

FOSSIL COLLECTING REPORT

April 2013

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April 7, 2013: It's Raining Echinoids!

Well, maybe not exactly. But patches of ½ to 2 inches of rain across the area interrupted the persistent drought in South Texas the previous week, so after helping my wife with a few things, I slipped out of the house in hopes of intercepting a few freshly exposed echinoids.

My friend Brian Evans and I met up at a site in the Glen Rose Formation (108 MYA), threw on the crawling gear, and gave the ground a low and slow look. There was no telltale evidence of other collectors since the rain, so we proceeded with high hopes.

A half inch of rain doesn't really wash out much at most sites, but since the targeted echinoids were generally ¼ inch diameter, it doesn't take much for them to hide, or to be revealed, for that matter. Within the first 20 seconds of my crawl, I grabbed a perfect *Pygopyrina hancockensis* echinoid, not one of the most common species from the site, enough to make the entire trip worthwhile in its own right....however, the finds didn't stop there.



FIGS 1-3: Glen Rose Formation echinoids *Pygopyrina hancockensis* this and next 2 pages (Site 161)







FIGS 4-6: Glen Rose Formation echinoids *Goniatypus* sp. this and next 2 pages (Site 161)





For the next hour we hollered out our finds....." *Goniopygus!*" "Hey man, I just got a *Pygopyrina* the size of a deer turd!" We got a number of cute little saleniid echinoids between the more uncommon finds. I quit when I got my "dirty dozen", and Brian hung around until he rounded out a clutch of 10. Good times, well worth the effort, and Brian is a good guy to spend field time with.



FIG 7: Glen Rose Formation echinoids *Hyposalenia phillispae* and possibly other saleniids (Site 161)



FIG 8: Glen Rose Formation partial echinoid, possibly *Pseudodiadema* sp., and regular echinoid spine (Site 161)

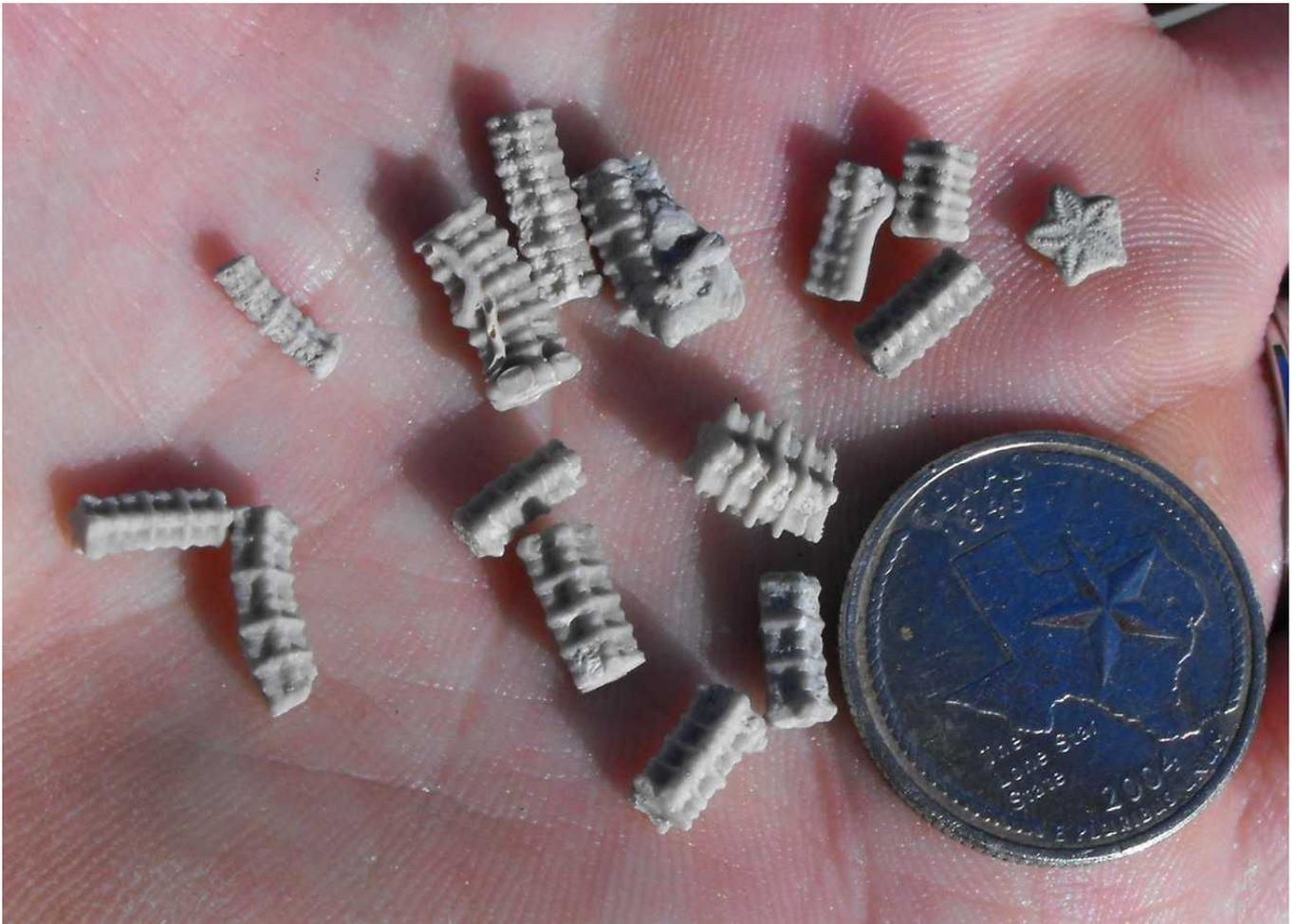


FIG 9: Glen Rose Formation crinoids columnals *Isocrinus annulatus*(Site 161)



FIG 10: Glen Rose Formation fossils, left to right, foraminifer *Haplostiche texana*(?) far left followed by 3 starfish ossicles, an unidentified crustacean dactyl, and an unidentified bivalve steinkern (Site 161)



FIG 11: Unidentified Glen Rose Formation crustacean leg section (Site 161)



FIGS 12-13: *Odocoileus virginianus* standing sentinel in the Glen Rose Formation, this and next page (Site 161)



I then made my way to the Corsicana Formation (68 MYA) to crawl what was left of a once productive hillside site. The glory days are clearly long gone, but I was still able to wrest a few finds from the crusty clutches of the Corsicana. Echinoids were sparse, and I only picked up 3 or 4, but one was an extremely rare *Cardiaster leonensis* in weathered but still diagnostic condition, a fitting last gasp of the site. The others were the more common *Hemiaster bexari*.



FIGS 14-16: Ultra rare Corsicana Formation echinoid *Cardiaster leonensis* this and next 2 pages (Site 349)







FIGS 17-18: Corsicana Formation echinoids *Hemister bexarthis* and next page (Site 349)





FIG 19: Corsicana Formation shark tooth *Cretalamna maroccana* (Site 349)



FIG 20: Corsicana Formation partial ammonite *Sphenodiscus* sp. (Site 349)

Outside of that I humored myself with gastropods. A decent shark tooth made it into my pill bottle as well, and thus ended a thorough search of a now greatly reduced collecting area.



FIG 21: Corsicana Formation gastropods *Lupiras*sp. top left, *Turritella*sp. top center, *Anchura*sp. top right, *Pyropsis*sp. below (Site 349)



FIGS 22-23: Unidentified Corsicana Formation gastropods this and next page (Site 349)





FIGS 24-25: Corsicana Formation bivalve *Cucullaea* sp. (?) this and next page (Site 349)





FIG 26: 3 unidentified Corsicana Formation oysters plus scallop *Neithea bexarensis* (Site 349)



FIG 27: Corsicana Formation bryozoan *Dysnoetopora celleporoides*(Site 349)

A quick hop into an Upper Cretaceous creek revealed some tantalizingly suggestive flint debitage, but no whole spear points. One stream tumbled ammonite made it into my pocket, but otherwise it was a light haul at a creek stretch I won't be returning to. No complaints...I was pleased to enjoy the nice collecting weather after the rains did their work.



FIG 28: Unidentified Upper Cretaceous ammonite (Site 655)

April 20, 2013: Solo Pleistocene Float

It had been a while since I canvassed some of my favorite Pleistocene stream exposures, so I took the opportunity to pay them a visit during the current low water interval. Low flow presents somewhat of a double edged sword...previously unexposed finds at the expense of tough canoe navigation. I got my taste of both this day.

I opted to run around in my canoe equipped with a small outboard motor, and I spent as much time paddling as motoring this trip. Running from bar to bar, my lower unit smacked hard bottom many times, and I must have broken at least a dozen shear pins that day, stopping each time to pull the propeller off and replace the pin. As a result, the slowdowns kept me from covering the distance intended, but I still managed to lay hands on a few nice Pleistocene specimens.

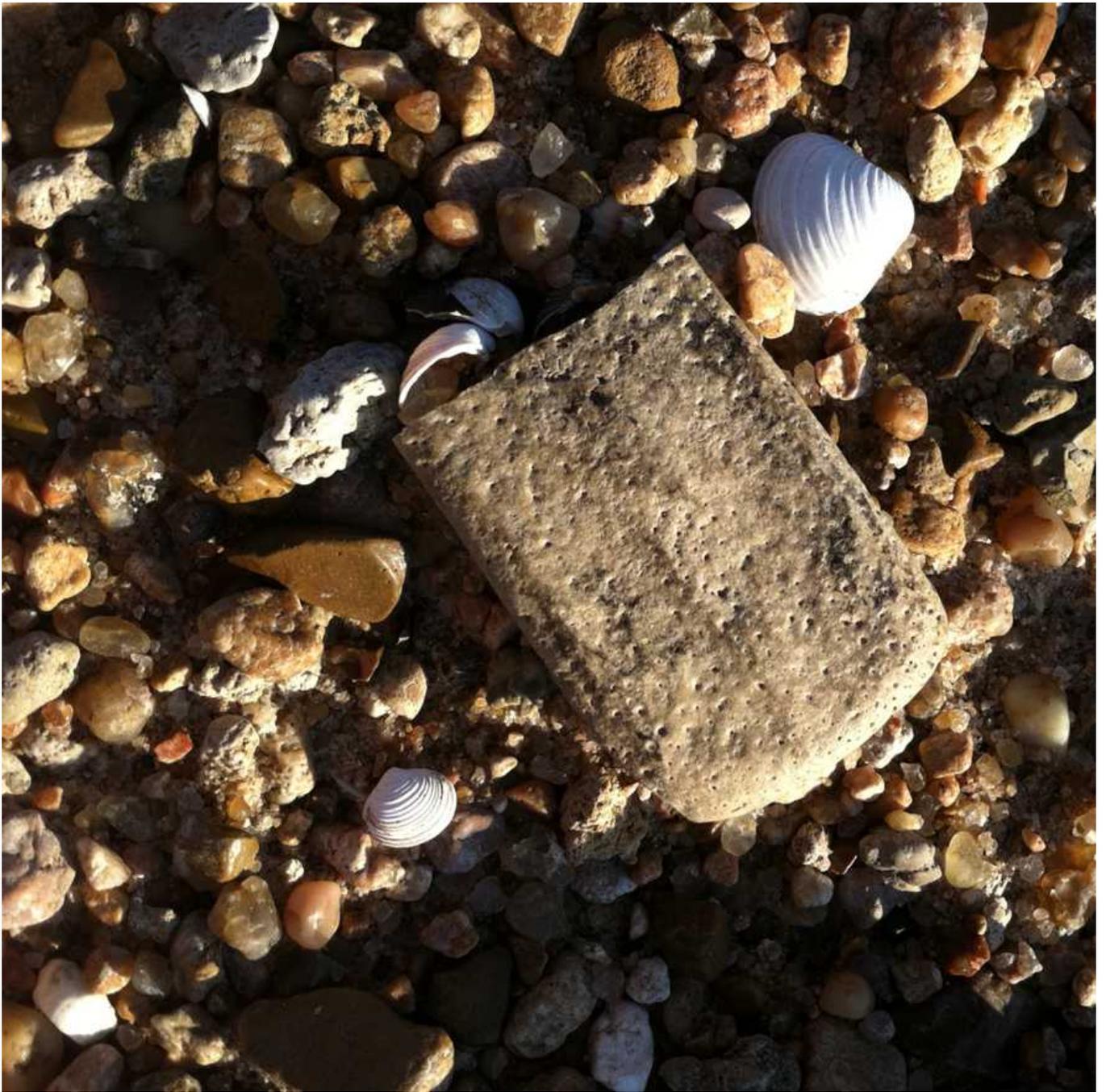
As usual, fragments of turtle shell are the most common find, and with the day's take came a few plastron sections from the extinct land tortoise *Hesperotestudo crassiscutata*. The first really desirable find was most of a giant armadillo osteoderm *Holmesina septentrionalis*. Suddenly things were beginning to seem worth all the effort.



FIG 29: Unidentified Pleistocene limb bone fragment left, rib section right (Site 379)



FIG 30: Unidentified Pleistocene skull fragment left, unidentified bone right (Site 380)



FIGS 31-32: Pleistocene pamphatere osteoderm *Holmesina septentrionalis* this and next page (Site 381)

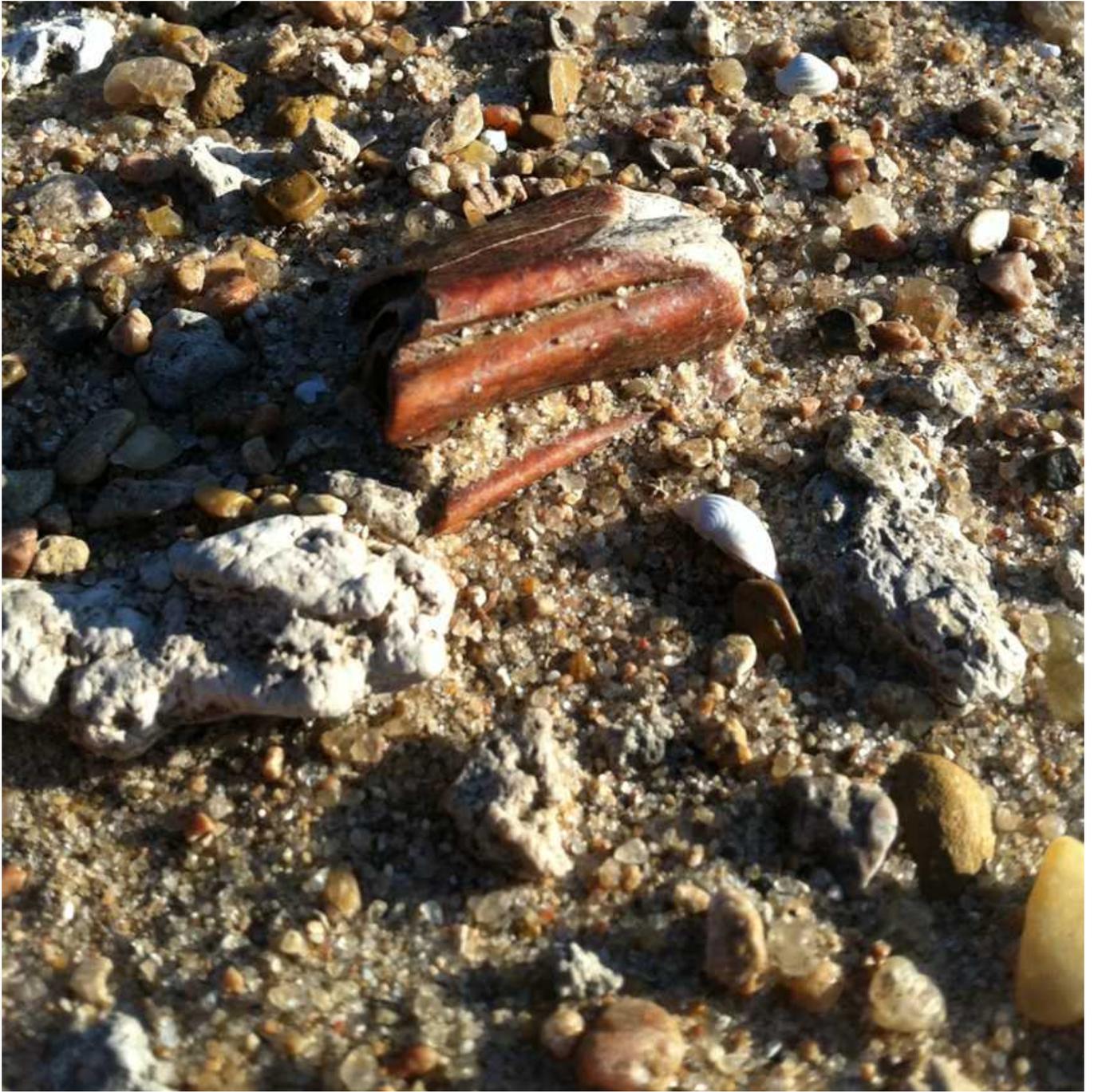


It was a chilly morning, the wind's effect on me magnified by my constant wading while dragging the boat behind me. But by late morning the sun was shining brightly, its warming rays drawing out a number of turtles to sun themselves. One snake made the scene as well, its head held high as it crossed the stream.

At one point I was enjoying the rays myself, searching a gravel patch while chomping on the previous night's leftover ribeye steak...life was good, and it got even better when something caught my eye. It was a *Bison* upper molar of a hue I had never encountered, a deep, fiery orange-red. I'm quite pleased with this specimen and consider it my best find of the day, gem grade in my opinion.



FIGS 33-38: Perhaps my favorite Pleistocene *Bison* molar, this cherry red specimen, this and next 5 pages
(Site 381)











Soon after, I picked up what appeared to be a perfect *Paleolamaphalanx* (toe bone) and a scrap of mammoth or mastodon tusk. A couple other nice foot bones rounded out my take.



FIGS 39-41: Pleistocene mammoth or mastodon tusk fragment this and next 2 pages (Site 381)







FIGS 42-44: Pleistocene llama phalanx (toe bone), either *Paleolama* or *Hemiauchenia*, this and next 2 pages

(Site 381)







FIGS 45-50: Unidentified Pleistocene carpal bone, this and next 5 pages (Site 381)













FIGS 51-52: Unidentified Pleistocene skull fragment above, *Bison* or camelid distal radius epiphysis, this and next page (Site 381)





FIG 53: Pleistocene tortoise carapace fragment *Hesperotestudo crassisscutata* below, turtle shell fragments above (Site 381)



FIG 54: Unidentified bottle a few decades old (Site 381)

During one of my frequent wades through the clear shallows, I noticed some gravel patches on the stream bottom in places I've never looked before. An instinctive grab at a strange shape turned up a very nice vertebra, possibly horse, deep brown with tan sandstone plugging the neural canal. A few old bottles and more turtle pieces kept me focused. Very cool.



FIGS 55-56: Unidentified Pleistocene thoracic vertebra, note sandstone filled neural canal, this and next page (Site 426)





FIG 57: Pleistocene turtle shell fragments including distinctively stippled section of soft shelled turtle *Apalone ferocior* (Site 426)



FIG 58: Estimated 1960s-70s era Coke bottle left, possible medicine bottle right, undated (Site 426)

I always get a kick out of landing the boat in a random spot along a gravel bar, and having the best find on that bar turn up right where I beached the boat. This time it was another tortoise plastron section. At a nearby bar my best find came from under a couple inches of running water....it is a mineralized radius of some sort. At first I believed it to be deer, but an expert later confirmed it as carnivore...much cooler.



FIGS 59-60: Pleistocene tortoise plastron section *H. crassiscutata* this and next page (Site 382)





FIG 61: Unidentified Pleistocene turtle shell fragments (Site 382)



FIG 62: Unidentified Pleistocene proximal rib (Site 382)



FIGS 63-67: Well preserved Pleistocene carnivore radius, possibly canid, this and next 4 pages (Site 382)









The next few hours were a slow go, costing me many shear pins, but netting me a few goodies to make it all worthwhile. Most notable finds were 2 nice vertebrae.



FIGS 68-70: Unidentified Pleistocene (lumbar?) vertebra, this and next 2 pages (Site 308)







FIGS 71-72: Unidentified Pleistocene vertebra, this and next page (Site 383)





FIG 73: Unidentified Pleistocene turtle shell fragments (Site 383)

I wished I could have covered more distance, but I'm content with the 8 or 10 high grade finds of the day...nothing big, but quality and variety made it a worthwhile trip overall, and a welcome diversion from my more frequently encountered ammonites and echinoids.



FIG 74: Pleistocene kiddie scraps

April 27, 2013: A Leisurely Finish

With a little time on my hands I opted for an out of town Saturday stream visit, and turned up one crude little flint scraper. Not exactly a centerpiece in any collection, but worth picking up, if only to give to an interested kid at some point.



FIGS 75-77: Possibly a uniface scraper, this and next 2 pages (Site 655)







FIG 78: A bashful new friend (Site 655)

With a little more time to kill, I moved on to some exposures of the Lower Cretaceous Walnut Formation (105 MYA). The first stop produced a surprise, an *Engonoceras* ammonite, not perfect, but much better than the fragments usually encountered in the Walnut. Perfection this day came in the form of the target taxon, the echinoid *Coenholectypus planatus*, with a nickel sized specimen making its way into my tool apron.



FIGS 79-81: Imperfect Walnut Formation ammonite *Engonoceras* sp. this and next 2 pages (Site 455)







FIGS 82-84: Walnut Formation echinoid *Coenholectypus planatus* and next 2 pages (Site 455)







FIG 85: Unidentified Walnut Formation crab dactyl (Site 455)



FIGS 86-87: Unidentified Walnut Formation crab bivalve steinkern this and next page (Site 455)



My final Walnut site for the day produced 3 more *C. planatus*, with 2 being half dollar sized, but only one of the 3 was high grade. I took a few of the nicer bivalves and gastropods encountered to round out my type collection for the site.



FIG 88: Daddy long legs party! (Site 459) FIGS 89-90: Walnut Formation echinoid *Coenholectypus planatus* this and next page (Site 459)







FIG 91: Walnut Formation fossils including 2 unidentified bivalves, one with interesting epifaunal growths, a gastropod and a *Heterasterechinoid* (Site 459)

And thus concludes a rather low key collecting month, however May should provide some more "amped up" adventures.