalk presented large white bluffs, but no fossils for us this time. I did however beat out of the exposure a few of the biggest and most beautiful pyrite nodules here that I've ever seen. Nearing the end of our course I had an epiphany.....I had left my keys 10 miles upstream in John's truck! To make a long story short, after sitting by my car in the 100F heat for 45 minutes or so while John hoofed it toward his truck, I was finally able to flag down the 20th vehicle going down the lonely country road and convince two nice guys to pick up John and take him to his truck. That screw up cost us an hour, and placed the cost of dinner on me! Humility comes with a price.



**FIG 27:** Pyrite nodules from the Austin Chalk (Site 509)

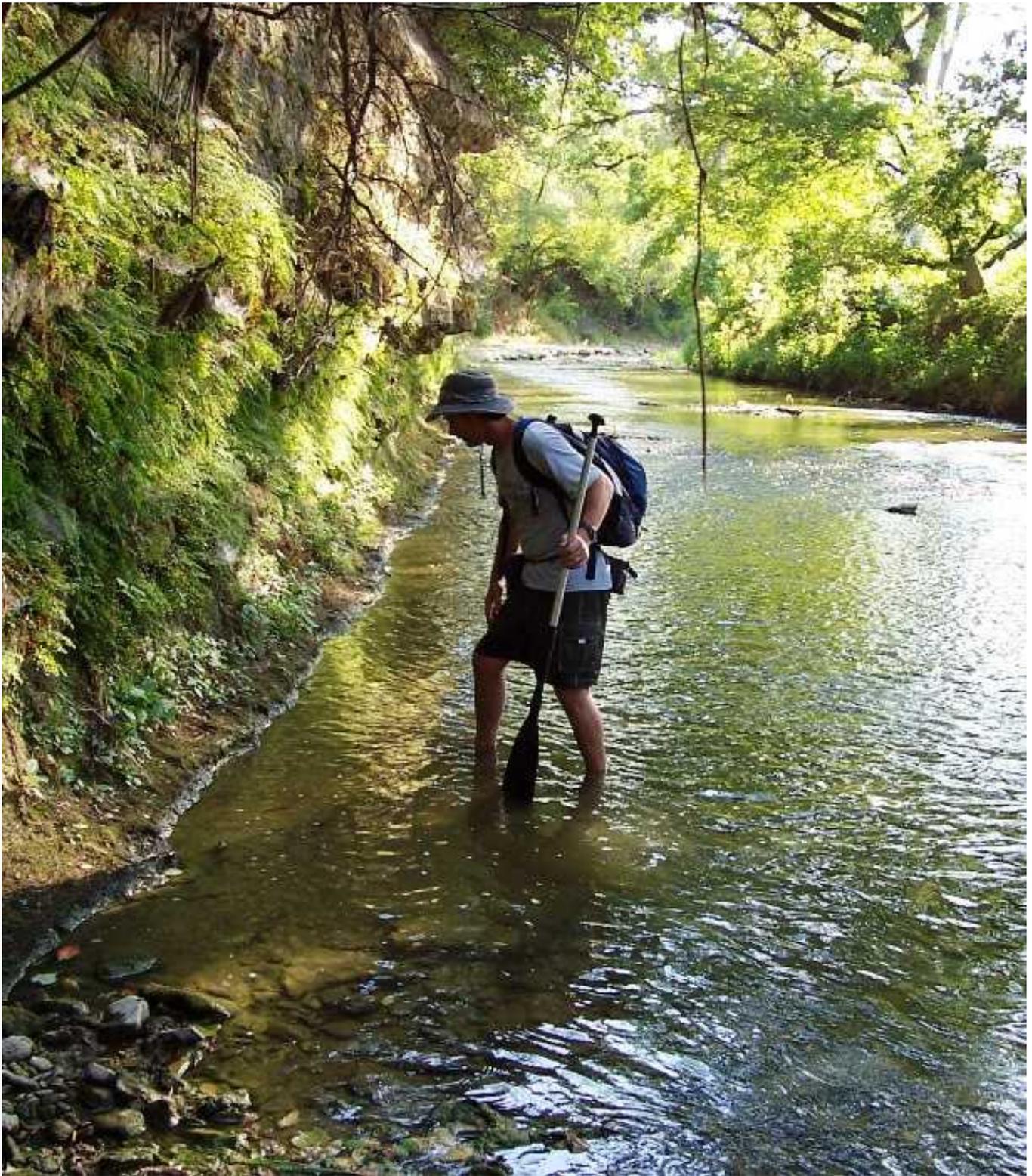
Gotta love summer. We still had daylight to spare so we went way upstream of the sewage effluent in the same side creek as earlier and waded a mile or so downstream, seeing the Edwards (105 MYA) and Kiamichi (104 MYA) limestone before getting into the Duck Creek limestone which began giving up some ammonites. With a short stretch still unexplored, we opted to head back to the vehicles in the interest of daylight. Later that night a look at Google Earth showed exactly what that omitted stretch contained: a 1/4 mile long by 100 foot high bluff of Georgetown limestone and marl - our plan for the next day was set in stone.



**FIG 28:** The author observing the Edwards/Kiamichi/Georgetown formation transition (Site 510)

July 19, 2009: Returning to the Eo-Scene

This time rather than wading the creek we hauled the canoe and took the easy route. I soon landed two small *Mortoniceras* ammonite and one superb 5 inch *Eopachydiscus marcianus*, a zonation marker of the basal Duck Creek. John worked on a big bedded Eo of his own but pulled the plug once he saw he'd never get it out in one piece. Pushing on, we had fun observing carp, gar, and snakes, catching turtles, and observing spring fed pools lined with ferns between fossil exposures. This was a very special and overlooked stretch of water. Downstream we were chagrined to observe that faulting had upthrust the fossil barren Edwards limestone, forcing us to paddle farther down the dip to re-enter the Duck Creek outcrop. We enjoyed the nerdy fun of reading the rocks and concluding precisely what age the strata were at any given location, then reminding each other of what fossils to be on the lookout for.



**FIGS 29-31:** John Jackson pursuing all things collectible followed by the author harassing nature and finally John with a large *Eopachydiscus marcianus* ammonite from the Duck Creek member of the Georgetown formation (Site 510)



Finally we were back in the Duck Creek, and just as I remarked that I found it disturbing that we weren't seeing ammonite keels jutting out of the exposure we were drifting by, John called out, "Look at that *Mortoniceratid* in that fallen block!" I looked and saw a Mort, and we soon realized that there were two nice specimens 3 feet apart, and we had each locked eyes on a different specimen. Mine was smaller but it had the rostrum intact and came out of the block in one piece; John's was huge and spectacular but too fragile to bring home. It will live on through photos. Downstream John spotted a whopper Eo free of matrix in the water and it took both of us to hoist the 20+ inch beast. It would be a long paddle back upstream with several portages, but I convinced John he needed to take this goliath home, and he was later glad I had petitioned him as such.



**FIGS 32-38:** John Jackson and the author discovering, extricating, and displaying a pair of *Mortoniceras* found a few feet apart in fallen blocks of Georgetown limestone this and next 6 pages (Site 510)















**FIG 39:** *Rastellum carinata* oysters possibly from the Denton member of the Georgetown formation (Site 510)

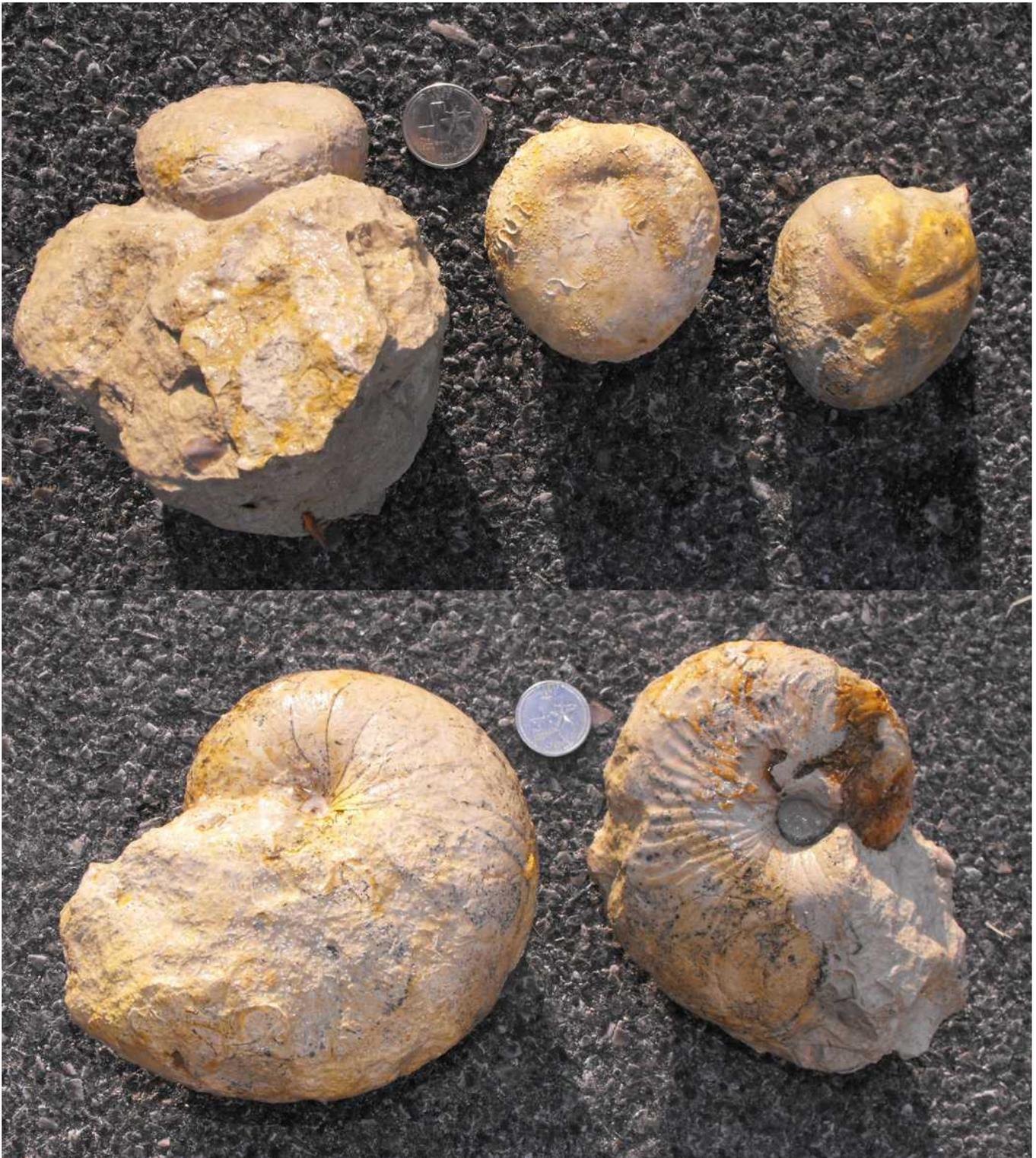
The big bluff we saw on the map was truly impressive, and in places quite steep. It is the only site I know of that exposes continuously the entire section from Edwards to Mainstreet limestone, a sequence of some 6 million years. Strangely the bluff was not very fossiliferous although John grabbed a few *Macraster* and *Holaster* echinoids from mid section, probably in the Fort Worth, while I grabbed one Mac from higher up, probably in the Weno. I also took a few *Rastellum carinata* clams and noted a layer of dense oyster shells, probably denoting the Denton Clay. After immersing our hides in the cool creek water (upstream of the effluent - ha!) we finally made our way back to the vehicles.

We finished the day with yet another new site, a new subdivision cut into the tan, marly hills. Here I immediately found a superb *Paracymatoceras texanum* nautiloid, followed by another, and John found a smaller example of the same. Spreading out, we both found echinoids, John coralling the *Holasters* while I grabbed 3 *Macrasters* with somewhat round profiles, possibly indicative of the Weno member of the Georgetown Formation. Piecing together all the faunal clues, the site appeared to expose the Fort Worth, Denton, Weno, and Mainstreet members of the Georgetown. It was a fun site, but many of the fossils, particularly the echinoids, were a bit more weathered than we preferred.



**FIGS 40-41:** The author pointing out a productive zone in Georgetown formation Site 511 followed by a *Holaster simplex* echinoid found in situ





**FIGS 42-43:** *Macraster* echinoids above and *Paracymatoceras texanum* nautiloids below from Georgetown formation Site 511

All in all it was a great weekend, with every site being new to us, and we found fossils about everywhere we went. So I went home high on adventure with hard earned fossils in tow. I'm ready to go again!

July 21, 2009: Maastrichtian ManVenture

With both of us needing to get out of the house to break the mid week doldrums, Weston and I went out for a bite to eat and he played in the sandbox there before the food came out. He brought a bag of fossils with him to play with

in the sandbox with other kids, and soon I heard him bragging about his recent finds. In the end I heard him tell them, "And I'm never telling you guys about my fossil sites!" As we were leaving Weston gave all his fossils to the other kids, a nice gesture, but then again he knew where we were headed after dinner – to the Corsciana site of course, its 68 million year old marine fossils ripe for the taking, or so we thought.

Upon arrival I outfitted Weston with his Daisy lever action BB gun and some plastic drink bottles. He went to town plinking off his bottles while the Old Man began picking off echinoids while crawling around on hands and knees. .21 inches of rain last week coupled with 95% of the site being freshly graded did little to boost my confidence, but persistence paid off and soon I had a clutch of some 40 echinoids, mostly *Hemiaster bexari* but including some of the more rare finds like a couple *Plesiaster americanus*, one *Linthia variabilis*, and a super exotic *Cardiaster leonensis*. With a few rough *Dakoticancer australis* crabs in my tool apron I'd have to consider it well worth the effort, even if the drought and construction schedule make it one of my final visits to the site.

Weston soon tired of plinking bottles and got into fossil finding mode. His best finds were *H. bexari* echinoids and a killer *Striatocostatum bexanense* gastropod – quite an ornate snail for those not familiar with that particular critter. He understood that our days at the site may be numbered and accordingly showed more tenacity in fossil finding than usual.



**FIG 44:** *Dakoticancer australis* crab carapaces from the Corsicana formation (Site 349)



**FIGS 45-46:** Rare *Cardiaster leonensis* echinoid from the Corsicana formation (Site 349)



**FIGS 47-48:** Corsicana formation echinoids *Cardiaster leonensis*, *Proraster dalli*, *Plesiaster americanus*, and *Linthia variabilis* above, *Hemiaster bexari* below (Site 349)



**FIGS 49-51:** Fossils from the Corsicana formation including nautiloid *Eutrephoceras* sp. above, unidentified gastropods below, and bivalves *Lima sayrei*, *Trigonia castrovillensis*, and unidentified below (Site 349)



However, the call of the BB gun returned, and Weston could be seen running around with jeans and no shirt, shooting wildly at every bird flying by, screaming that he had nailed another one....this could have continued well into the night but at dark I had to call the boy back to the truck to end our perfect adventure...

#### July 25, 2009: Go West, Young Man

Weston has been asking me to take him to Del Rio for a while (not sure why) and since I had little else on the agenda for the weekend we loaded the power kayak on the roof of my car and made the 2 ½ hour run west on Hwy 90 starting early in the morning on Saturday. I grabbed a few breakfast tacos for the road en route in Hondo while young Weston was craving cheese enchiladas for breakfast (he's quite the Texan).

There are a few road cuts on Hwy 90 and Hwy 277 out past Del Rio that expose the Del Rio formation (98 MYA) and here we spent a little time perusing for fossils. I was a bit more attentive than Weston, so he got a little mad when I found all the echinoids – a couple *Hemiaster calvini* and a couple *Coenholectypus*. But he managed to find a few *Neithea* scallops and other bivalves as well as some gastropods, and as typical for the formation we ran into numerous broken ammonites *Plesioturrillites brazoensis* and literally millions of oysters *Ilymatogyra arietina*.



**FIGS 52-53:** Echinoids from the Del Rio formation including one *Hemiaster calvini* (left) and 2 *Coenholectypus* sp. (Site 512)



**FIGS 54-57:** Weston Woehr and the Old Man playing around at Lake Amistad, also Del Rio formation







With our collecting needs satiated and mercury rising toward the 103F mark, it was clearly time for us to deploy the yak in Lake Amistad. Here we spent 4 hours buzzing the shorelines, swimming, and hiking the bluffs. It's a good thing my yak is such a wet ride too. Taking constant spray directly in the face proved a good way to beat the heat.

After letting Weston horse around a while longer we made our trek back east, stopping only to share a big plate of chicken snitzel in D'Hanis while the guitar play plucked his strings and yodeled his way through cowboy tunes. No major paleo finds for the day, just a leisurely day for the boy and his Old Man, a day that left Weston in hibernation for the next 12 hours.