

# FOSSIL COLLECTING REPORT

NOVEMBER, 2007

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November 7, 2007: Pilgrimage to Pristine Pleistocene

With my little brother in town followed by my Mom over the last couple of weeks I downscaled my collecting efforts to spend time with family. However now a ramp up of collecting vigilance is in order. As a lover of all things Pleistocene I opted for a river excursion after convincing my boss that a day off mid week would be a tremendous morale booster and resulting boon to my current design project. I navigated treacherous waters around the wife as well and made it out the door with no shots fired.

Always miserly with daylight I eased into the river valley cloaked in darkness. I could almost hear the morning bellow of the mighty Columbian mammoth, the limb shaking commotion of an outstretched giant ground sloth standing on its haunches and feeding on leaves 20 feet above the ground, and the heavy cadence of footfalls of a lumbering glyptodont. I could feel the hot breath of a short faced bear on my neck, hear a tapir testing the wind with its overhung snout, and feel the piercing eyes of a saber toothed cat peering down on my from his lofty parapet in the canopy of trees, silently tracking my every move, hopping from limb to limb right above me. I found myself in position after a long hike just as enough collecting light had gathered to warrant scanning the ground. My first stop was a high bluff in the river, the very same "paleo pagoda" of sorts which produced my 25 inch section of mammoth tusk months ago.

The bluff is a veritable panettone of marbled swirls of red clay, yellow sand, and polychromatic gravels. Scanning the surface just above the waterline produced several interesting specimens. First I locked eyes on a peculiar oblong, gravel studded shape 15 yards ahead and quickly closed the gap. It turned out to be a 22 inch, probably complete limb bone of some sort. My best guesses fall in the categories of *Camelops* sp. tibia or sloth or mammoth fibula, but I may never be sure because I plan to keep this specimen as found with adhering matrix intact. It had a crack through the middle which I attempted to stabilize but it ended up breaking in half on the way back to the truck. With a little epoxy it is now in good condition again.

With my focus on that bone I almost overlooked another significant find 3 feet away – a killer fossil horse mandible *Equus* sp. with 3 ½ molars intact, the whole specimen sporadically covered with sandstone – this was a very cool find, my best of its kind.

Farther down the bank a pattern of grooves on a cylindrical object buried in the mud caught my attention. This heavily mineralized specimen turned out to be a 13 inch section of horn core from *Bison latifrons*, the huge 5000 LB bison twice the size of its modern descendent, *Bison bison*. The former had straight horns spanning 6 to 7 feet tip to tip in mature bulls. This find was the first of its kind for me so it too was eagerly annexed into Woehr's Pleistocene Parlor.









**FIGS 1-9:** Unidentified limb bone beautifully encrusted in gravel, section of horn core from *Bison latifrons*, and a marvelous section of *Equus* sp. horse mandible from Site 157

Moving on to a few gravel bars I spent the next 4 hours grid searching and bagging various limb bones, vertebrae, sections of turtle and tortoise shell, deer antler sections, a piece of alligator skull, a nice scute (body armor plate) from the giant armadillo *Holmesina septentrionalis*, a complete sloth caudal (tail) vertebra, and other goodies, but no mammoth, tapir, or sloth teeth (my high priority target finds). My backpack was completely full of bones and I had three 2 gallon Ziploc bags full of material to lug out with 2 miles to go. The load was as heavy as any productive ammonite day I've personally experienced. I had to stop often, drop the bags, forge ahead, drop the pack, double back for the bags, etc. With arms, back, and shoulders worn out I at times just leaned over to change the angle of the load for a brief respite. My hips were shot by the time I made it to the truck. In fact I walked with a

limp for 3 days. I confirmed that my finds over that stretch tipped the scales at 90 lbs. Such is the price of high adventure in the Texas outback.



**FIGS 10-11:** Camelid metapodial and unidentified humerus above followed by two horse molars and miscellaneous jaw sections second frame from Site 140



**FIGS 12-13:** *Odocoileus virginianus* deer axis (first cervical) vertebra and antler sections above, *Terrapene carolina* turtle trap door, *Mammuthus columbi* tusk fragment, and *Alligator mississippiensis* skull fragment below (Site 140)



**FIGS 14-15:** Miscellaneous limb ends above, *Bison* sp. calcanea and horn core scrap below (Site 140)





**FIGS 16-17:** Giant ground sloth caudal vertebra followed by unidentified cervical and other vertebrae (Site 132)



**FIGS 18-19:** Giant armadillo scute *Holmesina septentrionalis* followed by unidentified sacrum (Site 132)



**FIGS 20-21:** 2 horse teeth and mammoth enamel fragment above, *Equus* sp. calcaneum (ankle bone) and *Bison* sp. astragalus (ankle bone) below (Site 132)



**FIGS 21-23:** Bison and horse phalanges and calcaneum above and finally miscellaneous horse, bison and deer limb bone ends (Site 132)

Pressing on 50 miles to another stretch of river I was able to mobilize all my equipment to the river's edge within 15 minutes of parking. Downhill is always a piece of cake. I ran the boat several miles to a bar that has been productive in the past, having given up a sloth jaw, horse jaw, human skull, partial mastodon tooth etc. over time. This time it appeared that somebody had beaten me to the bar based on footprints and other disturbances in the sand and gravel, but honestly I could not determine their objective. I saw a few nice, keeper bones which had been kicked, lifted, or otherwise disturbed, but still in the same place deposited by the river. At first I wondered if a very discriminating collector had picked only the best specimens from the bar, but later thought otherwise. A serious collector would have worked the bar more systematically, and would not have left the nice horse teeth, vertebrae, and possible *Glossotherium (Paramylodon) harlani* sloth claw core I found on the bar.







**FIGS 24-27:** Cool giant ground sloth claw *Glossotherium (Paramylodon) harlani?* (Site 373)



**FIGS 28-29:** *Equus* horse molars (Site 373)



**FIGS 30-31:** Miscellaneous limb bone ends above, *Geochelone* land tortoise shell fragment and two unidentified vertebrae below (Site 373)

Soon I ran out of daylight and had to run back to my put-in and get out by dark. Several hundred feet of rope and a straight shot made for an easy equipment yank up the bank. The sloth claw was the best find on that stretch, a good enough find to make even the most seasoned collector's day. The total take for the day was 110 lbs, probably the most I've ever picked up, but after preliminary cleaning and sorting I culled out over half for donation to kiddie programs. Still, I'm patiently awaiting a few rarities I know are laying out there somewhere for my buddies and me...

#### November 17, 2007: A Tale of Two Rivers

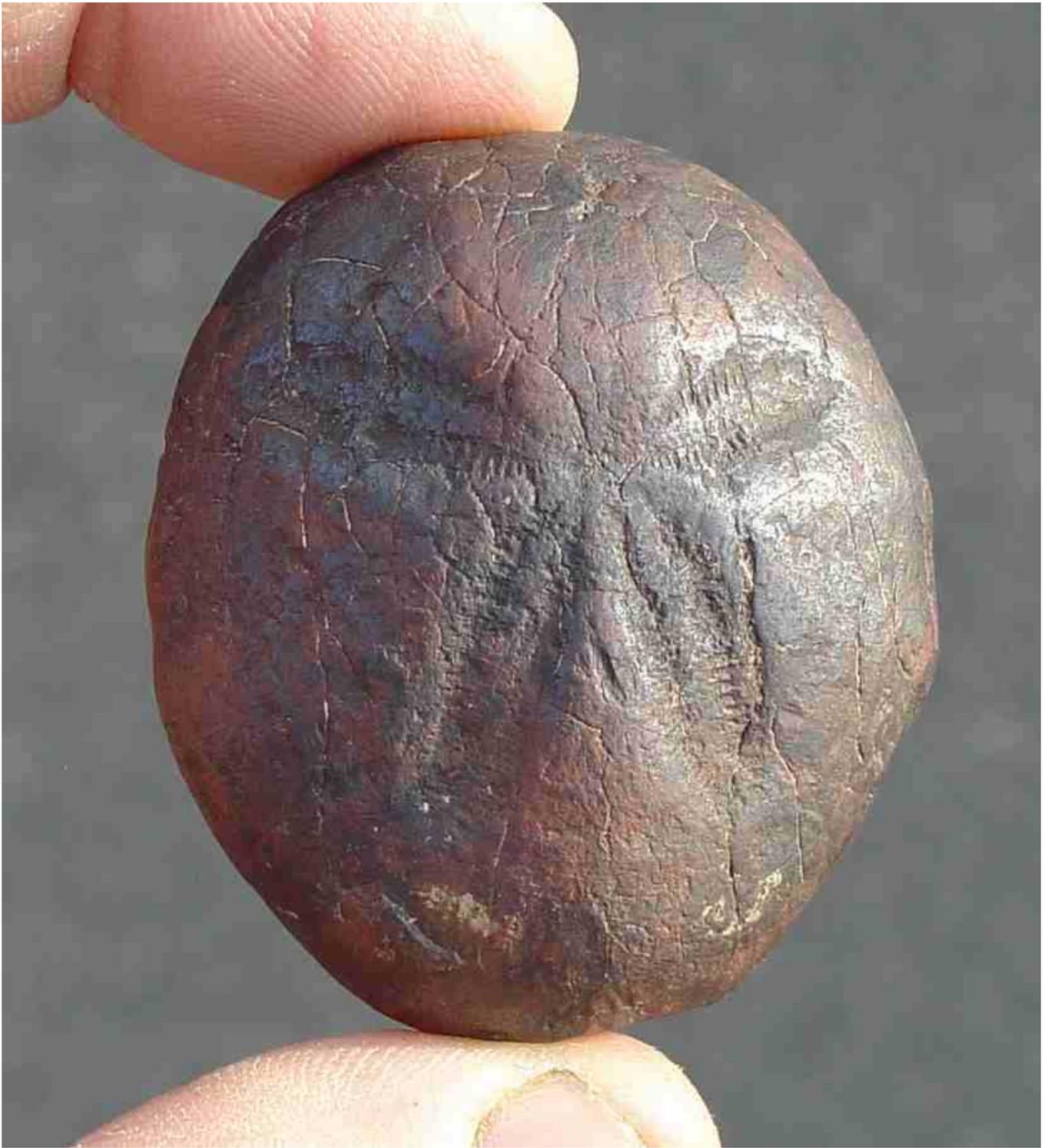
My friend Ron Hunter flew from Washington D.C. to Dallas last week for personal business and had a day to burn so I reserved him a motel near a remote stretch of one of the major Texas rivers and then met him there for a day of collecting. After some huffing and dragging we had my boat, motor, and ancillary equipment in the river and were steaming upstream. Bluffs of Weches limestone and sandy clay (Eocene in age, roughly 45 MYA) were exposed in the banks, and the harder ledges formed the bottom of the river which soon got up close and personal with the lower unit of my engine, forcing me to drag the boat upstream through the shallows.

We took an hour or so to explore one of the longer bluffs hoping to encounter the crab *Harpactocarcinus americanus*. In short our search turned up no crabs, but in the nodules that had collected at the base of the exposure I picked up a peculiar object which turned out to be the echinoid *Eutapagus carolinensis*. I picked up a cool solitary coral as well as a pyrite dusted gastropod found inside a nodule cracked open with my hammer. Due to scant finds and poor navigability we pulled the plug, headed back to our put-in, and had our boat pulled up the bank by an obscure lift system (see images).



**FIGS 32-34:** Two views of Weches fm Site 418 and a coral and gastropod nodule from there









FIS 35-39: Weches fm echinoid *Eutapagus carolinensis* (Site 418)



**FIGS 40-41:** Taking the river trolley out of Site 418

Miles away in another river exposure we looked for the same crab species in a slightly younger formation, the Cook Mountain fm. We did poorly here as well. I may have picked up one really rough crab but that was about it other than the cool finger sized coral I plucked in situ from the exposure. We packed it up and ran for another river.



FIGS 42-43: *Archohelia singleyi* corals and inner mold of crab carapace *Harpactocarcinus americana* (Site 419)

Again we lugged the boat etc. down to the river, jumped in, and yanked the ripcord, and yanked the rip cord, and yanked the rip cord..."This never happens!" I told Ron. At least we were stuck right by our put-in point and not miles from it. I tried starting fluid, tried to clear a flooded carb, etc. We soon deduced that we were getting no spark. I pulled the plug and dropped the spark plug wrench in the water as the plug broke free...oops!

I threw an old plug in place and just as we had pronounced this leg of the trip a bust, with a couple half hearted yanks the engine sputtered to idle speed. Ron made me shut it down and restart it several times to guarantee reliability as our plan was to run miles downstream. Since it was late afternoon we opted not to replace the cowl on the engine in the interest of time, so we must have really looked like rednecks running around in a beaten up 12 foot jon boat pushed by a tiny engine with no cowl. On top of this I discovered not one but two leaks in the floor near the transom and had to periodically operate the bilge pump (Gatorade bottle with the top cut off). At least the depth finder (broom stick jammed into the water periodically) was in proper working order.

We landed on a big gravel bar and commenced our search. I found a scrap of mineralized bone but we saw little else, losing confidence when we saw stacked pieces of petrified wood, the signature of the fossil collector who had beaten us to the punch. Pressing downstream we landed on another bar. This one too had signs of human presence, but apparently not from collectors as Ron threw an 8 inch piece of worn mammoth bone at me. I then picked up a big bison or camel calcaneum (ankle bone) and gave it to Ron as I had taken several on a trip the previous week.

Ron then found another sizeable chunk of mammoth bone while we walked along a high spot in the bar. A sliver of bone caught my eye as I blabbed to Ron about the cool horse jaw I had found on the previous week. I picked up the mass of sandstone and pebble conglomerate and soon saw that I had found another horse jaw section with 2 molars in place, my best find of the day.





**FIGS 44-45:** Pleistocene horse jaw *Equus* sp. in conglomerate nodule (Site 420)

With dusk looming not far off, I left that bar to Ron while I jumped in the boat and raced a couple miles downstream to the next one. It was in a bend of the river and appeared not like a bar as much as an upper and a lower gravel terrace eroded in place by the current as the river wrapped around it. While the bank had all the right characteristics of a great site, I saw nothing but cow prints in the fading light. Rain drops began falling so I gassed up and jumped in the boat as the first of many lightning bolts lit up the dim sky nearby.

I had no hat and soon gave up on using my hand as a brim as I drove wide open throttle into the unforgiving maelstrom. Ron's water taxi picked him up 15 minutes later and we were thoroughly doused to the underbritches on the ride back upstream. I'm glad it was a safe, deep stretch with little current as we really didn't need to stop to change a shear pin too. Besides, my hands were full steering and bailing out gallons of water while Ron occasionally probed the depth. Arriving at the bridge in near darkness, we tied a rope to the boat and yanked it up the bank while my back tires spun in the mud and fought for purchase.

The day was light on good finds but high in the adventure category. All the sites were new to both of us and taking chances on many new sites is the way I end up logging a few good ones every now and then. I look forward to running out to DC this winter to enjoy a guided trip from Ron in his neck of the woods.

#### November 22, 2007: Thanksgiving Day Fossil Snatch

Somehow I convinced my wife that an a.m. assault on some San Antonio area creeks would be good use of time before we had to leave for Thanksgiving festivities, so I donned my foul weather gear and headed for the field. My first stop was a ditch exposing the contact of the Georgetown limestone and Del Rio clay (98 MYA) which I had worked pretty heavily in the past and then let lie fallow for a while. Last summer's incessant rains inundated Bexar County and kept local creeks full to the brim. All the while I targeted other sites where collecting was optimized by wet conditions, knowing that with patience, area creeks would be in good shape soon enough.

As closely and methodically as I had grid searched the Del Rio ditch on my knees my confidence was low in its current collecting potential. But the combination of soft matrix (clay), flowing water, and time worked together to rejuvenate the site. In short an hour of work produced about 10 *Coenholectypus* sp. echinoids (half keepers), a partially squashed but complete *Hemiaster calvini* echinoid, several big *Neithea* sp. bivalves, and a couple

*Plesioturrillites brazoensis* ammonites. It was a worthwhile stop but since the site is small I plan to give it a rest until the next flood subsides.







**FIGS 46-49:** Echinoids from the Del Rio/Georgetown fm contact 3 views of *Coenholectypus* sp. above and *Hemiaster* sp. below (Site 420)

Pressing on I relocated to a creek site exposing a bench of yellow limestone whose lithology and fauna suggest to me that it is a transitional phase between the Pecan Gap and Anacacho formations (72 MYA). Another hour or so of work here produced nice *Pachydiscus paulsoni* and *Trachyscaphites spiniger* ammonites, unidentified bivalves and gastropods, and a cool echinoid that appears to be *Linthia variabilis*. By crawling I found some small and well preserved ammonites. With a full backpack and the countdown to Thanksgiving dinner on, I packed it up and headed back to the house.



**FIG 50:** From the Pecan Gap/Anacacho fm transition at Site 266 we have ammonites *Pachydiscus* sp. (fine ribs) and *Menabites(?)* sp. (coarse ribs and larg tubercles)



**FIG 51:** One of the better *Pachydiscus* specimens from Site 266



FIG 52: Ammonites *Trachyscaphites spiniger* from Site 266



**FIG 53:** Pecan Gap/Anacacho echinoid *Linthia variabilis*(?) from Site 266

November 25, 2007: Ammonite Wheel of Fortune

We awoke to cold drizzle on the last day of our 4 day weekend. After spending some time with family the rain stopped and I opted to walk a local creek exposing the Dessau formation of the Austin Chalk (75 MYA) with heavy hammer in hand to wrestle with some ammonites in the hard limestone. The first one I encountered appeared to be a *Peroniceras* or *Prionocycloceras* specimen in hard packstone. My 3 pound hand sledge did little to free the entombed ammonite, but natural joints and fissures surrounding the 375 mm specimen leads me to believe that if I return with a 20 LB sledge and 3 foot pry bar I can get it out in a block, then haul it out with my dolly.



**FIG 54:** A view of Dessau fm (Austing Chalk) Site 317



**FIG 55:** Ammonite in situ, possibly *Peroniceras* sp., that I plan to beat out at a later date with my 20 LB sledge and then haul out with a dolly (Site 317)

Pressing downstream I encountered a big *Peroniceras* ammonite that spanned a whopping 22.5 inches in diameter. I had little confidence that I'd be able to get it out but after about 30 minutes I had completely trenched the specimen and it began to loosen from the creek bed. Unfortunately it came out in 2 pieces and was so thin in the center that the cingulum disintegrated. Still, with ammonites size matters so I lugged this thing back to the truck but not before beating 2 *Parapuzosia americana* specimens out of the creek bed, both coming out in 2 pieces but they superglued back together better than the big ammonite.







**FIGS 56-58:** 22.5 inch *Peroniceras* sp. (?) ammonite from Site 317, the largest diameter ammonite I've collected to date, Weston Woehr for scale









**FIGS 59-62:** In situ and prepped views of two *Parapuzosia americana* ammonites from Site 327



**FIG 63:** One more ammonite I plan to beat out and haul away at a later date at Site 317. I may need to epoxy the back of this one in the ground before the hammering starts

My legs were in low gear when hauling out 75-100 pounds of ammonites and it took me a half hour with 2-3 stops to cover the mile back to the truck. November was a fruitful fossil month and I look forward to December to be the same or better.