FOSSIL COLLECTING REPORT

June 2012

Daniel A. Woehr and Friends and Family

June 5, 2012: Eagle Ford Epiphany

While driving home from work one day I realized that the small road cut made a few years ago just might be weathered enough for a first look by this point. A quick drive by glance revealed some tan to yellow slabs lying around, in sharp contrast to the blocky, massive lithologic character of the more prevalent Buda Limestone in the area.

Parking where I could and hoofing it through traffic to the site, I was encouraged to see many more slabs of gritty Eagle Ford limestone (90 MYA) than came to view while driving. By focusing on the slabs with gritty broken oyster shells covering one surface, I began to see bone debris, soon followed by some small fish vertebrae. This stretch petered out without giving up much in the way of fossils, so on a whim I walked across the street to a smaller and more overgrown exposure. This proved to be a fortuitous move.

This stretch was pretty rich for this formation, at least for the San Antonio area. My crawl was quite productive…a slab bearing a *Pachyrhizodus* fish tooth, once scrubbed at home, revealed 3 *Squalicorax falcatus* crow shark teeth in the same slab. My continued efforts revealed several small *Enchodus* teeth, more *Squalicorax*, and 2 large and well preserved *Cretoxyrhina mantelli* teeth, the biggest and best lamniform teeth I've taken in this formation locally.

FIG 1: Eagle Ford exposure (Site 597)

FIGS 2-4: Eagle Ford shark teeth *Cretoxyrhina mantelli* this and next 2 pages (Site 597)


TEXAS
1845


TEXAS
1845

FIGS 5-7: Eagle Ford shark teeth *Squalicorax falcatus* and fish tooth *Pachyrhizodus* sp. this and next 2 pages

(Site 597)

2 crow shark teeth *S. falcatus*

Fish tooth *Pachrhizodus* sp. above, crow shark tooth *S. falcatus* below

FIGS 8-9: Eagle Ford shark tooth *Squalicorax falcatus* and fish vertebra this page, unidentified shark tooth next page (Site 597)

FIGS 10-12: Eagle Ford fish teeth *Enchodus* sp. this and next 2 pages (Site 597)

FIGS 13-15: Unidentified Eagle Ford fish vertebra this and next page, bone hash following page (Site 597)


TEXAS
1845

FIGS 16-19: Eagle Ford ammonites, possibly *Acanthoceras*, this and next 3 pages (Site 597)


TEXAS
1845
2001

Drenched in sweat but with my “finder’s fee” safely in possession, I noted this chapter of midweek adventure and hope for major rainfall on this site very soon.

FIG 20: Pecan Gap Formation partial straight ammonites, possibly *Baculites taylorensis* (Site 15)

June 9, 2012: Pennsylvanian Pilgrimage and Cretaceous Camaderie

Since young Weston was scheduled to be with his mom most of Father's Day weekend, we opted to have a father-son outing a weekend early. Up before dawn, I whipped us up some egg sandwiches and marshaled the lad into the truck with a pillow and some new creek shoes. A good drive later we found ourselves on a stream exposure of Smithwick Shale, Pennsylvanian Period, roughly 300 million years of age.

Since this site was new to me, I wasn't exactly sure what to expect in terms of access, so when I saw an open gate and people camping by the water's edge, Weston and I went down to chat a bit and ask permission. It turned out that the nice people fishing and camping were guests, and the landowner soon came by, and we had a long,

interesting conversation resulting in permission to look for, but not dig up, fossils. I gave him my word that I'd only take pictures, and as it turned out the experience and pictures alone were well worth the trip.

FIGS 21-23: Young Weston stretching his legs in the Pennsylvanian Smithwick Shale this page, orthocone nautiloid found there next page, first coiled ammonoid spotted there by Weston following page (Site 598)

The shale bench was expansive and not incredibly rich in fossils, but the finds were interesting and in some cases spectacular. I kicked things off with discovery of a large orthocone nautiloid, perhaps an inch diameter by 7 inches long. Moving along, Weston found an eroded coiled ammonoid sitting proud of the rock bench. I tapped on it and it sounded hollow and ready to free itself from the surrounding stone. However easy extraction would have been, I had given the landowner my word and needed to show Weston a good example, so I explained to the boy that his good find needed to stay right where it was.

FIGS 24-25: Smithwick Shale calcite vug this page, large coral or sponge next page, both found by Weston

(Site 598)

Weston then spotted a large sponge or coral type structure in the rock as well as a calcite vug of some sort, then I spotted a nice albeit small coiled cephalopod of some sort followed from some eroded *Spirifer* type brachiopods. Not to be outdone, Weston bellowed out upon discovery of the best find of the day at the site, a 4 inch coiled nautiloid with an ornately studded keel. Then a foot away I spotted a larger, smooth cephalopod slightly exposed. This was a wonderful finish at this site, but then things took an unexpected, positive turn.

FIGS 26-28: Father/Son tag team of Smithwick Shale ammonoids this and next 2 pages (Site 598)

Weston's find – spectacular!

The guests at this property upon learning of our interest in fossils invited us to visit their 150 acre tract a few miles away where they routinely find “those heart shaped things with the star on top and those round bumpy ones”. Sounded like Walnut or Comanche Peak formation echinoids (105 MYA) so we graciously accepted and gave it a whirl.

With the map they had drawn us in hand, we got close to the property, but then the lack of county road names threw us off into a 30-45 minute diversion. Finally we found the site, unlocked the gate and found a couple gullies eroding out of a hill just as promised.

FIGS 29-31: Weston Woehr getting a head start in the Walnut Formation this and next 2 pages (Site 599)

The echinoids were there in force, and over one very busy hour Weston took about 50 perfect *Heteraster texanus* and two *Phymosoma texanum* echinoids while I took 16 or 18 *P. texanum*, one *Coenholectypus planatus* and a *Salenia mexicana*....there were even echinoids in the dirt road! What a wonderful chance encounter with nice people this day....and productive enough to make us ignore balmy temps.

FIGS 32-40: Weston Woehr sporting his first Walnut Formation echinoid *Phymosoma texanum* of the day this page, more *P. texanum* next 8 pages (Site 599)


2004


TEXAS
1845
The
Lone Star
State
2004

Weston's best *Phymosoma* of the day

FIGS 41-43: Walnut Formation echinoids *Coenholectypus planatus* this page, *Heteraster texanus* next 2 pages (Site 599)


TEXAS
2004

Pressing on, we revisited a familiar site in the Walnut Formation. Our short 30 minute visit presented no regular echinoids, all the *H. texanus* we cared to pick up (not many), and one nice little *Engonoceras* ammonite. Another site nearby produced similar results – a few *Heterasters* and one *Engonoceras*.

FIGS 44-45: Walnut Formation ammonite *Engonoceras* sp. this and next page (Site 484)


TEXAS
1845
The Lone Star State
2004

FIGS 44-45: Walnut Formation echinoids *Heteraster texanus* this and next page (Site 484)


TEXAS
1845
The
Lone Star
State
2004
E PLURIBUS UNUM

FIGS 46-47: Unidentified Walnut Formation gastropods this and next page (Site 484)

FIGS 48-49: Walnut Formation gastropod *Anchura* sp. this and next page (Site 484)

FIGS 50-51: Walnut Formation ammonite *Engonoceras* sp. this page, echinoid *Heteraster texanus* next page

(Site 600)

With temps soaring, we continued our series of quick site hits with an air conditioned ride in between. Another familiar site benefitted from recent rains and gave us a few goodies. *H. texanus* in great condition, some dusted with pyrite, dominated our take, but a couple nice *P. texanum* and an *Engonoceras* ammonite made the scene as well before we pulled out.

FIGS 52-54: Walnut Formation echinoids *Phymosoma texanum* this and next 2 pages (Site 404)


TEXAS
1845
The
Lone Star
State
2004

FIGS 55-57: Walnut Formation echinoids *Heteraster texanus* this and next 2 pages (Site 404)

Pyrite dusted tubercles

Weston had enough energy for one last site, so we visited a stream in the Georgetown Formation (102 MYA) with hopes of a find or two....and that's what we found. Walking in, we noticed a large ammonite underwater and proceeded to a dry exposure where we spent 20 minutes looking and dodging poison ivy. Weston grabbed a nice *Neithea* scallop while I grabbed 2 *Holaster simplex* echinoids, back handing one into the water due to rough condition.

On our walk out we opted to go for the submerged ammonite. It was a good thing I packed a hand sledge and chisel, as the hand sledge had enough umpf underwater to make progress on the ammonite, freeing it from the stream bed within 5 minutes...and now a 12 inch *Mortoniceras* ammonite graces our collection.

FIGS 58-61: Georgetown Formation ammonite *Mortoniceras* sp. this and next 3 pages (Site 173)

With a little Chick-Fil-A in our bellies, the miles and hum of the road made Weston's little eyelids heavy, sealing the deal on a good day afield for a man and his kid. On the drive home I noticed that since we were free of the distractions of my domestic obligations and his friends and computer, we had lots of in-depth conversation above and beyond what we have during our normal routine, and this was the hidden gem of the trip.

June 16, 2012: Texas Coast Adventure Quest

With a little time on our hands and a mutual thirst for outdoor adventure, Ms. Brett and I took to the waves for the better part of the weekend, geared up whatever the coast might provide. We kicked things off by sliding the canoe into the brine underneath a bridge…our choice of spots was no accident as it provided shade, protection from the wind, and a deep channel an easy pitch from either side of the boat.

However our bucket brimming with frisky live shrimp did little to entice local denizens of the deep. Slack tides tend not to put predator fish on the feed, but I did manage to land a couple undersized speckled trout while Ms. Brett took the big fish prize with a lengthy ribbonfish, its saber like chrome body complemented by equally saber like teeth. We enjoyed a few hours of this then pressed on with our adventure.

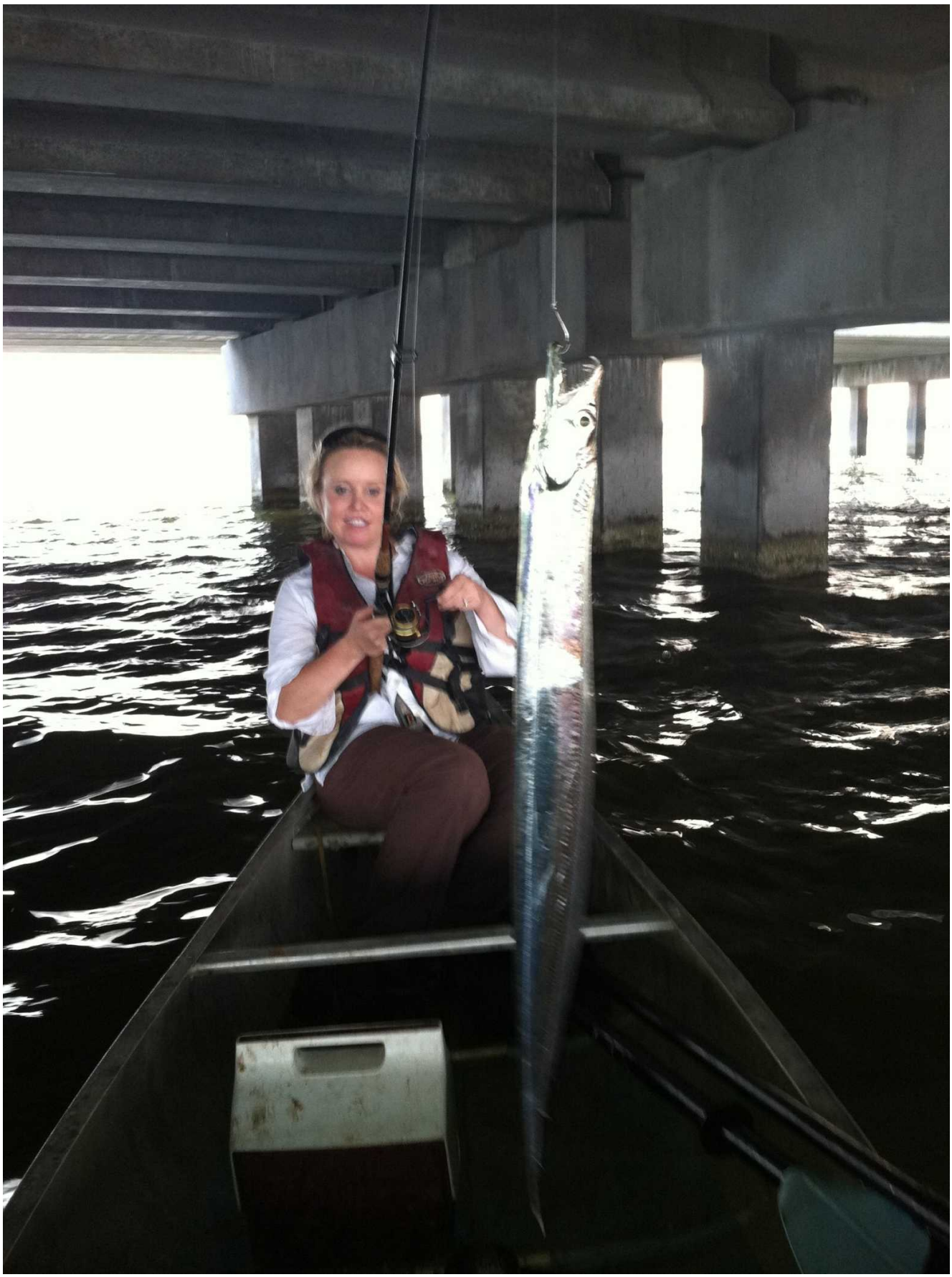


FIG 62: Ms. Brett inflicting her piscatorial prowess on this ribbonfish

With winds slacking, we embarked on an ambitious 18-20 mile route which gave us a peak at some Pleistocene Beaumont Clay which had a chance of exposing a fossil or two. Dolphins kept us company for part of our ride.

Once on land, we enjoyed sharing footing with legions of fiddler crabs while we strolled the shorelines. Finds were sparse…I started off with a couple small but thick chunks of bone thought to be fragments of proboscidean limb bones along with a small piece of petrified wood; Brett scored a nice Pleistocene gastropod steinkern.

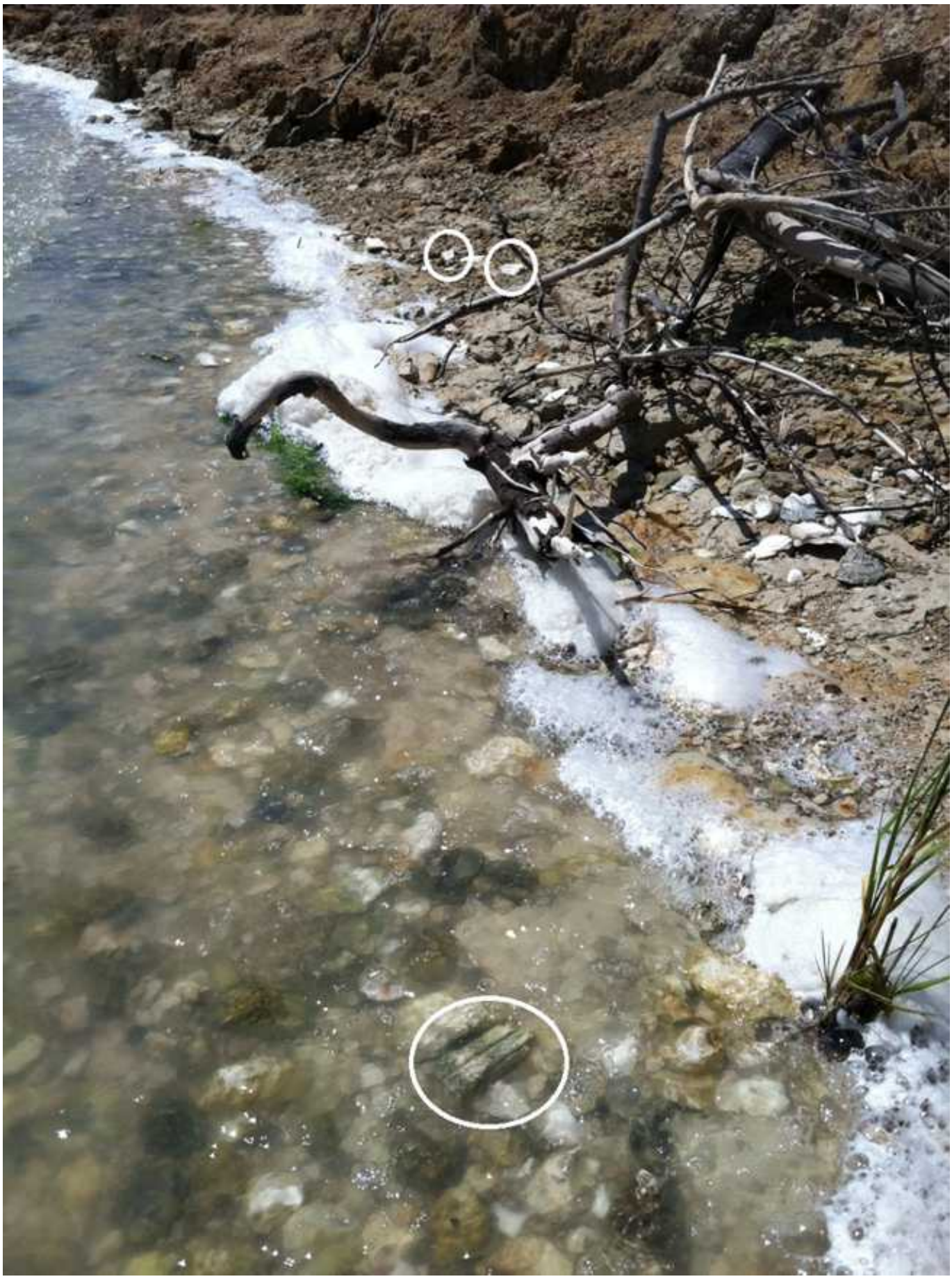
FIGS 63-65: A peaceful shoreline this page, the author with a fiddler crab next page, Ms. Brett with a Pleistocene gastropod steinkern following page (Site 601)

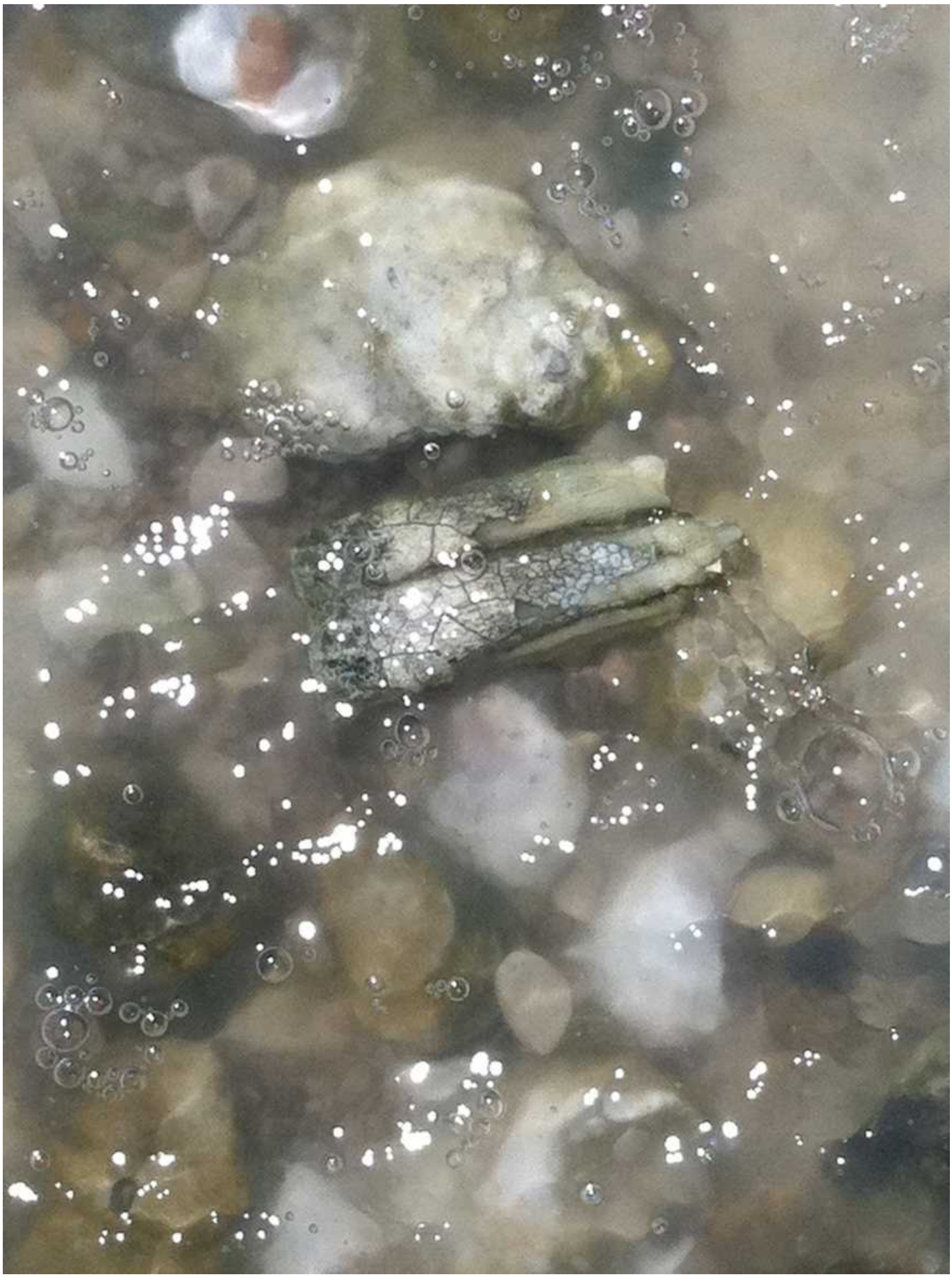

Lost Maple

One shoreline got particularly hard to navigate as trees and sea grass made for awkward footing. I considered turning back but experience told me to proceed the last 50 yards. I jumped a fallen tree trunk and was soon rewarded with a worn blue, yellow, and white horse lower molar from far back in the jaw as the waves intermittently covered it. Pleased with my find, I continued my course.

FIGS 66-73: Horse teeth, possibly Pleistocene, possibly more recent, this and next 7 pages. Vertebrate fossils in this area are often deceivingly white; more collecting required to ascertain age of these teeth (Site 601)

50 feet later, a second horse molar revealed itself underwater, and peering forward, 2 more horse molars could be seen together on the bank just 10 feet away, all 3 bleached white with micro cracks through the surface, but in good condition. I surmised that the latter 3 could all be from a single animal.





Winds kicked back up a notch and soon there were small whitecaps to consider. Not wanting more formidable winds to hamper us, I motored the canoe straight through the chop for miles to a windward shoreline, where calm water prevailed.

We walked a few more shorelines but fossils were sparse. I picked up just one fish vertebra of possibly Pleistocene age at our last stop, its dark color slight encrustation and brittleness not making it appear to part of a recently deceased critter.

Winds increased to slightly alarming speed, with chop to match, and once again back in protected water we were able to throttle back up for the home stretch back to the vehicle, then kiss the ground, feeling as if we had cheated death and rounded Cape Horn in our diminutive vessel. In the process we had caught lingering glances from fishermen in more substantial boats tucked out of the wind as we appeared on the horizon and gradually putted by them...yes adventure was what we were after, and I believe we both found it.

June 30, 2012: Paddling Waters New and Old

Saturday morning found me running solo to a few riparian venues I'd been eyeing for a while, and this time I felt the kayak was the best vessel for the task. I sure enough need the exercise! Anyway, in short, 5 miles of paddling in the first stream resulted in little other than one Fort Worth Formation ammonite (102 MYA) in the backpack, and a bunch of *Rastellum carinatum* oysters from the Denton Formation (101 MYA) photographed in huge slabs. It was a scenic 4 hours.

FIGS 74-75: Fort Worth Formation ammonite *Mortoniceras* sp. this and next page (Site 603)

FIGS 76-79: Denton Formation exposure this page, *Rastellum carinatum* oysters found there, next 3 pages

The second stream revealed the contact of the Woodbine and Grayson formations in my 1 mile paddle, but unfortunately no fossils of interest.

My third and final stream was quite polluted, in fact most of the “cultural evidence” was a bit more modern than preferred, but amongst the numerous car bodies, sofas, refrigerators and old cans were Bison/cow bones, old bottles, and a few Cretaceous marine fossils. 6 miles of paddling produced some things of interest, most notably an old wine bottle made of heavy green glass, a gallon stoneware whiskey jug, four *Cymatoceras* nautiloids and a shark tooth, the latter marine fossils hailing from the Grayson Formation (98 MYA). The bovid bones and teeth I found were all sub fossils either cow or Bison. The deer material was a mix of fossil and subfossil.

FIGS 80-81: Views of Grayson Formation this and next page (Site 330)

FIGS 82-85: Grayson Formation nautiloid *Cymatoceras hilli* covered on one side by *Mariella* ammonites, a gastropod, a *Neithea* bivalve, and an unidentified gastropod, this and next 3 pages (Site 330)

FIGS 86-87: More Grayson Formation nautiloids *Cymatoceras hilli* this and next page (Site 330)

FIG 88: Pleistocene deer *Odocoileus virginianus* skull piece and attached horn core, note attached caliche (Site 330)

FIGS 89-92: Pleistocene or Holocene *Bison* (hopefully not cow!) teeth this and next 3 pages (Site 330)

FIGS 93-95: Heavy wine bottle with bubbles...unsure of age (Site 330)

FIGS 96-100: The two rightmost bottles are older than the leftmost bottle (Site 330)

"Hazeltine & Co." barely visible on left side


TRADE-PISO'S-MARK

"Dr. S. Pitcher's"

That was a tiring but fun day. I covered many miles running upstream and downstream, seeing all the formations from Fort Worth through Woodbine. And thus concluded a slightly more laid back month of fossil collecting.