

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

June 6, 2009: Reciprocity in the Upper Cretaceous

A couple summers ago my friend Richard Benefield took me around his native DFW area to some of his better ammonite and crab collecting sites. It took me a while to reciprocate, but with promises of back breaking loads of *Sphenodiscus* ammonites from the Escondido Formation (66 MYA) I talked him into coming down my way for a day. He arrived late Friday night and we stayed up till 3 looking at my collection before getting 3 ½ hours of sleep and getting on the road by 7.

We stuffed a few breakfast tacos down our throats en route to my stream of choice and by 8:30 or so we were on the water, plying our way in my kayak toward the drought-exposed expanses of tan, gritty Escondido limestone that bear the very critters we were after. A half hour of paddling and dragging the kayak finally led us to where the water ended so we donned our packs burdened with many bottles of Gatorade and hoofed it for another several hundred yards.

Gravel gave way to a pronounced limestone bench traversing the width of the stream bed and extending for several hundred yards. A quick scan at one end of the bench had us marking ammonites we intended to beat out. Within 20 yards we ran out of things to mark them with, so we broke out the heavy hand tools and went to town. Richard scored first with a nice *Eutrephoceras* nautiloid, the only one taken that day. Then came an endless stream of *Sphenodiscus* ammonites as promised.

Richard took his time while I did more of a rapid smash and grab. Surprisingly our casualties were few. I think we broke less than 20% of the ammonites we worked on despite the tough nature of the matrix and the fact that some were eroded open, revealing calcite filled hollow chambers, thus weakening them structurally.

Sometimes the ammonites were literally on top of each other like a slid stack of poker chips, and I found 3 ammonites overlapping this way, two *Sphenodiscus* and one unidentified ribbed ammonite, perhaps some form of *Pachydiscus*, the latter my first ever from that formation.



**FIGS 1-4:** Ammonites *Sphenodiscus* sp. from the Escondido formation this and next 2 pages, some eroded open and showing crystal filled chambers (Site 417)







**FIGS 5-7:** Unidentified ammonite *Pachydiscus* sp. this and next page, note suture pattern (Site 417)





**FIGS 8-13:** Unidentified gastropods this and next page 3 pages (Site 417)







We worked the bench for about 3 hours during which time we filled our backpacks with specimens and began getting rather selective, even leaving some of the larger specimens for another day if they were well encased in matrix and hard to remove from the creek without protracted effort. Or perhaps it was the blisters on our fingers

that helped the selection process. I had one the size of a pea on my pinky, but Richard had a huge blister the size of a digit rupture on his middle finger. Strangely he seemed to think it was all worth the experience. We grabbed some large and spectacular gastropods toward, rounding out our take. In the end my back was loaded down by 24 ammonites and some gastropods totaling over 60 LBS, and Richard grabbed 8 ammonites and a nautiloid.

On our way back to the truck Richard remarked that I had put serious effort into finding a site like this one, to which I remarked that you have to do what others aren't, otherwise you'll be left with their scraps. With the kayak on my back we were up the bank and back to the truck. Unfortunately my cell phone had gotten soaked and fried despite the fact that it was in a Ziploc bag – not cool when you are going on a two week business trip first thing Monday morning. Luckily later in the day Richard bought some Pleistocene vertebrae from me – just enough to pay for a new phone.

We raided an outstanding bakery on the way back to town, something I could stand to avoid, but man it was good! I stuffed 12 bucks worth of pastries down my gluttonous pie hole in one sitting mind you. But hey, weekends are my down time and I like to indulge in a “well rounded” experience.

Our final stop was the Corsicana site (68 MYA), the fabled lagerstätte of *Dakoticancer australis* crabs that my fossil buddies and I know and love so well. It seemed that as soon as I began crawling around I instantly got into the shark and fish teeth, most notably *Serratolamna serrata*, *Squalicorax pristodontus*, *Enchodus*, and *pycnodont*. I also found several *Hemiaster bexari* echinoids as well as one *Linthia variabilis* and eventually a crab carapace which I handed off to Richard for practicing prep.



**FIGS 14-15:** Corsicana formation crab carapace *Dakoticancer australis* (Site 349)



**FIGS 16-17:** Corsicana formation shark and fish teeth *Squalicorax pristodontus*, *Serratolamna serrata*, *Enchodus* sp., pycnodont, and crab claw fragment above, ammonite *Pachydiscus* sp. lower left, nautiloid *Eutrephoceras* sp. lower right (Site 349)



**FIGS 18-19:** Corsicana formation echinoids *Linthia variabilis* above, *Hemiaster bexari* below (Site 349)

Catching back up with Richard I saw that he had found 2 nice crabs of his own, so I followed suit by digging one crab carapace out of the ground. Complacent with our finds we actually quit early. I'll soon be in California for a couple weeks and hope to add a little variety to my June collecting report.

June 14, 2009: California Cenozoic Part Deux

But I didn't go back to the hotel just yet. In fact I clipped off another hundred miles to the north and slept in a rest area in the Kettleman Hills area which left me poised for a dawn assault on another site my friend detailed for me.

5:20 a.m. found me awake as the sun came up and by 5:45 I began my 45 minute hike into the Etchegoin formation, a 4 MYA Pliocene marine sequence in middle of the desert. Here I had a singular objective: fossil sand dollars, and if I had a nickel for every one I found that day, I'd be a rich man.

The site was a bluff formed when a dirt road was cut into the side of a hill, and the loosely consolidated brown matrix gave way to a profuse explosion of well preserved *Dendraster gibbsi* specimens. I spent about 2 hours there and filled about  $\frac{3}{4}$  of a gallon bag with these things. Later I sorted out the best of the best and still had 200-300 perfect ones suitable for framing in a Riker mount.



**FIGS 60-66:** Kettleman Hills exposing the Etchegoin and San Joaquin formations followed by *Dendraster gibbsi* sand dollars and unidentified bivalves and gastropods found there this and next 4 pages (Site 506)









Content with my take I did the stomp back to the car, threw down an omelette at the local greasy spoon, and floored it toward my final site for the day. McKittrick Tar pit is a natural asphalt seep in the middle of the desert and is similar to La Brea tar pit with its Pleistocene animal remains encased in tar.

It was mid day in the desert and I was standing on black asphalt, so I opted to only surface hunt instead of blind digging. I did the best in the spoils of the pits where more dedicated collectors had dug previously. Here I found chunks of black matrix encasing small bird and rodent bones, and upon cracking some of them in half I found the metallic green sheen of small beetles – very cool, very cool indeed! I may never get to collect a venue like this ever again.

The bones deep inside these tar clods were obviously black, but the ones on the surface of the clods were chalky white to sky blue, as were the bones found loose on the surface. Crack one of these white bones in half though and the cancellous pores were filled with tar, so I surmised that these were fossils as well. After an hour of this I decided to pull the plug and head for the hotel early as the weekend had been so ludicrously productive that I already had a logistical nightmare on my hands in getting these treasures home.



**FIGS 67-71:** McKittrick Tar Pit and some of the bird and rodent bones and claws and beetles found trapped therein this and next 3 pages (Site 508)







I shipped 100 pounds of fossils home in flat rate boxes and they ended up beating me home, unfortunately with some of the verts damaged in transit. Oh well, now I have more to give away and still have a bunch for myself. I bought a small rolling carry-on suitcase to get some of the better ones home, and airport security had a field day with me! My carry-on was so overloaded that the wheels heated, melted and fell off, forcing me to drag my carry-on through the Phoenix and San Antonio airports. But the best of the best ultimately made it home intact, so I have no complaints.

I look forward to my next SoCal business trip...70 degree climes while San Antonio swelters in the 100s....great fossils.....blackened yellowfin tuna.....macadamia encrusted halibut.....lobster tacos.....walking the beach cliffs at night.....no complaints here!