

# FOSSIL COLLECTING REPORT

December, 2007

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## December 1, 2007: The Early Bird Catches the Mammoth

After seeing the same guy collecting one of my preferred river stretches on the last 2 visits I committed myself to being first on the scene this time, jumped out of bed by 2 a.m., and was in the water when there was barely enough light to navigate the current. The river level had risen in recent weeks and subsided within the last 2 days, making my timing impeccable. Just as there was enough light to collect I arrived at my first bar miles from my put-in point and eagerly assumed a stooped posture with eyes burning the ground. I took my time in canvassing this large bar and found a few things worthy of note. I picked up some turtle and tortoise shell fragments, miscellaneous vertebrae, etc. but the one find that really sticks out as significant was my first sloth tooth, possibly *Megalonyx jeffersonii*. As nondescript as these teeth appear, I've been after one for quite a while, was happy to cross that off the list, and look forward to finding more and better examples.











**FIGS 1-5:** Sloth tooth, possibly *Megalonyx jeffersonii* (Site 308)



**FIGS 6-7:** Unidentified cervical vertebra (Site 308)



**FIGS 8-9:** Various turtle shell fragments above, land tortoise shell fragment below (Site 308)



**FIG 10:** Deer antler base left, unidentified bone fragments center and right (Site 308)

Several formerly gravelly bars were now ensconced in sand, limiting collecting to just a few patches of exposed gravel. Just as Ma Nature had robbed me of access to these bars, she opened up one good enough to make up for the rest. A peninsula of clay and sandstone jutting into the river joined a gravel bar at the bank, making a horseshoe shaped snag for all manner of deceased critters attempting to tumble downstream. A horse tooth and fragment of mastodon or gomphothere tooth came to hand first, followed by a large section of *Geochelone* tortoise shell. A big, mammoth sized humerus or femur ball showed itself next, then a round, shiny, black shape in the sand turned out to be about 50% of the carapace of the pond turtle *Terrapene carolina*. The sandstone adhered to the inside of the shell apparently held it together for the ride downstream.

Then came the find of the day that sent me back to the boat for the camera: jutting up out of the sand at an angle was a large section of mammoth tusk intermittently encased in sandstone. This chunk, quite similar in appearance to the last, is 5.875 inches in diameter, 13.5 inches long, and 17 LBS. Not a bad hunk o'ivory.





















**FIGS 11-22:** Site 306 and the section of mammoth tusk found there – in situ, washed with matrix intact, and finally stabilized with matrix scribed off





**FIGS 23-24:** Unidentified mammoth (?) limb ball joint (Site 306)





**FIGS 25-27:** Camel (?) cervical vertebra in situ followed by same specimen and unidentified vertebra (Site 306)





**FIGS 28-30:** Horse medial phalanx (foot bone) and unidentified hoof core followed by rib fragment, probably modern cow lower molar, mastodon tooth enamel fragment, and possible reptilian limb bone (Site 306)







**FIGS 31-33:** Most complete Pleistocene turtle found by author to date followed by 2 fragments of *Geochelone* land tortoise shell and a turtle shell fragment (Site 306)

My travels downstream produced an apparent scapula fragment from a mammoth sized critter plus a few other goodies. 10 miles downstream of the truck I decided it was time to head back, but the motor over revved and caused me to investigate. I suspected that too many hard hits had caused the shear pin to gouge out the hub of the nylon prop, and my water's edge prop swap confirmed exactly that. However the condition reappeared soon after, was later confirmed as a transmission problem, and forced me to run upstream at a scant 4-5 MPH, barely bucking the current. A quick look at one last bar produced a nice glyptodont osteoderm, a small piece of mammoth tusk, and other assorted odds and ends.





**FIGS 34-35:** Mammoth scapula section (?) from Site 305





**FIGS 36-39:** 3 views of a horse medial phalanx (foot bone) followed by a mammoth ball joint and *Geochelone* tortoise shell fragment (Site 305)

A couple hours later I made it back to the truck but had to postpone working a certain leg of the river. The boat had several minor leaks that my hurried, slipshod workmanship did not fix earlier in the week as I found out once on the water. I spent the day pushing goop into the holes and bailing constantly to stay above water. With a little love and maintenance in the garage this week I should be back in running order soon.



**FIGS 40-41:** 2 views of a mammoth tusk fragment (Site 379)



**FIGS 42-43:** Bison tooth and glyptodont osteoderm above, horse metapodial and camel(?) limb bone below (Site 379)





**FIGS 44-45:** Tortoise shell fragment above, turtle shell fragments below (Site 379)

I had one more easy access site 45 minutes drive away, so I packed up, hauled butt, and dropped the boat in for one last round that would take me to dark. It was a slow run with the degraded engine performance, but I made it and commenced to scouring the ground to little avail. I picked up a couple ribs, sections of turtle shell, and a nice horse molar before calling it a day and heading home. The pressure is on to get my equipment in order ASAP as I plan to test its limits again next weekend.







**FIGS 46-48:** Unidentified bone fragment, horse molar, and turtle fragment above followed by 2 close ups of same horse molar (Site 414)



**FIGS 49-50:** Unidentified rib sections above, turtle and tortoise shell fragments below (Site 414)



**FIGS 51-52:** Unidentified vertebrae above (Site 414), composite horse lower leg below

December 8, 2007: A Quick Paleo Diversion

I know I said I was going Christmas shopping, and I did for that matter, so efficiently in fact that I was able to make a quick hit on a Del Rio/Georgetown site while flying under the spousal radar. Finds were few but still pretty cool. I grabbed a decent *Hemiaster* sp. echinoid and a small chunk of matrix containing a nice *Plesioturrillites brazoensis* ammonite and a rough *Coenholectypus* sp. echinoid. Multi species presentations are always a cool addition to any collection. I was also happy to beat a rare Austin Chalk ammonite out of another creek and get on home in record time.









**FIGS 53-56:** Two views of a *Plesioturrillites brazoensis* ammonite and *Coenholectypus* sp. echinoid in matrix followed by a *Hemiaster* echinoid from Georgetown fm Site 151 followed by an unidentified Austin Chalk ammonite, possibly *Submortoniaceras*, from Site 14

December 9, 2007: Return to Pleistocene Paradise

For this outing I selected another Texas river lined with gravel bars and banks and got an early start, arriving at the first site around 2 a.m., grabbing 3 hours of sleep in the back of my truck, and stomping deep into the outback under a blanket of stars. The first 45 minutes of my adventure took place in the beam of my flashlight and produced a horse metatarsal and some other goodies. Pressing on to one of my favorite gravel banks I picked up first a couple of ribs and a worn camel upper molar followed by a cool partial horse jaw with one molar intact. The symphysis (point of the jaw) was intact but the incisors were gone. Still it is a good piece, studded with pebbles in sandstone. I made it out with perhaps 20 LBS of good material, leaving the anomalous bone chunks where they lay. I grabbed a few verts, weathered hunk of mammoth tusk, etc. One of my favorite finds came on my way out, an *Alligator mississippiensis* osteoderm, the first of its kind in my collection.







**FIGS 57-59:** Camel upper molar (Site 157)





**FIGS 60-62:** Horse mandible (Site 157)



**FIG 63:** Misc bones (Site 157)



**FIG 64:** Misc horse and bison bones (Site 140)





**FIGS 65-68:** Weathered mammoth tusk fragment (Site 140) followed by *Alligator mississippiensis* osteoderm, 2 deer antler sections, and 2 turtle fragments (Site 132)

From there I drove an hour and hauled boat, motor, and gear down a steep bank to the water's edge. Considering the engine trouble the previous weekend I opted to run upstream this time in case of problems. The engine again began over revving and now I believe I have worn gears in my lower unit. I'll bite the bullet and just buy a new lower unit for my engine and save the other for spare parts. As much as I depend on my equipment I can't take chances by being a cheapskate. A couple sticks of plumber's putty appeared to put an end to the troubling leaks I had experienced the previous week so at least I didn't have to worry about that too.

In a half hour I arrived at the target sand and gravel bar and beached near the tail. This particular horse shoe bar has little gravel near the water's edge. Most of my better finds tend to come from up higher and there aren't any sizeable banks upstream, so I'm guessing that this bar is an eroding gravel terrace. I have found 2 spear points there in the past but laid hands on none this trip. Instead I found some decent fossils. My favorite finds were a couple *Holmesina septentrionalis* osteoderms (giant armadillo body armor plates) although I grabbed a horse upper molar, end of a mammoth limb bone of some sort, palm sized chunk of mammoth tusk bark, some vertebrae, turtle and tortoise frags, etc.



**FIGS 69-70:** Giant armadillo osteoderms from *Holmesina septentrionalis* (Site 210)





**FIGS 71-72:** Mammoth limb bone end (Site 210)





**FIGS 73-74:** Unidentified vertebrae followed by unidentified partial scapula, bison horn core tip, bison astragalus, and mammoth/mastodon skull fragment (Site 210)



**FIGS 75-76:** Horse upper molar and deer phalanx (Site 210)







**FIGS 77-79:** Glyptodont osteoderm (Site 210)





**FIGS 80-81:** Turtle shell fragments followed by mammoth tusk fragment (Site 210)

Miles later I landed on yet another big bar. Just as I beached the boat I noticed a piece of honeycombed bone a few inches underwater. It turned out to be a chunk of mammoth skull. My walk was a long one and my feet were tired. I picked up lots of the standard horse teeth, a bison tooth, *Geochelone* tortoise shell fragments, various turtle shell frags, vertebrae, etc. but my concentration began to fall off as I became a little exhausted. I began to daydream about finding a mammoth tooth or spear point and wondered what that would do for my energy level. I was as whipped as a Cherokee Indian limping down the Trail of Tears. Right on cue I looked down and caught the glint of a shiny brown triangular object...it was a nearly perfect 3.265 inch spear point! It had a minor ding on one of the barbs but was otherwise perfect collateral flaking on one side and random flaking on the other. This clearly stood out as the find of the day.





**FIGS 82-84:** Mammoth skull fragment followed by horse teeth (Site 373)



**FIGS 85-86:** 2 unidentified ulnas, distal bison metapodial, and proximal horse or bison tibia followed by tortoise shell fragment (Site 373)



**FIG 87:** Turtle shell fragments (Site 373)





**FIGS 88-92:** Spectacular spear point (Site 373)

With the slipping in my engine's lower unit it was a slow ride back to the truck but I made it out with a little daylight to spare. I can't wait for the next adventure.