

FOSSIL COLLECTING REPORT
FEBRUARY, 2007
Daniel A. Woehr and Friends

February 3, 2007: Return to Texas Terrace Deposits

After careful research over time I located a tucked away put-in point on an isolated 15 mile stretch of river which was new to me except for the farthest 3 gravel bars downstream which I had surveyed once the previous summer with good results. The day started with temperatures in the low 30s but I was pretty warm by the time I lugged boat, motor, and related gear 150 yards to the water's edge. Still, I took my neoprene chest waders along just in case I had to walk in water over shin deep. Getting wet in winter conditions 10 miles from the truck is not the best way to maintain my focus while fossil collecting.

Before launching the boat I scanned the adjacent gravel bar with good results. In short I picked up a couple camel toe bones, a horse astragalus (ankle bone), lots of turtle shell fragments, a wonderful glyptodont scute (giant armadillo body armor), and various mammalian limb bones. Just upstream I picked up a gem grade camel tooth in impeccable condition, the only one I've found to date. Things were looking up early in the game.



FIGS 1-6: *Glyptotherium* scute (giant armadillo external body armor) top left, turtle scutes top right, camel toe bones center, horse astragalus (ankle bone) below (Site 379)



FIGS 7-12: Horse astagulus top left, bison bone top right, camel tooth remaining frames (Site 380)

Some bars were small and unassuming but I stopped to canvass them as well. One such bar produced a partial horse maxilla with 3 molars intact as well as a number of turtle and tortoise shell fragments and horse and bison vertebrae. I bent down to flip over a mostly buried piece of bone only to realize that it was my best glyptodont scute to date. I even got a small piece of mammoth tusk bark. It pays to be methodical even when you are getting tired.

Upstream I found yet more vertebrae, a horse tooth and a host of other bones before turning back and pressing a dozen miles or more downstream of my put-in point. Early on I hit a couple productive bars but then hit a dry spell of many miles. Not all bars are created equal.



FIGS 13-17: Unidentified distal femur above probably bison, camel, or horse, mammoth tusk fragment middle left,, probably *Elephas columbi*, glyptodont scute middle right, possibly *Glyptotherium floridanum* unidentified pelvis fragment below (Sites 381-382)



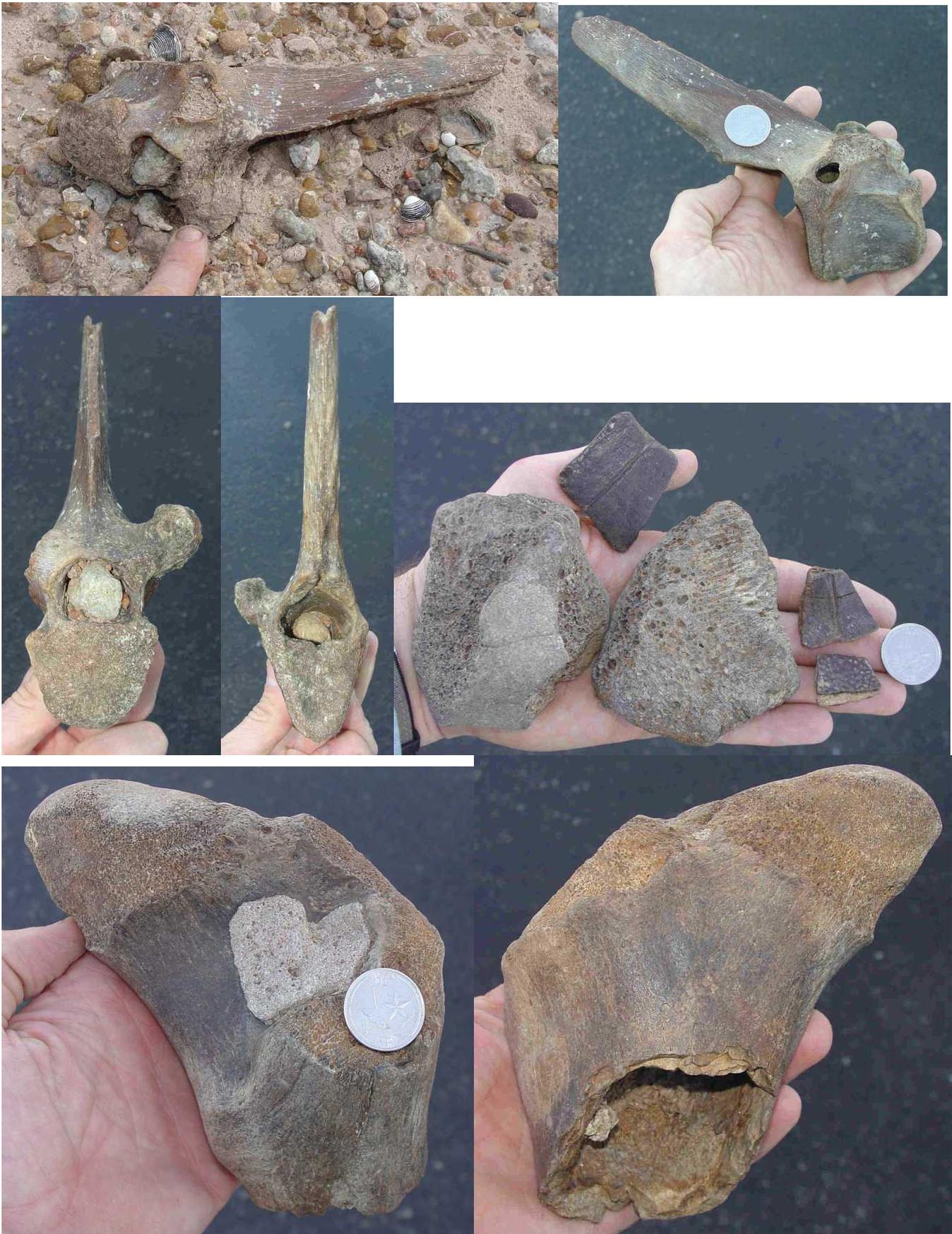
FIGS 18-25: Partial horse maxilla top 4 frames followed by turtle scutes and deer antlers and then unidentified bones and a cool sandstone concretion (Sites 382-383)



FIGS 26-29: Horse tooth and mammoth toe bone (Site 383)



FIGS 30-37: Unidentified vertebrae (Site 383)



FIGS 38-44: Unidentified vertebra followed by turtle material and unidentified distal femur (Sites 301-308)

As I got into more familiar territory I stopped to grid search a small patch of gravel near the head of a bar. I only found one fossil here but it was a keeper, the chevron from a big mammoth vertebra. If the centrum was still attached this would have been one of my best finds of all time.



FIGS 45-48: Mammoth vertebra chevron (Site 307)



FIGS 49-55: Unidentified scapula and limb bone fragment top left, unidentified vertebra top right, two unidentified occipital plates (backs of skulls) below (Sites 301-308)



FIGS 56-63: Turtle material above, unidentified vertebra center, possible glyptodont or armadillo (*Glyptotherium* or *Holmesina*) vertebra below (Sites 301-308)



FIGS 64-69: Unidentified sacrum above, unidentified vertebrae below (Sites 301-303)

The last bar produced some decent fossils, but most interesting was an encounter with a couple big wild hogs. I heard them moving in the brush and closed in within bow range before lobbing rocks behind them to push them out

in the open for a photo. I never got a good picture as they vacated once they saw me. If I had had any kind of weapon with me I would have been dining on fat back later in the week.

Doubling back I found time to peruse all the small bars I had initially skipped over, picking up odds and ends here and there. I arrived back at my put-in point at dusk after 10 solid hours on the water and lugged 2 five gallon buckets back to the truck completely full of bones and teeth. I'll end up keeping the best and donating the rest after cleaning them up and culling out the obviously modern ones. The miles dragged on the way home but I was already planning my next trip in another river system for the following weekend.

February 10, 2007: Taking the Plunge into Fossil Hunting

My coworker Tommy Harris had been asking me to take him out for his first "real fossil hunt" for quite some time and we were finally able to pull something together last weekend. We left my house at around 6 a.m. and headed to an exposure of Escondido clay (66 MYA) known to produce numbers of shark and ray teeth after hard rains. It had been a while since I had visited this site so I figured it would be a good place to meet immediate success before doing a little prospecting.

We arrived on site just after dawn on an overcast day and spent a couple hours methodically crawling the areas known to produce the most teeth. Between the two of us I think we must have picked up 300-400 shark and ray teeth including *Serratolamna serrata*, *Squalicorax pristodontus*, *Odontaspis* sp., *Ginglymostoma lehneri*, *Ischyriza mira*, and *Rhombodus binkhorsti*. We also picked up a number of nice little shark vertebrae and unidentified fish and reptile teeth. Perhaps 10% of the fossils were in great condition and the remainder heavily abraded by ancient storm events, leaving most of the teeth with rounded tips and worn down or missing roots. We still both got enough to justify the effort.

I spent the last 15 minutes bulk sampling a couple areas of the exposure rich both in teeth and small phosphatic nodules as seen on the surface of the clay. I later soaked and screened 8 gallons of clay and picked out a number of macro and micro scale shark, fish, and ray teeth and vertebrae, some of which I've never encountered by conventional surface collecting methods.



FIG 70: Miscellaneous Escondido fm shark teeth, mostly *Serratolamna serrata* (Site 86)



FIGS 71-74: Escondido marine vert material including *S. serrata* teeth and others above, nurse shark teeth *Ginglymostoma lehneri* and crow shark teeth *Squalicorax pristodontus* (second frame), shark vertebrae and fish otolith (earbone) (third frame), ray teeth *Rhombodus binkhorsti* below (Site 86)



FIGS 75-79: Ray tooth *Rhombodus binkhorsti* top left, *Enchodus* sp. and unidentified fish teeth top right, pycnodont fish teeth bottom left, *Ischyrhiza?* sawfish rostral tooth bottom right (Site 86)

Next came our time to break some new ground. I had been eyeballing a particular stretch of river for a couple years and finally committed to exploring it on this day. With one vehicle upstream and one downstream we embarked on our kayak route through Upper Cretaceous Anacacho, Escondido, and Corsicana formations in

addition to Pleistocene/Holocene terrace deposits. Reasoning that it might be smart to stay dry in February I wore rubber boots and a pair of rain pants. Cypress lined rivers tend to have deep holes around the roots of these trees as I found out when I stepped off into an icy abyss early in the trip which put me in water up to my stomach. While my feet and sweats were wet, fortunately the rubber boots prevented water circulation and the rain pants prevented air circulation so I stayed reasonably warm for a while. The only problem was that I had grossly underestimated our route as 7 miles when it was really more like 15, quite a long haul in a low flow river during winter.

Within a couple miles we encountered a ¼ mile long bluff of Anacacho limestone with about 8 vertical feet of strata exposed. A massive yellow limestone overlaid a gray, chalky, recessive limestone and both contained fossils. Large yellow boulders had tumbled down from above and one contained a *Placentoceras* ammonite which was unfortunately broken. The area was littered with *Inoceramus* clams and I picked up a few *Baculites* as well. Toward the end of the exposure I chopped a *Cymatoceras* nautiloid out of the gray layer and we continued on our route. My best find was a 6-8 inch *Pachydiscus* ammonite which required me to whittle down a boulder just to be able to take the thing on the kayak.

We bushwhacked our way a few hundred yards up a tributary creek where we encountered an exposure of gray Escondido clay in the creek bed and slightly up the bank where it was overlain by gravel deposits. I found one black shark tooth blade near water level and a few oysters but nothing of real interest.

Things got rough from then on. The river had many sharp turns, logjams, and small bridges requiring us to drag the boat over gravel bars or get out and portage. At other times huge logs blocked off the river completely and steep banks required us to haul the yak over these trunks while we stood on them. Gravel bars were numerous but fossils were sparse and artifacts never made an appearance. I did encounter some *Pycnodonte* and *Plicatula* bivalves in the float which were diagnostic of the Corsicana fm but nothing worth keeping. I also climbed a huge 100+ foot high bluff of Escondido clay but found nothing (and couldn't see town in the distance either).

In the meantime dusk was approaching, Tommy took a couple inadvertent river baths, river obstacles persisted and fossil exposures were sparse. Cold began to bite at our feet. We came up to another low, long Anacacho bluff which I walked quickly and grabbed a few *Baculites* while Tommy fought with the kayak in the shallows.

"No more stops," I promised as we continued into the fading gloom. Finally we saw lights. This was good because we were approaching town, but bad because it was nightfall and we were still on the river. Tommy convinced me to ditch the boat in the dark near the main bridge in town and walk to my truck rather than take our chances on the river in the dark. We walked 1-2 miles and got to my truck 15 minutes before the park where I was parked was scheduled to lock up. As much money as that truck has cost me in repairs lately I was ready to kiss the thing when I saw it. 8 hours on the river was a bit excessive considering the fact that we only collected for one hour. Soon we loaded up the boat and retrieved Tommy's car upstream.

Tommy went home and hibernated in a cocoon of blankets and said he stayed cold for the entire weekend. We didn't do very well fossil wise on the exploratory leg of our trip, but we did score some good shark teeth early and then benefited from the exercise of 7 hours of constant paddling. My forearms are still pumped up. And the whole experience will help me in my selection of apparel for future wintertime river trips. While this particular river is now permanently stricken from my hit list, I plan to log some miles on a different river during the upcoming weekend.