**FOSSIL COLLECTING REPORT**
February, 2010
Daniel A. Woehr and Friends

February 4, 2010: Lunch Hour Adventure

After wolfing down lunch at my desk I was able to don appropriate gear and scramble fast enough to milk 30 minutes of collecting out of my lunch hour. Destination: a bluff of Austin Chalk, probably Dessau formation, roughly 85 million years old. I thought I had given the place a fairly thorough look in recent weeks, but a couple inches of rain got my curiosity going again, hence the return visit while things were still wet.

As thoughts of work began to draw me back to my car I noticed it tucked back in the shadows….a nickel sized regular echinoid, possibly *Phymosoma hilli*, a very rare find indeed. Time well invested, with great satisfaction I worked my way back to my vehicle and got on with the work day.

**FIGS 1-3:** Austin Chalk regular echinoid *Phymosoma hilli*? this and next 2 pages (Site 16)

February 6, 2010:  Working the Freshly Washed Washita

The ground was wet so it was a good time to look at the Corsicana formation (68 million years old) once again, even though I only had an hour to do so.  Muddy hands and knee pads produced a modest take of fossils including a partial crab *Dakoticancer australis* eroding out of hard matrix, a lone shark tooth, and a small clutch of echinoids *Hemiaster bexari*.  Nothing new to my collection, but the thrill of discovery is something I enjoy in regular doses just the same.

**FIG 4:** Corsicana formation echinoids *Hemiaster bexari*, scallop *Neithea bexarensis*, straight ammonite section *Baculites* sp., and two unidentified gastropods (Site 349)

At any rate I had a schedule to maintain. A long morning drive put John Jackson and me in position to explore a bluff John's research had recently found lining the bank of a remote stream. Air temps seemed a full 20 degrees cooler than San Antonio, and water temp would be unbearable as my poor choice of footwear would soon commit to my memory.

This bluff must have been ¼ mile long and up to 40 feet high. It was a classic exposure of Washita limestone and marl possibly exposing a stratigraphic section perhaps from Fort Worth to Weno formations (roughly a 101-102 million year old marine sequence) , the latter formation confirmed at the top of the adjacent hill by presence of *Macraster obesus* echinoids the size of your hand. But down in the valley we made a few finds that made the effort (and my seemingly liquid nitrogen chilled feet) all worthwhile.

John worked the bluff at water level while I perambulated about 6 feet above him. He plucked a couple nice *Holaster simplex* echinoids and Mortoniceras ammonites from below while I lucked into a couple decent *Macraster* echinoids above, one at the base of the bluff in a collapsed zone, the other stuck high in the muddy wall and eventually freed with John's walking stick.

Walking the downstream gravel bars put a few things in our backpacks as well. We grabbed some *Mortoniceras* ammonites and I got a worn but very cool example of a *Washitaster* echinoid, perhaps my first. Moving to the top of the hill tan limestone and marl looked like Mainstreet formation at first, but the ammonite and echinoid fauna as well as the mode of echinoid preservation gave it away as Weno.

Packing up and moving on, a hike along another drainage took us to another unexplored (by us at least) bluff of similar age that John pinpointed after reading a paper I bought off eBay. The hike was long and the finds were sparse, but we both ended up with a decent *Macraster* echinoid for our efforts.

**FIGS 5-6:** Georgetown formation echinoids *Macraster* sp. (Site 531)


**FIGS 7-8:** Georgetown formation echinoid *Washitaster* sp. above, *Macraster obesus* and *Macraster* sp. below from the Weno member of the Georgetown (Site 531)


**FIGS 9-10:** Georgetown formation ammonites – 2 small *Mortoniceras* sp. and two heteromorphs *Idiohamites fremonti* (Site 531)

**FIGS 11-14:** Georgetown formation ammonites *Mortoniceras* sp. and denture clam *Rastellum carinata* this and next 2 pages (Site 531)


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Pressing on we returned to a bluff the same age that I've been working for years. I took the lead and landed a nice *Gyrodes* gastropod and *Trigonia* bivalve. Some broken *Holaster* echinoids came into view as well, and we both spotted small *Mortoniceras drakei* ammonites poking out of the gray calcareous marl and limestone. We agreed that a little blind mining was in order and a half hour or so of this gave us a half dozen *Mortoniceras* ammonites each from 1 to 3 inches, then there was the nice 10 incher that I landed as I blindly flipped the edge of a limestone bench.

The small ammonites, being completely encased in matrix for 100 million years were preserved beautifully when our chisels exposed them. I bailed out a little early but John stuck around long enough to blind mine 4 more *Holaster* echinoids, making for a productive field excursion all the way around.

**FIGS 15-16:** Georgetown formation echinoid *Macraster* sp. and partial ammonite *I. fremonti* this and next page (Site 532)


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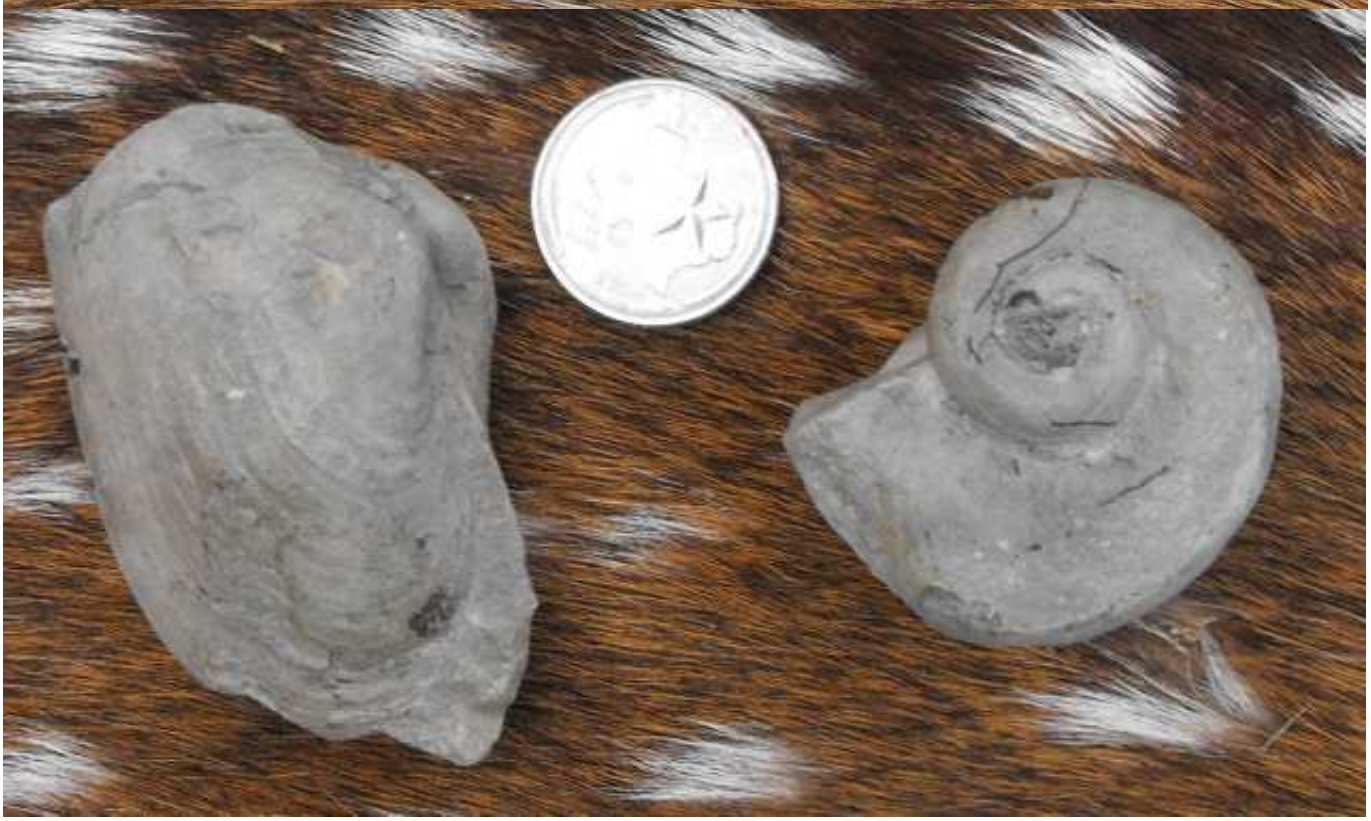
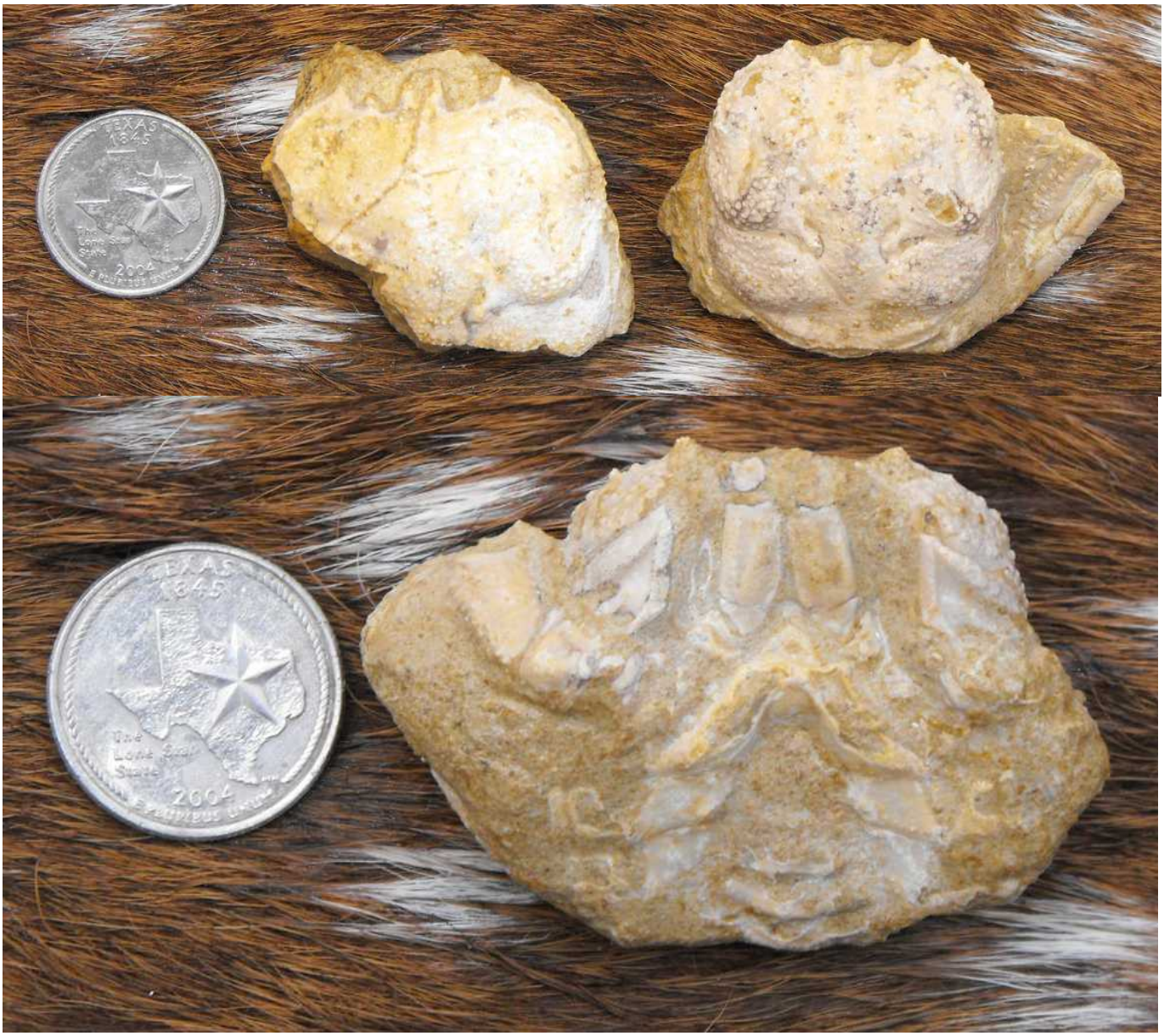
**FIGS 17-23:** Georgetown formation ammonites *Mortoniceras drakei* and *Mortoniceras* sp. followed by unidentified bivalve and *Gyrodes* gastropd this and next 5 pages (Site 173)



February 13, 2010: The Corsicana Crawl

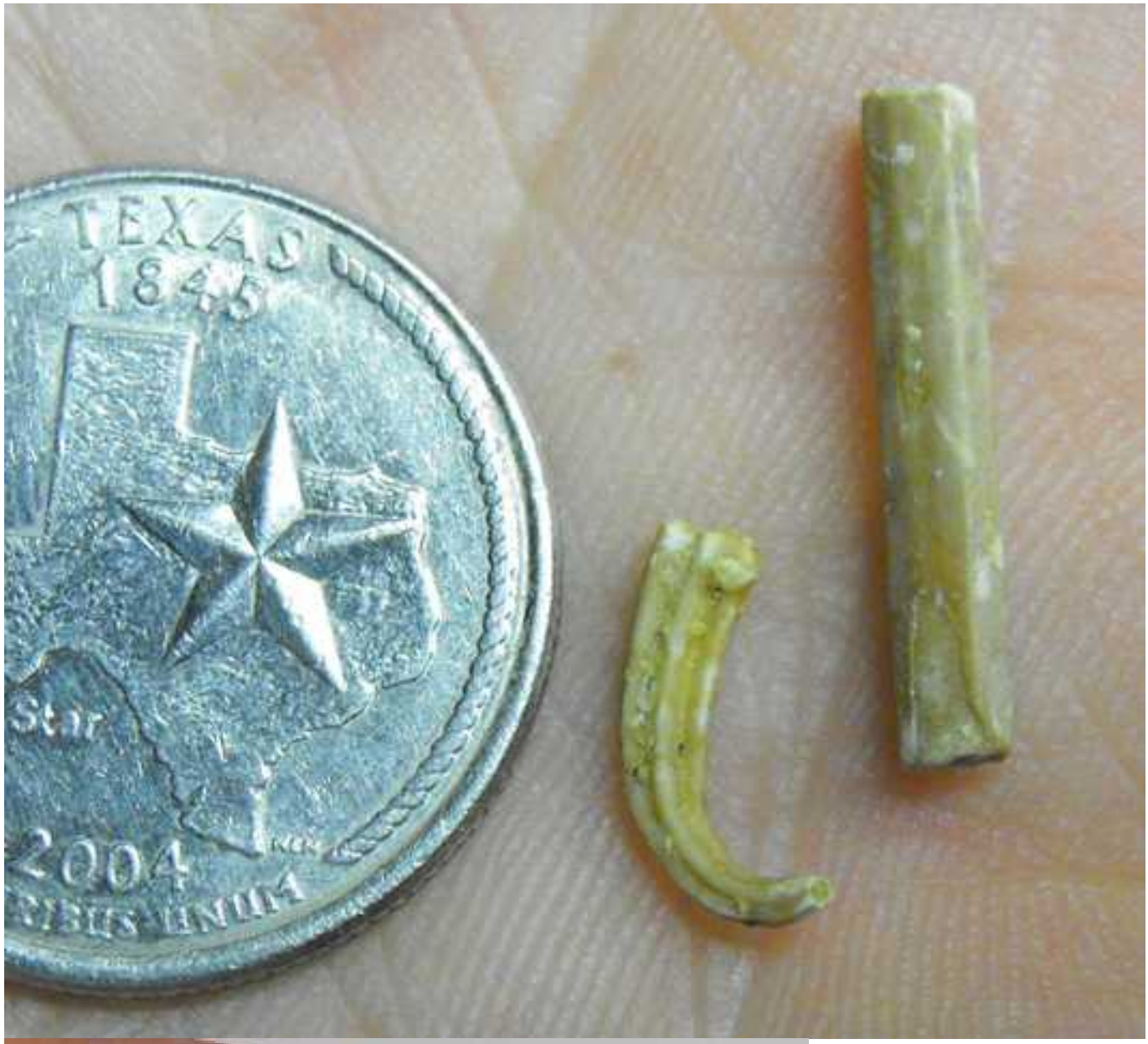
Rain fell across the state once again mid week, making some sites better collecting options than others for the weekend at hand. With gloves and knee pads in place I fell into a systematic pattern of passes over the Corsicana formation (68 MYA) exposure, the wet ground darkened by remaining moisture highlighting recently exposed marine fossils. While the site isn't very big these days and can be looked at very thoroughly by one person in 2-3 hours, the crawl is still worth the effort.

Best finds this round included a couple of *Plesiaster americanus* echinoids. A couple dozen *Hemiaster bexari* echinoids made up the bulk of my take, but the bivalves and gastropods in some cases were too nice to leave behind as well. There weren't any complete crab carapaces found this time, but it was a fun outing nonetheless, and I made it back to the house by 11 to get on with the Valentine's weekend (along with a little prep work on the previous weekend's fossil finds).

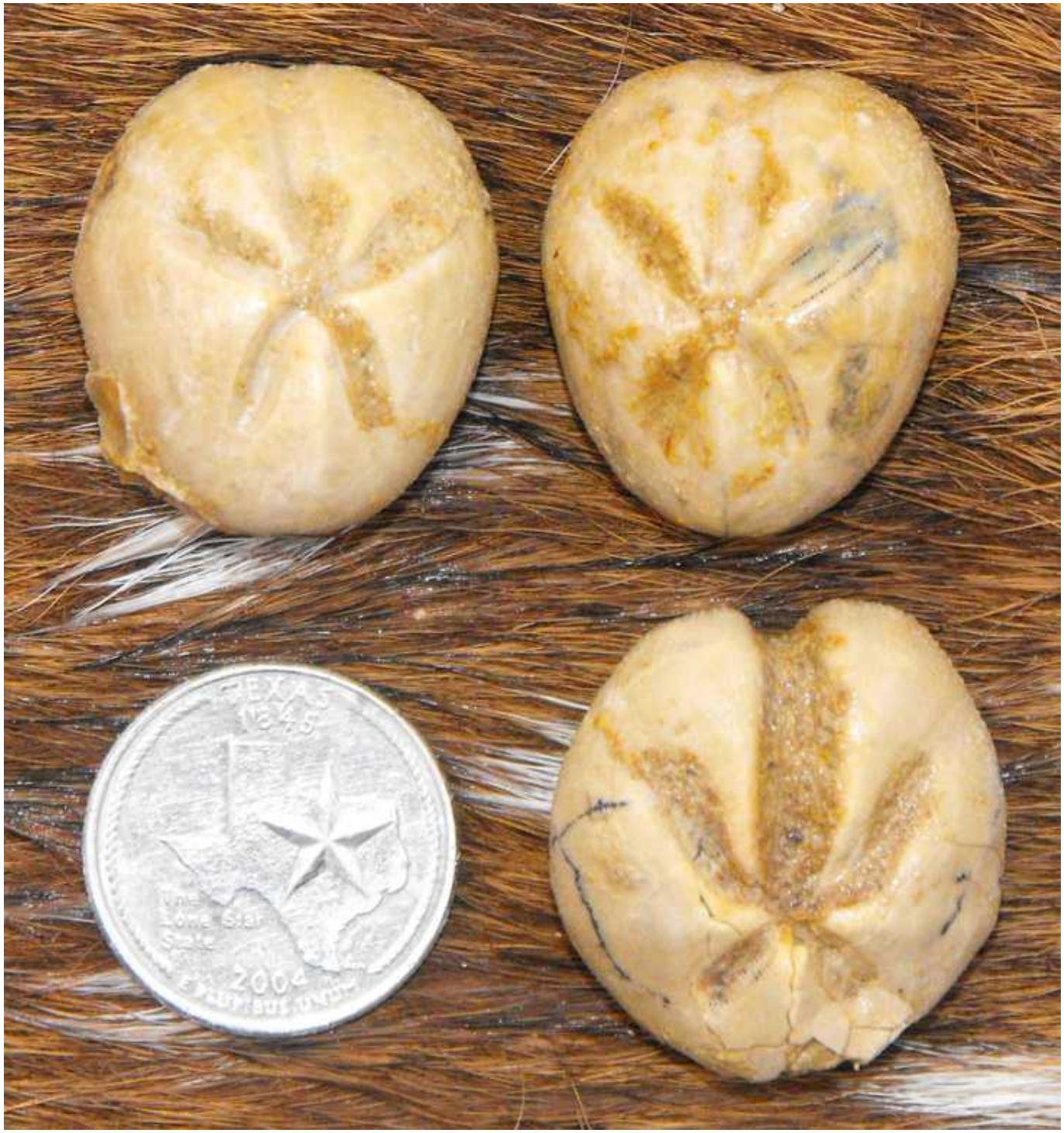



**FIGS 24-25:** Corsicana formation crabs *Dakoticancer australis* (Site 349)

**FIG 26:** Corsicana formation partial ammonites *Discosaphites* sp. left and *Anapachydiscus* sp. right (Site 349)




**FIGS 27-28:** Corsicana formation unidentified medial bone section and *Hamulus* sp. worm tube (Site 349)




**FIGS 29-30:** Corsicana formation echinoids *Plesiaster americanus* top row and *Proraster dalli* bottom row, this and next page (Site 349)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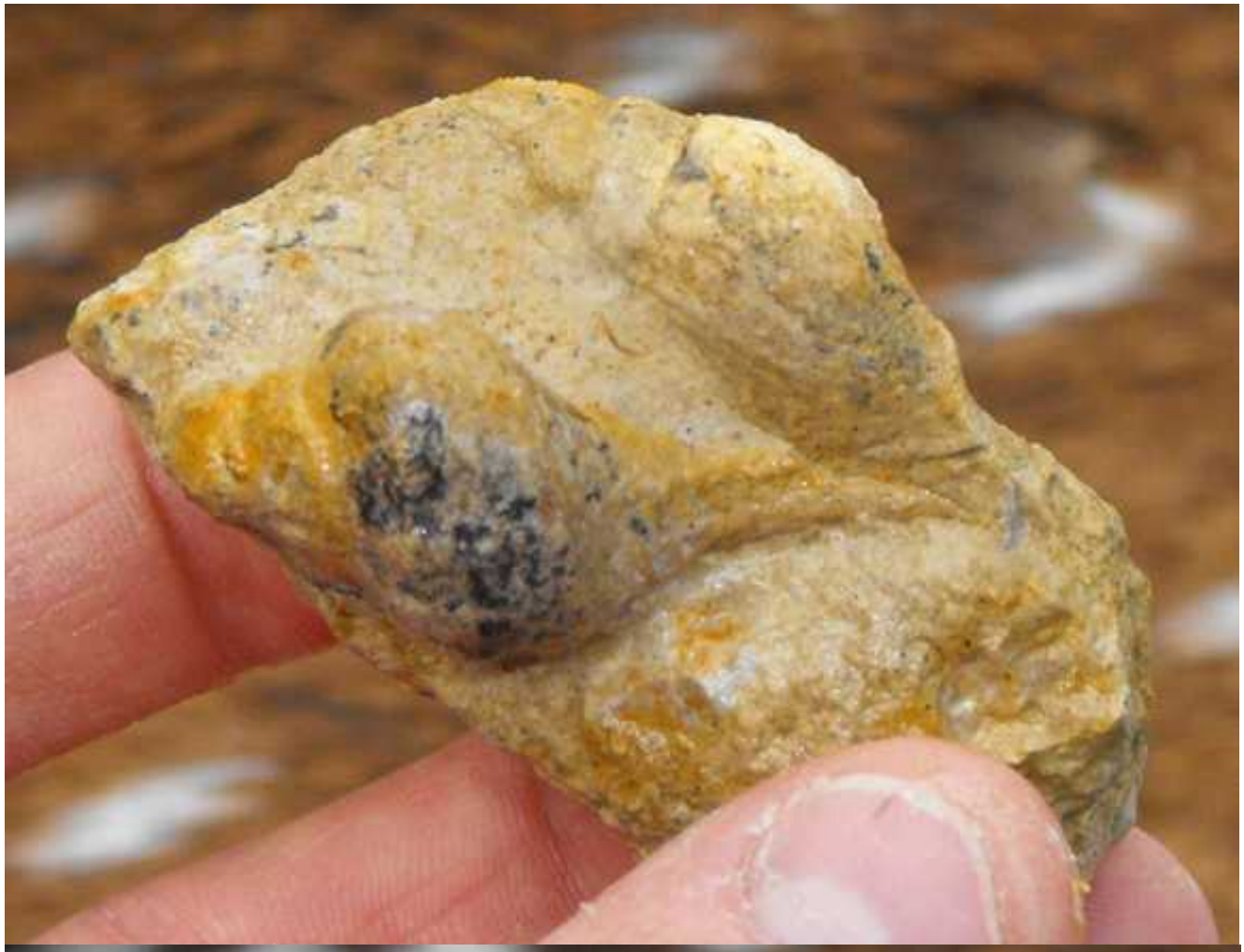
**FIGS 31-32:** Corsicana formation echinoids *Plesiaster americanus* top right corner crushed, remainder *Hemiaster bexari* (Site 349)




**FIGS 33-35:** Corsicana formation gastropods – 2 views of 2 in matrix followed by several unidentified loose specimens next page (Site 349)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**FIGS 36-37:** Corsicana formation bivalve internal mold (Site 349)


**FIGS 38-39:** Corsicana formation bivalves *Lima acutilineata, Plicatula mullicaensis, Neithea bexarensis* and others above, *N. bexarensis* and *Lima guadalupensis* below (Site 349)

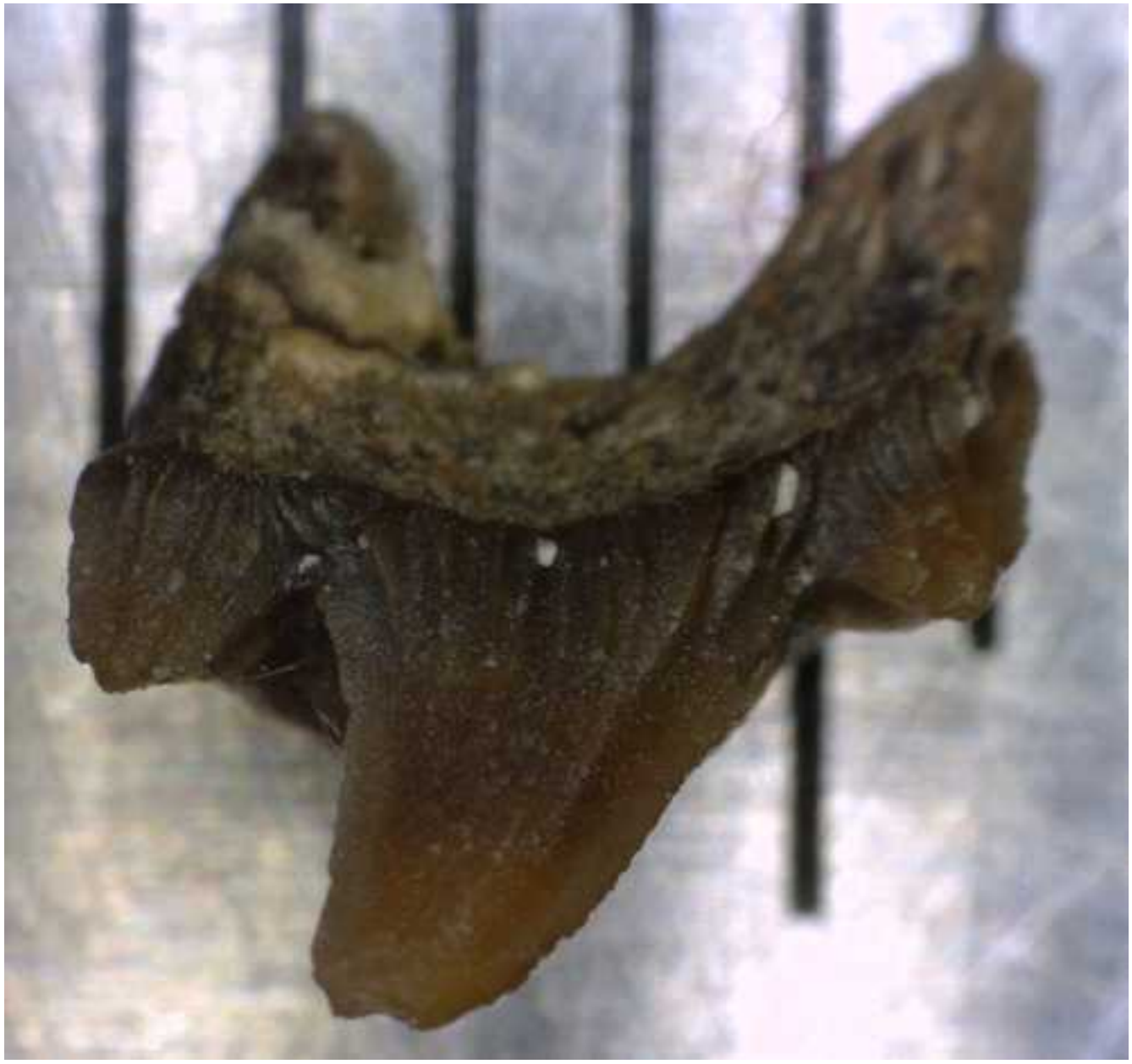
February 14, 2010: One More Round

I awoke early and everyone else seemed to be in a deep sleep……off I went for another echinoid excursion, this time in the Glen Rose formation (108 MYA) north of San Antonio. This was a pretty muddy venue but I committed to the mess and got on task soon after daylight.

An hour of crawling resulted in some interesting finds, all diminutive in size. My first find was a 2 mm wide floating crinoid – very welcome in my collection as something I don't have very many of. 8 *Salenia* echinoids filled most of the next hour, and at the tail end of my crawl I landed 2 nice finds: a cool crab claw with both fingers intact and a small shark tooth *Protolamna sokolovi*, only the second one in my collection. When some big dogs showed up and began tracking up the site I decided it was time to move on.

An area road cut was still dripping with runoff and just a 10 minute look produced a handful of ornate little echinoids *Loriolia rosana*, some partially entombed in matrix, others washed completely free of matrix. Wanderlust thus satisfied, I soon found myself back at the house enjoying family.

**FIGS 40-41:** Glen Rose formation shark tooth *Protolamna sokolovi* this and next page (Site 161)



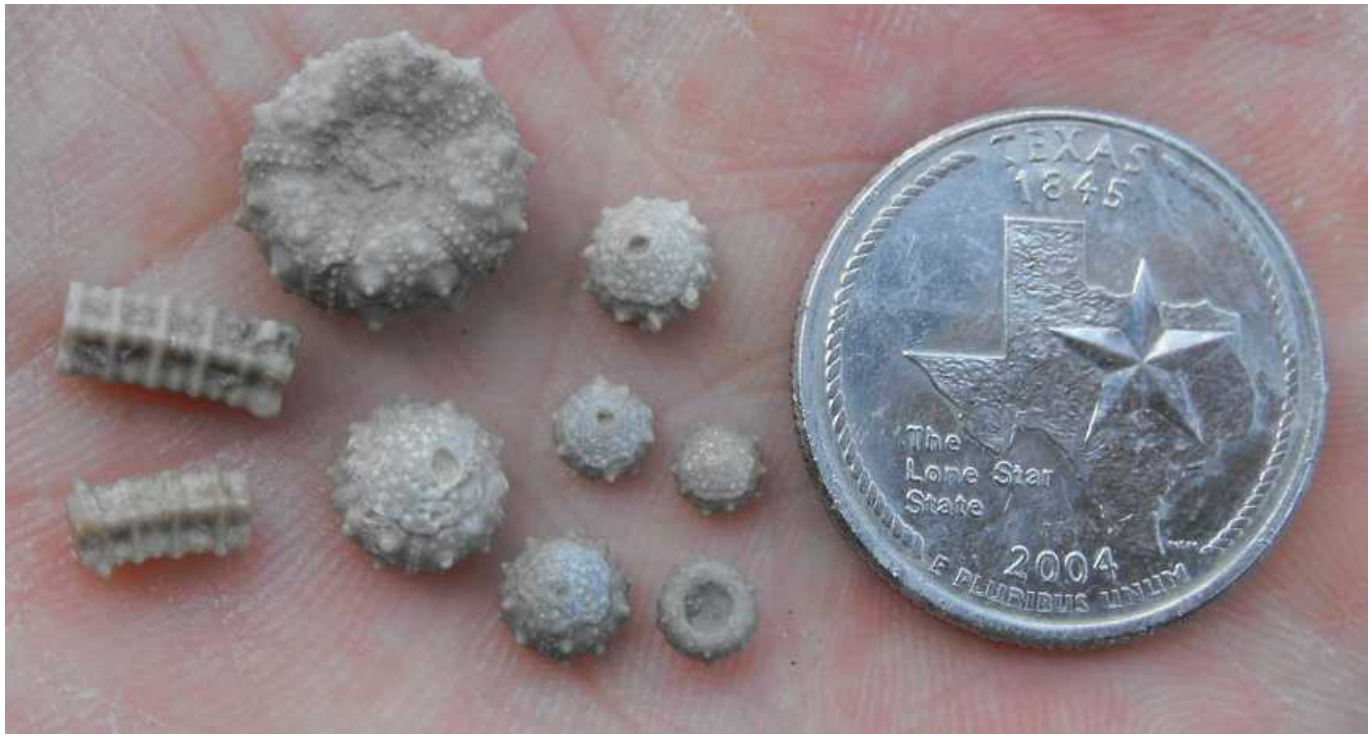



**FIG 42:** Glen Rose formation echinoids *Salenia* sp. and crinoid stems *Isocrinus annulatus* (Site 161)

**FIGS 43-44:** Glen Rose formation echinoid *Salenia* sp. and unidentified floating crinoid (Site 161)


**FIGS 45-47:** Glen Rose formation crab claws *Paleopagurus banderensis* this and next 2 pages (Site 161)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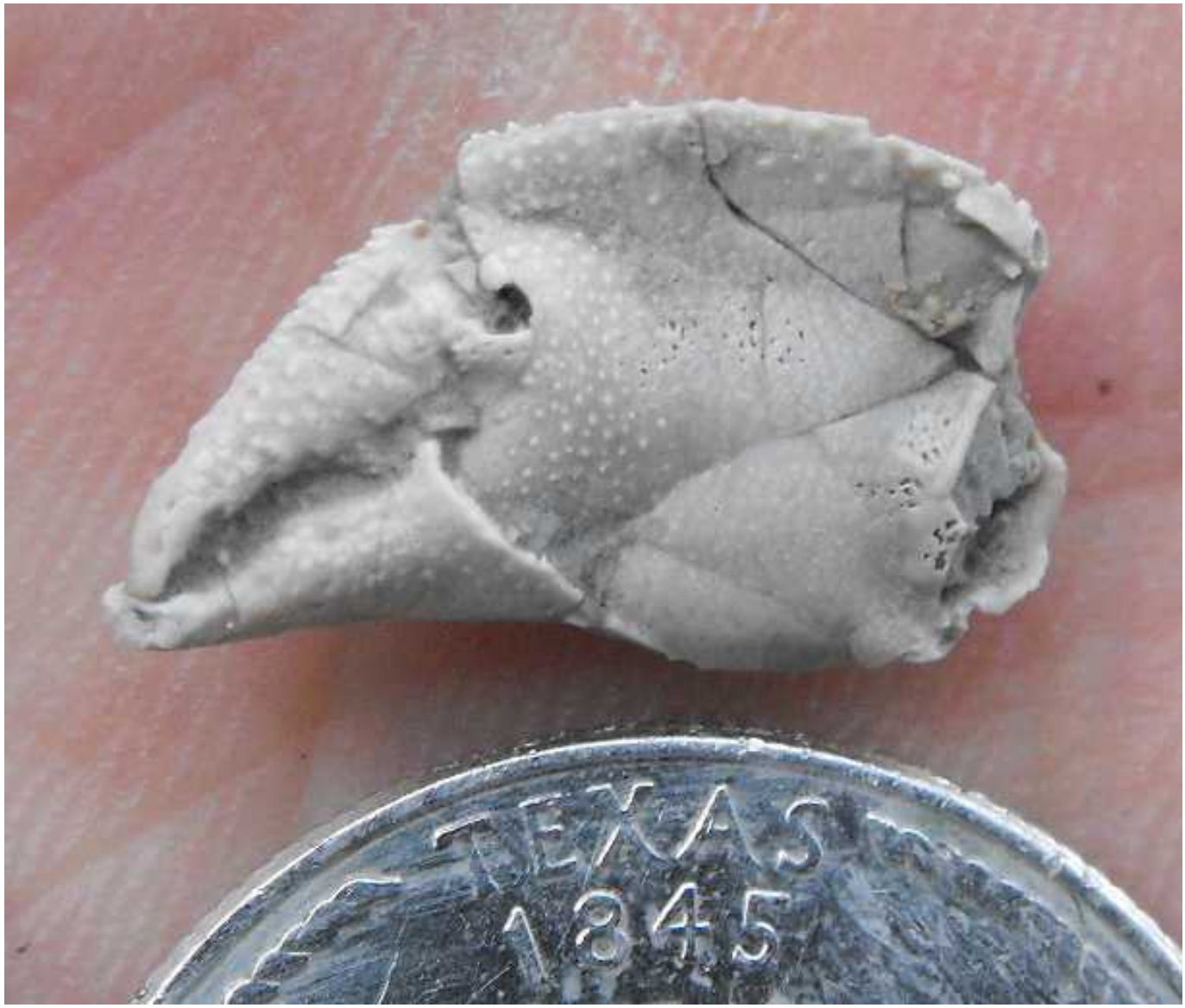



February 21, 2010: Reclamation at Glyptodont Gulch

With a sudden cancellation by some Dallas area folks of a fossil collecting trip I'd be hosting on Sunday I scrambled to come up with a weekend outdoor adventure to take its place. With light winds in incoming tides predicted I opted to make a run for the coast, Corpus Christi area specifically. 3:30 a.m. came all too soon but I was out the door by 4 and had a bucket of 50 live shrimp in hand by 7.

I threw my canoe in the water, paddled underneath a bridge, dropped anchor and began lobbing shrimp into a 30 foot deep channel. A thick, dripping fog rolled in and ensconced me in billowy gloom, but by being under the bridge at least I didn't get rained on. The bite was constant but the fish weren't too big. 50 live shrimp produced only 2 keeper fish, among them a small sand trout and a 17 inch sheepshead. Outside of that I spent most of 3 hours picking off 12-16 inch redfish and releasing them. If only I had been on a school of bigger fish….

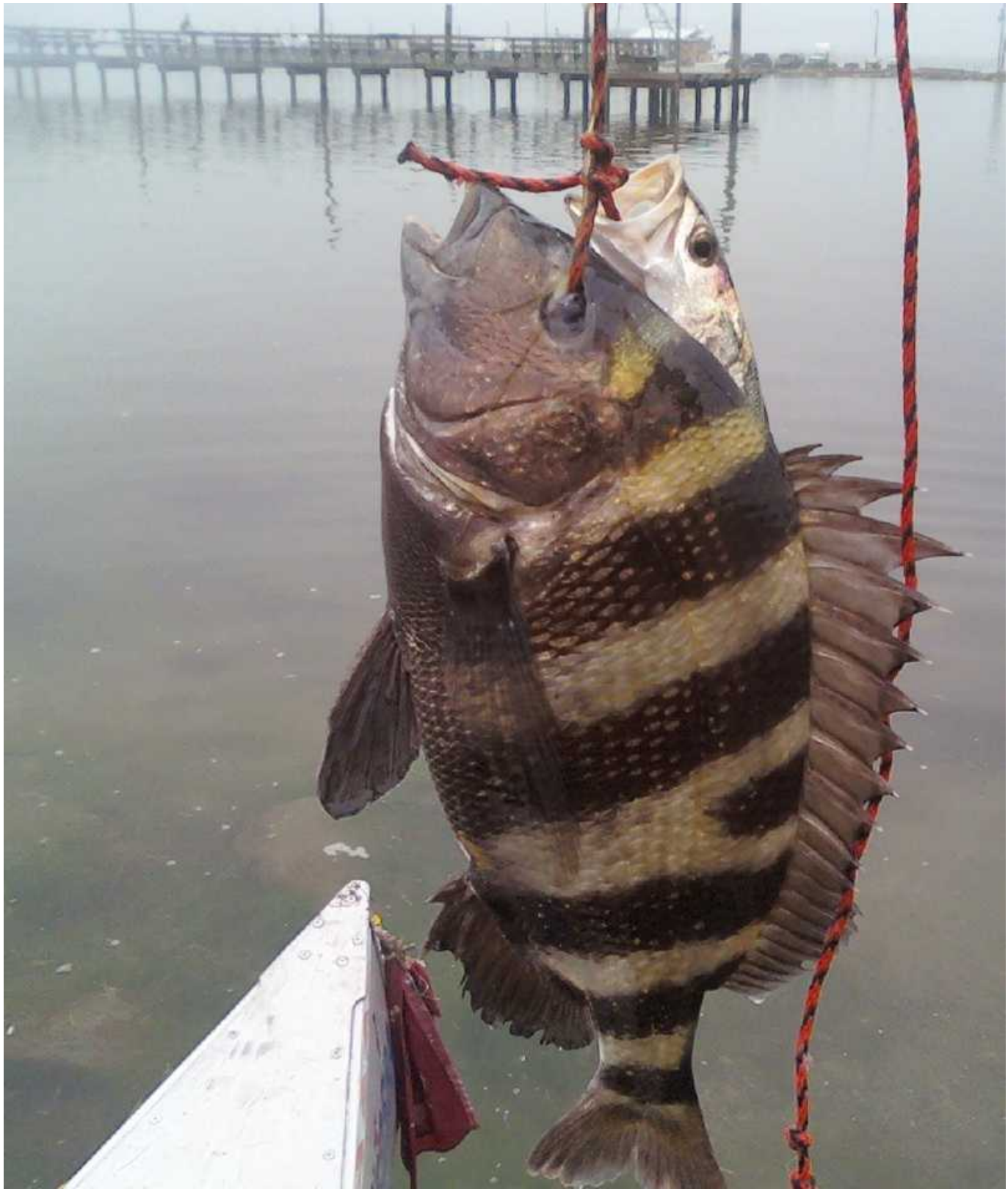


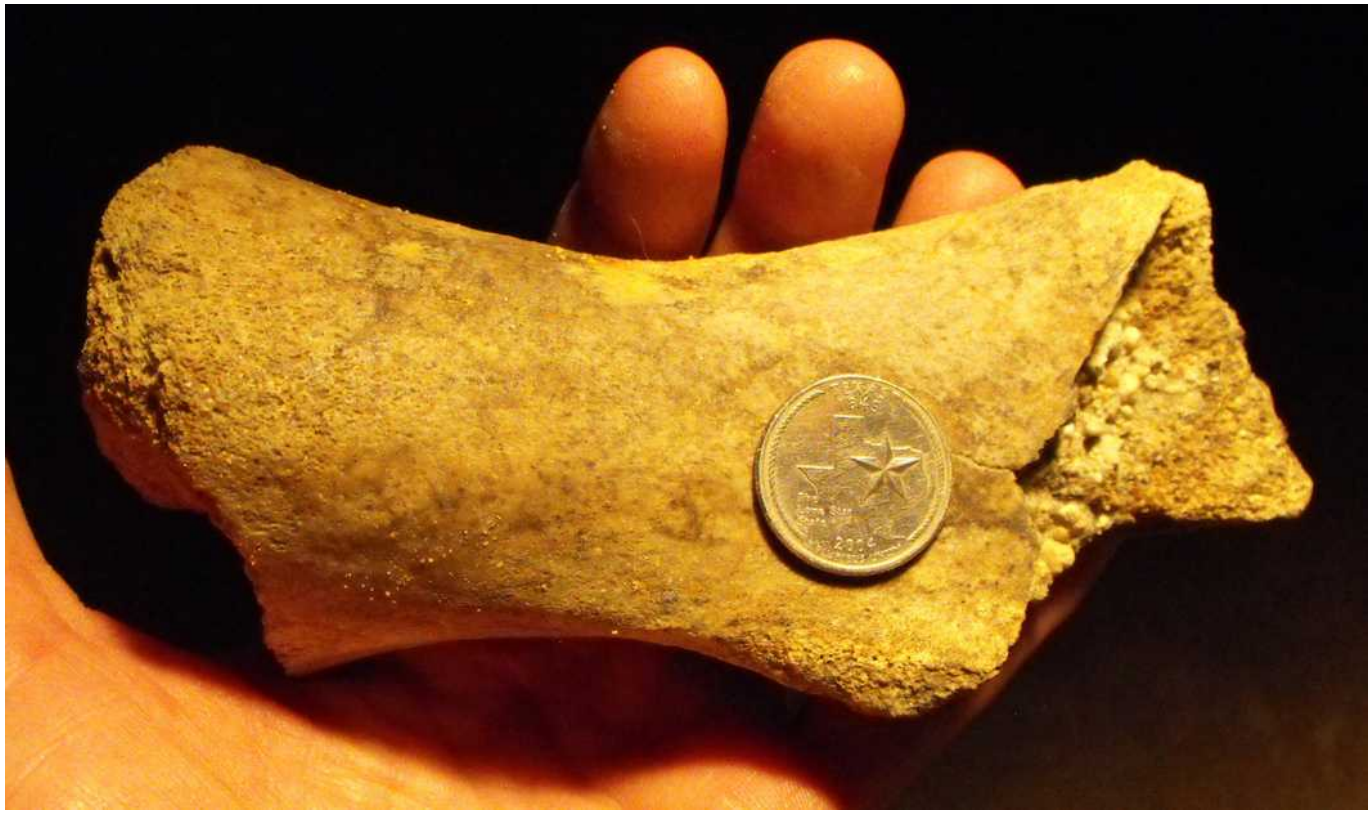
**FIG 48:** 17 inch sheepshead and a sand trout from the Laguna Madre

Pressing on, I threw my boat into an area stream and motored several miles to a pet site of mine, Glyptodont Gulch. It's a good thing I nailed that submerged log dead center or else it could have easily pitched and swamped the boat. The water was not only cold but infested with alligators to 12 feet so I was happy to keep the stream out of the boat.

Anyway I beached the boat, grabbed my paddle to wedge in the mouths of any hungry gators, and began scaling the bluffs in search of Pleistocene vertebrate fossils. Success came early in the form of a nice glyptodont osteoderm (bony body armor), its distinct form catching my eye. I also grabbed a piece of turtle shell among other odds and ends.

While walking down the gulch another peculiar form caught my eye….a phalanx (toe bone)….upon inspection it was clearly the best sloth toe bone I had ever found….into the bag it went….soon the bag seemed curiously light. The sloth phalanx was missing! It had fallen through a hole in the bag, and it had only been in my possession for 30 seconds! I spent a half hour beating down the high grass in the 20 feet I had moved since finding it….no luck. Perhaps I stepped on it and pushed it down into the mud. Oh and I lost my sunglasses in the thick brush too; an errant limb had ripped them off my hat unbeknownst to me.


**FIGS 49-50:** Pleistocene vertebrate fossils including turtle shell fragment left, *Glyptotherium* osteoderm center, unidentified limb bones right and next page (Site 350)



Clearly this was turning out to be a laughable situation, its place in history sealed when I drove a fishing hook deep into my fingertip while unloading the car. Perhaps I should have just stayed in bed this round?

February 25, 2010: Over My Head in the Pleistocene

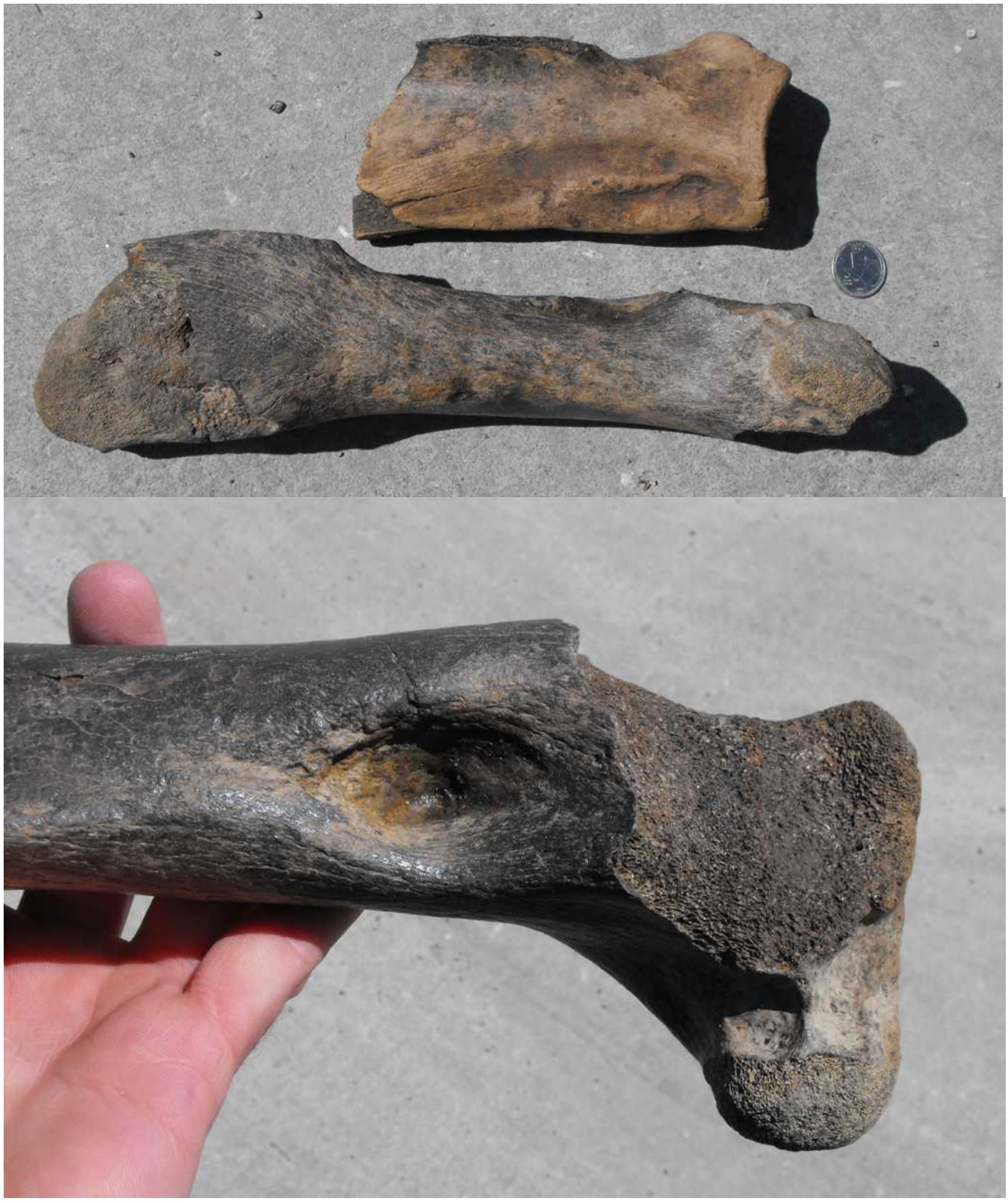
The weather was good yesterday so I opted for a Pleistocene stream run, however the long hours I worked the day before apparently impaired my judgment while packing for the excursion. Case in point, at the gas station I noticed that I had left my gas can at home, so I got a late start waiting for the local Walmart to open. On to more bucolic and riparian environs, I told myself.

Things went downhill from there. While shuttling loads of gear to the water's edge I turned around, looked down, and said, "Hey - that's my phone!" I had forgotten to latch my dry box, and in the process my wallet had gotten away from me somewhere in the last couple hundred yards...a sinking feeling swept over me as twice in recent years I had misplaced my wallet while fossil collecting, the outcome pretty bad both times. Too much gear to keep track of in this hobby! Fortunately I was able to backtrack and secure my wallet. However, the foolishness was not quite out of my system just yet.

I beached my boat on a gravel bar and spent a little too much time walking the other direction with my eyes on the ground. Upon my return I remember my words...."Dude! Where's my boat???" The wind had picked up and I hadn't pulled it high enough onto the bar, so the forces of nature ended up teaching me a humbling lesson. My boat and all my gear were spotted a couple hundred yards away on the opposite bank, so I stripped down to my underwear and waded out as far as I could. Did I forget to mention that there was frost on the brush that morning? The air temperature had risen in the meantime, but the water didn't feel too inviting. In fact the Titanic victims had nothing on me at that moment. My legs were in pain by the time I needed to throw my whole body in and close the final 20 yards. I'm sure it was quite a sight as I made my way up the opposite bank and to my boat. Good thing I brought along those hip waders I bought earlier in the week.....

Despite the setbacks I still managed to find a few fossils. One bar gave up a banged up humerus and scapula, the next gave up a worn cervical vertebra, another scapula, turtle shell fragments, and a few other things. The next bar gave up the distal end of a radius and a piece of soft shelled turtle plastron. The final bar was the most productive, giving up a bigger piece of turtle plastron, a white tailed deer antler tine, and 3 very nice horse lower molars, the

latter making the day worth the effort.  However, better trip planning and responsible execution will be higher on the agenda after enduring the messes I created for myself this time.



**FIGS 51-52:** Unidentified Pleistocene humerus and scapula (Site 414)

**FIGS 53-54:** Unidentified Pleistocene cervical vertebra, ischium (hip bone), and scapula above, antler base and turtle shell fragments below (Site 379)

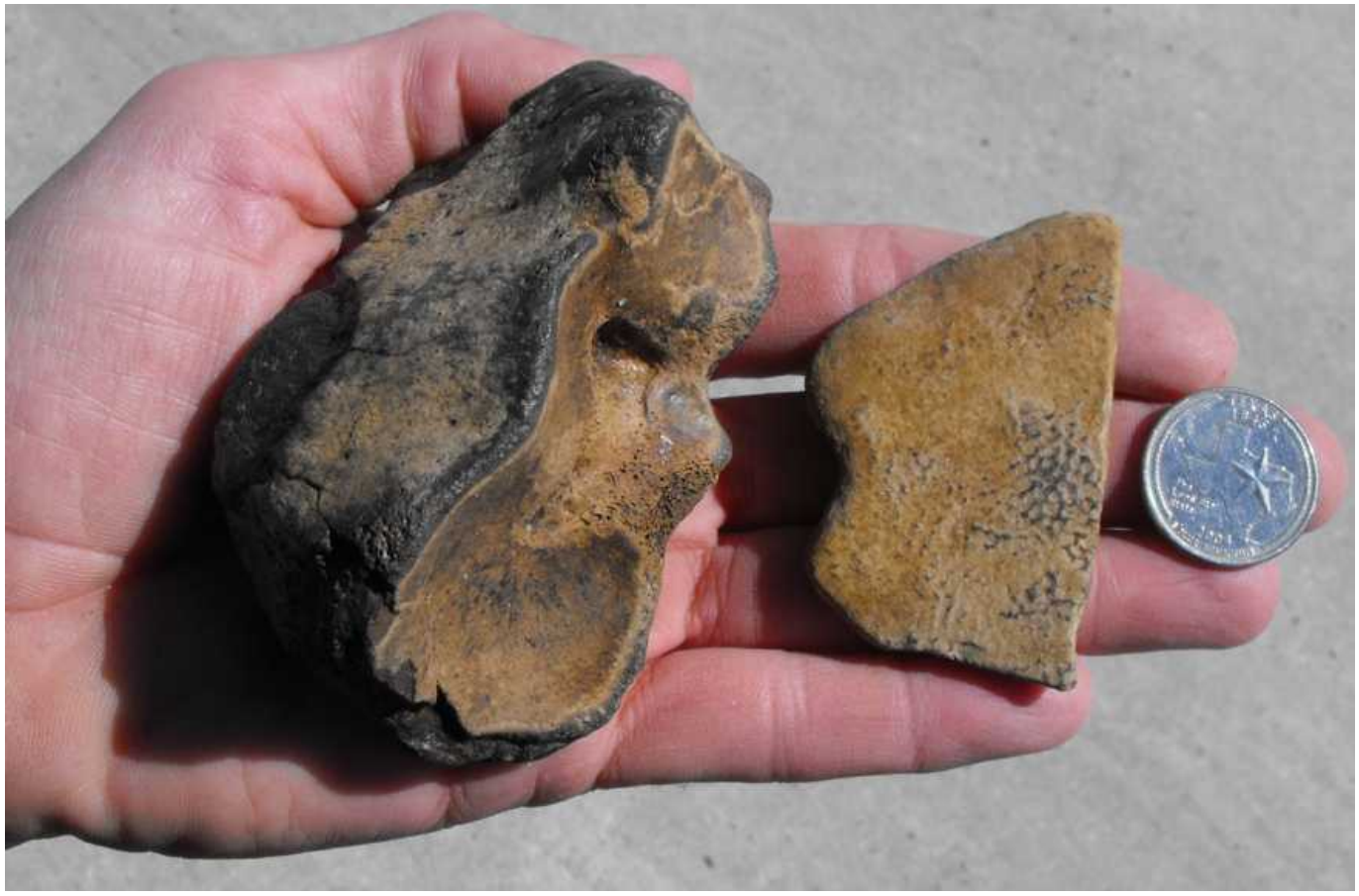
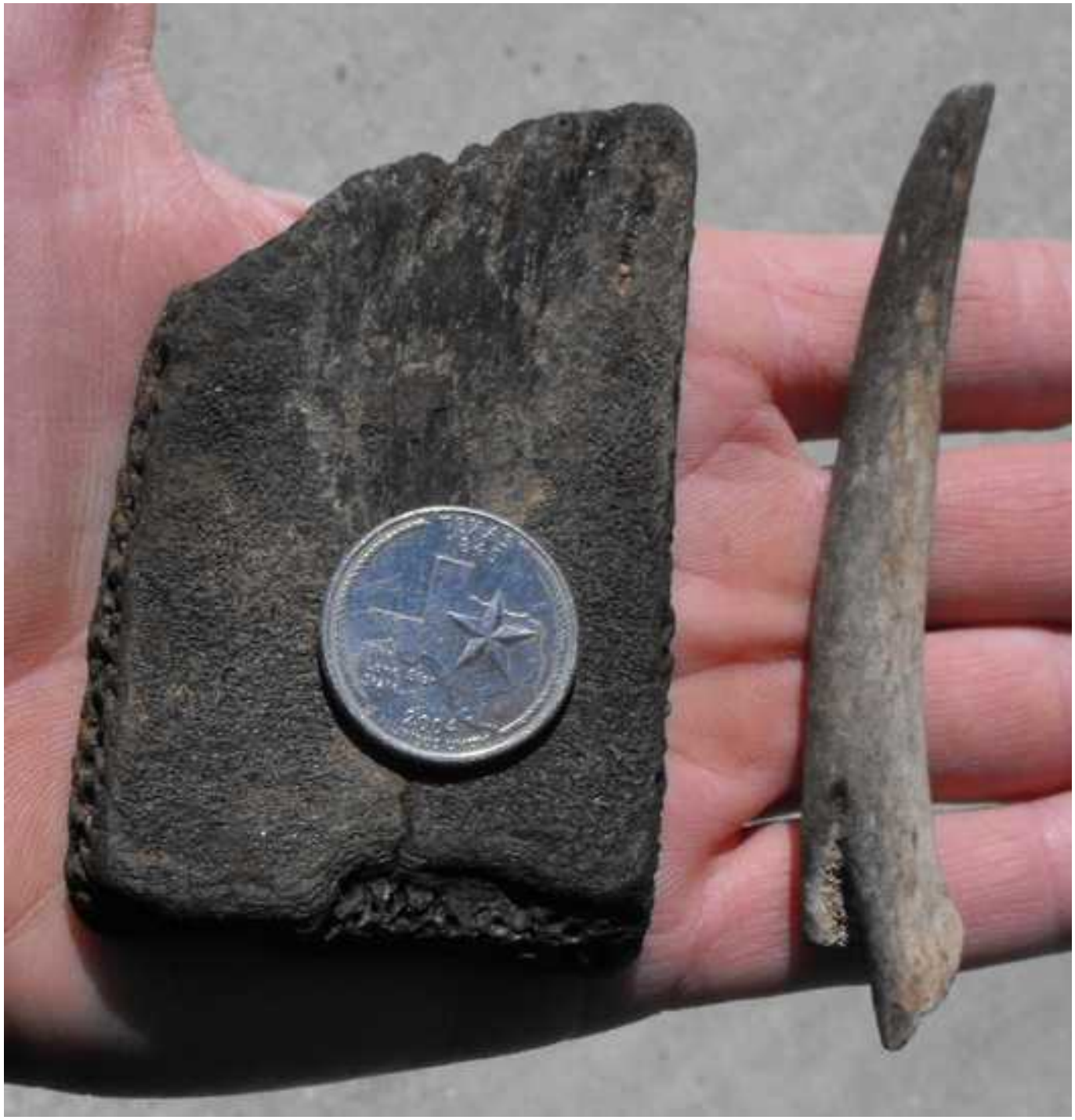


**FIG 55:** Unidentified Pleistocene distal radius, possibly *Bison*, and partial plastron of *Apalone* soft shelled turtle (Site 426)



**FIGS 56-58:** Pleistocene turtle plastron fragment and deer antler tine followed by 3 nice horse lower molars (Site 382)