FOSSIL COLLECTING RESULTS MARCH 2005

March 4, 2005

I took a day off work to probe a few local sites. Most were a bust, but I encountered enough goodies to keep things interesting. My first stop in a creek exposure of Pecan Gap float (about 72 MYA) produced a number of partial *Baculites*, a gastropod, and one *Trachyscaphites spiniger porchi* ammonite that I unwittingly smashed into a million pieces as I randomly split a slab of chalk. It would have been a good one too!

FIGS 1-3: Pecan Gap *Baculites*

My next stop was a creek exposure in the Corsicana fm, about 68 MYA. I used to work in a building 200 yards from this site 10 years ago and never knew of the fossil locality. I found this site in an old reference from the 1930's, so I was surprised to find the exposure still workable. I've had better luck finding the natural exposures detailed in those old references than the man made exposures. At any rate, the green and red sandy clay gave up a few cool pieces including a couple gastropods and *Baculites*.

FIG 4: Corsicana gastropod and *Baculites*

A local quarry almost let me in to search for shark teeth, but corporate legal types ultimately put a stop to my plans. A few strikeouts later I stopped at a local road cut in the Lower Glen Rose fm (about 108 MYA). In a half hour I secured 6 or 7 nice *Salenia texana* echinoids, including the biggest one I've ever found at about 30 mm diameter. I'll be taking a family collecting in a few weeks and made a note to return to this spot with them.

FIG 5: Lower Glen Rose echinoids *Salenia texana*

I returned to the Lower Glen Rose site that gave Marc and me a number of micro echinoids the weekend before as we had experienced hard rains in the meantime. An hour of crawling only produced 3 nice little *Salenia* and a couple nice *Paleopagurus* crab claws, so I broke out a shovel and buckets and bulk sampled about 100 LBS of material. I tried to be systematic about it by keeping separate matrix from 3 different areas, then screening and analyzing the results individually. I was happy to get another *Salenia* plus my first *Globator* and *Goniopygus* echinoids along with lots of crab claws and *Pentacrinus* crinoid columnals (stem sections).

FIGS 6-7: Lower Glen Rose *Pentacrinus* crinoid columnals, echinoid spines, crab claws, and echinoids *Salenia* and *Phyllacanthus* fragments left, crab claws *Paleopagurus banderensis* and *Callianassa* right

March 5, 2005

Heavy rains had also washed the site where a small group of us had mined shark teeth in the South Bosque fm (90 MYA) in Travis Co. the weekend before. I kicked off the day by surface hunting the crumbled phosphatic matrix we had exposed after it had been washed by the rain. With no digging, I was happy to land about 30 more shark teeth, with one over 30 mm in length. I grabbed 10 small *Ptychodus anonymus* plus a number of *Squalicorax falcatus*, *Cretoxyrhina mantelli* (shark) and *Enchodus* and *Pachyrhizodus* (fish) teeth as well as a couple small fish vertebrae.

FIGS 8-9: Eagle Ford shark teeth *Ptychodus anonymus* left, lamniforme teeth *Cretoxyrhina* right

FIGS 10-11: Eagle Ford shark teeth *Squalicorax falcatus* (top 3 rows)*, Carcharias, Odontaspis* left, fish teeth *Enchodus* (curved) and *Pachyrizodus* (fat) right

The rain returned and tried to dampen my spirits, but I pushed on. At a large bluff in the Kemp fm (67 MYA) I found nothing, and to add insult to injury, both feet went out from under me at once and I landed on my back in the mud. I left a "mud angel" where I floundered to regain my footing.

My right front brake caliper locked up on the road and my rotor got extremely hot. I was lucky it didn't warp. I pulled the wheel off, let everything cool down, put the wheel back on, pumped the brakes and was fine till I got home. Later in the week I had to put $1000 into the truck…ouch!

While limping home I decided to scout Hays County for another shark tooth site…and scored nicely. I found a little unfenced creek cutting right through the Eagle Ford, which looked strikingly similar to the South Bosque fm farther north. Darkness was creeping in, but I managed to find a red, gritty lens of shark teeth. I picked out loose *Squalicorax*, Cretoxyrhina, *Carcharias* and *Ptychodus* teeth, but as the rain and darkness increased I ultimately mined out as much of the shark tooth layer as I could carry and dumped it in a big box for future analysis. I ended up scoring about 300 teeth (half of them broken) in that 40-50 LB sample including a Plesiosaur tooth.

I paid a huge price for the day's finds, both in terms of finances and bodily discomfort.

FIGS 12-13: Eagle Ford turtle bone left, fish teeth *Enchodus* and *Pachyrizodus* right

FIGS 14-19: Eagle Ford shark teeth *Odontaspis* and *Carcharias* top left, *Ptychodus anonymus* top right, *Squalicorax falcatus* middle left, various shark and fish teeth in matrix middle right, various teeth including *Cretoxyrhina* and plesiosaur lower left, broken teeth lower right

March 10, 2005

While driving the previous weekend I noticed a little creek exposure in the Pecan Gap and returned on my lunch hour to survey it. I saw mainly *Inoceramus* clams, but as I was getting ready to leave, I found a cool compressed *Pachydiscus paulsoni* ammonite which will have a new home in my collection.

FIG 20: Pecan Gap ammonite *Pachydiscus paulsoni*

March 11, 2005

On the way home from work I stopped at a small exposure of Eagle Ford limestone float to look for shark teeth. When I flipped the first rock, I almost jumped out of my shoes. Underneath it was one of those red and black huge millipede things with the yellow legs and antennae…not what I was expecting. He went his way and I went mine. Ultimately I got a good *Squalicorax* and a broken *Cretoxyrhina* tooth as well as a fish vertebra. Not a bad start to the weekend.

FIG 21: Eagle Ford shark tooth *Squalicorax falcatus* and fish vertebra

March 13, 2005

The day started off with moderate success on a field trip with the Central Texas Paleontological Society (CTPS), then turned into a solid finish when I split off and hit some sites on my own. The group met at 8:30 in downtown Bandera, then all 30 of us proceeded to a Lower Glen Rose roadcut in Bandera Co. I had hunted this site before for crab claws and done poorly. The main targets this day were a half dozen undescribed species of free floating crinoids. We stuck around about 90 minutes and did all right. I got not only a *Paleopagurus* crab claw, but also a leg segment from a *Callianassa* ghost shrimp, a few *Heteraster* and *Palhemiaster* echinoids in good shape, and one coveted crinoid, albeit in poor shape. Mike Smith got 2 nice crinoids. Most people found crab material of some sort plus a handful of keeper echinoids. I gave away most of what I found and kept only the best.

FIG 22: Lower Glen Rose echinoids *Salenia texana, Heteraster obliquatus*, and *Palhemiaster comanchei*

Pressing on to another Medina Co. roadcut in the same formation, two more people found crinoids and everyone found irregular echinoids. Bill Thompson and I each found 3 *Salenia texana* echinoids, and Bill got a nice *Coenholectypus planatus* as well. It was fun collecting with the group, but some sites can't support that many collectors, such as the 2 Anacacho sites I found through my own research and planned to hit later. I looked forward to having lots of room to search at my own pace for the rest of the day.

After lunch I was on the first Anacacho site in Uvalde Co. The Anacacho is the western equivalent of the Pecan Gap chalk of San Antonio, placing it at roughly 72 MYA. Lithology changes from beige fine grained chalk in the Pecan Gap to a yellow to tan gritty limestone in the Anacacho. Both have zones of nice ammonites and echinoids of similar species, but the Pecan Gap specimens tend to be more compressed in their preservation.

Anyway, this particular streambed still held some *Phyllobrissus cubensis* echinoids for me after last month's visit. I randomly chipped into a large boulder and got 3 or 4 roulette finds in good shape. Next I worked a cliff edge where huge slabs of limestone had fallen into the streambed. I did quite well by crawling under these fallen slabs and chipping away at specimens, often with

only 3 inches of hammer stroke and grit falling in my face while my legs dangled in the flowing water. Awkward, but productive. I walked out with about 25 specimens, with maybe 5 being pristine and impeccably preserved.

FIGS 23-24: Anacacho echinoids *Phyllobrissus cubensis* and *Hemiaster*? left, gastropods right

Moving back to Medina Co. I entered another streambed and got down to business in the Anacacho, but not before having both feet shoot out from under me, laying my whole body (even my head) prostrate in a cesspool of algae. Undeterred I found a good bench of yellow limestone and extracted a nautiloid, a few cool gastropods, and a couple ammonites including a superlative *Trachyscaphites spiniger porchi* specimen. Upstream I laid hands on a weathered *Salenia hondoensis* and 2 unidentified irregular echinoids. Despite the smell of stagnant algae on my person, it sure was satisfying to see my research pan out. Once I began prepping this material I found a large pinkish tan mosasaur tooth buried in matrix. It was so fragile, it exploded when I tried to get it out. Oh well, I still know where it came from. Perhaps I'll go back for more at a later date.

FIG 25: Anacacho ammonite *Trachyscaphites spiniger porchi*

March 20, 2005

My high school buddy Gil Pulliam brought his two kids Jack and Sarah to Texas for spring break, and I dragged them all out the first day for a little fossil hunting in the Lower Glen Rose formation. By the time we got to the first site, a road cut, even Gil was asking "Are we there yet?" I tend to get caught up in collecting and lose track of time, but this time I kept close track of interest level of my neophyte guests and ended up spending about 30 minutes or so at each of two sites. Each kid got a grocery bag full of gastropods, bivalves, *Porocystis* algal fruiting bodies, and echinoids including *Salenia, Heteraster*, and *Palhemiaster*. Even old Gil snagged a perfect *Salenia*.

Later in their stay I showed Sarah how to prep her fossils using water, a brush, an air scribe, and a microblaster. She actually took interest in it and spent a couple hours prepping her finds.

Those keen eyed kids must have really cleaned up, since the next weekend when Brent Dunn and I returned to the first *Salenia* site, we found next to nothing!

March 27, 2005

Brent and I have been planning for some time to introduce our wives by trading trips on our home turf in Dallas and San Antonio. The whole scheme hinged on the wives liking each other enough so that Brent and I could bail out at any time to collect fossils. It worked! After seeing the sights in San Antonio for a few days as families, Sunday was the day Brent had been waiting for.

We kicked things off at daylight at a local site in the Pecan Gap fm. I gave Brent a disclaimer on the way in so he wouldn't be too disappointed if fossils were sparse. That was completely unnecessary as the next three hours turned up 4-5 *Pachydiscus* ammonites, 3-4 *Trachyscaphites* ammonites, 4 *Echinocorys* echinoids (although one was too weathered to recover), Brent's big *Squalicorax* shark tooth, and a host of bivalves, *Baculites*, and gastropods. I gave most of my good material to Brent since he had never hunted the formation.

FIGS 26-27: Pecan gap echinoid *Echinocorys texanus* and ammonite *Pachydiscus paulsoni* left, various gastropods right

Next we struck out in the road cut I hit with the Pulliams the weekend before. No biggy. We detoured to another site in the Lower Glen Rose where we bulk sampled for micro echinoids. We messed with each other a little throughout the day. While Brent was crawling with his face mere inches from the surface, I came in from the side with my shovel and scooped up the very patch of dirt under scrutiny and dumped it into my bucket.

My bulk sample gave up several echinoids including a *Globator*, an *Orthopsis*, and several *Salenia*. In addition I got a number of crab claws, a crinoid arm, and a wonderfully detailed, 5 cusped little *Protolamna?* shark tooth, my first from the Glen Rose.

FIG 28: Lower Glen Rose microfossils: *Protolamna*? Shark tooth top left followed by echinoids *Globator* (2), *Orthopsis, Goniopygus*, and crab claw *Paleopagurus banderensis*, second row echinoid spine and crinoid arm, bottom row bivalve, gastropod foram, and 4 *Salenia* echinoids

Last we hit a construction site in the Lower Glen Rose which gave up a bevy of *Salenia texana* echinoids. As we reached the most productive zone at the rear of the site, we saw a three collectors heading our way. It was a good thing we got there when we did, because just as they reached us, I found a slab with a *Coenholectypus* and 3 *Salenia* echinoids at about the same time Brent found a big *Loriolia* in *a* nearby slab. Those sharp eyed kids found a pile of regular echinoids of their own, and we chatted and helped them bang theirs out of the matrix. This was the first local competition I've seen in some time.

FIGS 29-31: Lower Glen Rose echinoids in matrix: *Salenia texana* top photos, *Coenholectypus* planatus below

April 1, 2005

I fought Friday rush hour traffic in order to scout a couple of potential sites on the other side of town. The first one was a bust, but the second will prove to be another goldmine. I only had 15 minutes to canvass it, but the large exposure of Pecan Gap has a dense mortality zone of *Baculites* and *Inoceramus* clams. I didn't see any spiral ammonites on the surface, but they tend to show up where I find *Baculites*. All the fossils I saw were excellently preserved and had

a tendency to split away from the matrix easily. I grabbed a few nice specimens and left, but I plan to return soon with a couple eager buddies from Dallas and give this site a good hard look.

FIGS 32-33: Pecan Gap *Baculites*

April 3, 2005

I had to make a run out to Kendall Co to pick up something from my sister-in-law, but built a little scouting time into my schedule. Very near their house I found a bluff of eroding gray Glen Rose marl which when carefully studied gave up a handful of well preserved *Loriolia* echinoids. That's one more for the log book. After a good hard rain I plan to visit this site again as well.

FIG 34: Glen Rose echinoids *Loriolia*

…TO BE CONTINUED