

# FOSSIL COLLECTING REPORT

## APRIL, 2007

Daniel A. Woehr and Friends

April 6, 2007: Sensational Serendipity in the Cenozoic, South Florida Style, Day 1

When you get serious about fossil collecting you eventually run into other serious collectors who live out of state. Ron Hunter from VA, Debra Powell (aka Fossil Babe) from south FL and I all met 2-3 years ago on a Florida fossil collector's web ring which Debra moderates. Debra has hosted Ron in FL for several successful trips and this was to be my first serious, premeditated, and dedicated fossil trip to the Sunshine State. There are leaders and followers in this pursuit and Debra proved to be one of the best leaders as demonstrated by her relentless persistence in seeking out untapped sites producing some of the best vertebrate and invertebrate material available in the state. Over the 4 days I spent with Ron and Debra I noticed that there was sort of an underground culture of fossil hunters there and it was extremely competitive due to the high dollar fossil market in the state. Debra's big heart and confidence that she will continue to find new and productive sites allows her to take clueless nonresident collectors like myself under her wing every so often and treat us to "slam dunk" collecting trips. She is in fact good enough that she takes tourists out for hire on day trips where they can find their own fossil treasures.



**FIGS 1-2:** Florida's own Debra Powell aka "Fossil Babe" with 5.25 LBS of shark teeth (over 5000 teeth) taken in one day from one of her self-found sites



**FIGS 3-6:** The author and friend Ron Hunter upper left admiring a complete mammoth hind leg at Debra Powell's house, the author "raccooning" along a Peace River bank then screening a load of gravel followed by a local newspaper article that came out the weekend we were there – could our youthful exuberance in digging up the river bottom have led to its parched demise?

Since Debra works her regular job as a bridge inspector during the week she sent us to a site in the Peace River she was working on and off and finding goodly amounts of marine and terrestrial vertebrate material of Miocene to Pleistocene age (10,000 – 7 million years of age). Ron and Debra had expanded a hole in the river bottom the previous weekend and took partial mammoth and mastodon teeth, glyptodont (giant armadillo) scutes, and lots of shark teeth, piquing my interest in the site. The conventional method of collecting the streams in FL is to dig or dredge the bottom with specialized shovels, dump the sediment load onto floating screens, then sift the screens in the current as if panning for gold. Each load condensed down to a screen full of gravel which generally contained at least a few shark teeth but sometimes hid welcome surprises.

Ron and I opted to work as a team in the rivers with me on the shovel and him on the screens. Since this was my first trip to the area Ron magnanimously offered to send me home with all the specimens we collected unless we got doubles of something rare he did not yet have. Our first load produced several shark teeth, most notably a nice *Hemipristis serra* (snaggletooth shark) tooth over an inch in length. The second load had Ron whooping and hollering so I went over for a look. On the screen lay a nearly perfect 2 x 3 x 3 inch, "3 humper" juvenile mastodon tooth *Mammuth americanum* with much of the root intact. It came from a team effort of Debra finding the site, me on

the shovel, and Ron on the screen. This was a milestone find in my pursuit of fossil elephants. In FL as in TX mastodon teeth are 50 times as rare as mammoth teeth so I was extremely lucky to land this particular specimen especially on such a short trip. Over 8 hours we landed lots of lemon, snaggletooth, bull, dusky, tiger shark and barracuda teeth that day in addition to a couple horse and deer teeth, a broken camel tooth, a sperm whale tooth, stingray barbs and teeth, bird bones, and Ron's *Glyptotherium floridanus* (giant armadillo) osteoderm but the mastodon experience will be the one I will remember for all of my remaining days. I've been hard after an intact elephant tooth for 3 years and I ultimately had to fly to FL and let the fire ants ravage my carcass to realize this goal.



**FIGS 7-10:** Juvenile mastodon tooth *Mammuth americanum* in excellent condition (Site 390)



**FIGS 11-14:** 2 more views of *M. americanum* tooth above followed by 2 views of horse, camel, and deer teeth and antler tine below (Site 390)



**FIGS 15-19:** Dugong (manatee) ribs and partial vertebra *Metaxytherium* sp. or *Trichechus* sp. and turtle plastron fragment top left, armadillo osteoderm *Glyptotherium floridanum* top right, snaggletooth shark teeth *Hemipristis serra* next two frames, lemon shark teeth *Negaprion brevirostris* below (Site 390)



**FIGS 20-22:** Stringray teeth and tail spines *Myliobatis* sp. above, sand tiger shark (*Odontaspis taurus*, long and slender), bull and dusky shark (*Carcharhinus leucas* and *C. obscurus*, short triangular), and tiger shark (*Galeocerdo cuvier*, hooked and serrated) teeth middle row, miscellaneous broken teeth below (Site 390)

## April 7, 2007: South Florida Day 2

Flush with bones and teeth, we opted for a completely different venue on Saturday. Debra took us to a commercial fill dirt pit which I believe was Tamiami formation, Miocene in age (7 MYA). Here she guided us to the more productive piles which were rich in invertebrate marine fossils. She showed us how to spot the edges of sand dollars barely exposed in the clods of gray, shelly marl as we picked through the piles with hand tools. We went about this drill for a couple hours, each of us securing 2-4 dozen "arrowhead" sand dollars *Encope tamiamiensis* plus sea biscuits *Rhyncholampus gouldi*.

Ron and I had wandered back to the truck for water and some of the other collectors on site knowing of Debra's collecting prowess took the opportunity to needle us for information on the site that gave up my mastodon tooth, thinking we'd be foolish enough to spill the beans on one of her hard earned sites. I played country dumb, telling them I was from TX and this was my first collecting trip in the state so I really didn't remember the area landmarks. We got a kick out of this whole exchange and how they backed away when Debra showed up. I hope things never get this competitive in my home state of TX.

Debra made her way back to the truck with a concerned look on her face, accused us of wimping out on her, and threw a killer regular echinoid at me. She said she found it in one of my footprints where the gravel had shifted as I passed by. Needless to say this breathed new motivation into Ron and me and we rejoined her on the pile. I began some light digging on top of the pile with Ron by my side. On the second sweep of my rake a perfect, matrix-free regular echinoid *Arbacia crenulata* rolled out right in front of me and I seized the opportunity to gloat and taunt Ron with it. Within minutes using the same method I produced another similar specimen of a different species, this time *Gagaria* c.f. *mossoni* with partial spines still attached. The two looked quite similar to the casual observer, but having studied echinoids pretty closely in TX I noticed differences in the size, number, and distribution of tubercles (spine attachment points) between the two specimens. Debra found 3 and Ron found 1 *Gagaria* just before a pit employee booted everyone off the property.

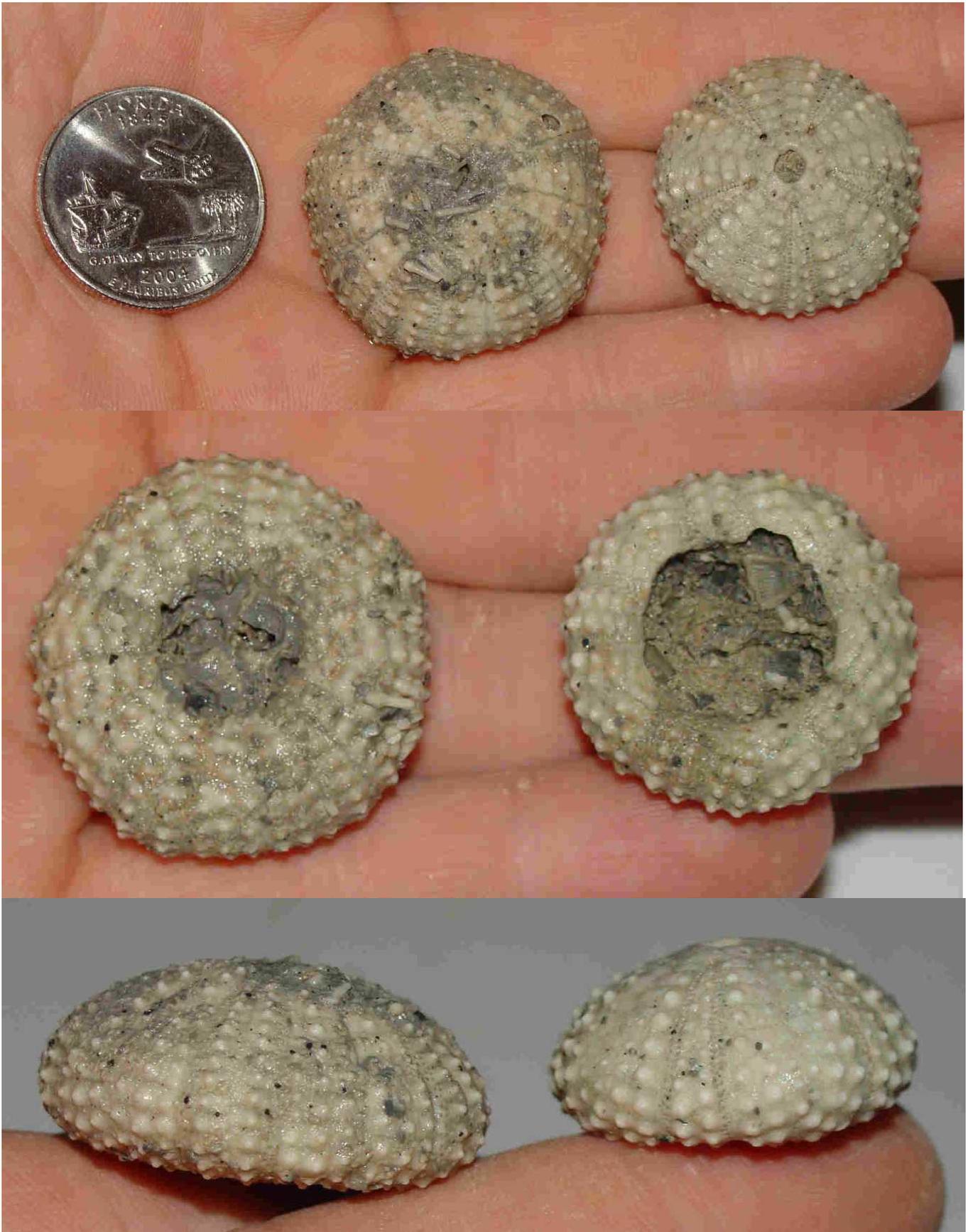
I stayed up till 2 a.m. that morning prepping all my specimens in Deb's garage using her air scribe, but not before we moved on to Deb's boyfriend Chuck's 600 acre river bottom ranch, trading fossil equipment for rifles and sitting patiently hoping for wild hogs to come through. We saw a couple alligators and Ron popped a raccoon with Chuck's .17 rimfire, but I sat tight with a Ruger Mini 30 and held my fire as no pigs came through. No matter; this was a complementary hunt on this particular ranch and it was fun just to see a new piece of land. I'm not used to hunting big game while surrounded by palm trees and palmettos – it made for a pleasant experience.



FIGS 23-28: Miocene sand dollars *Encope tamiamiensis* (Site 391)



**FIGS 29-30:** More sand dollars *E. tamiamiensis* above, removing matrix with air scribe below (Site 391)



FIGS 31-33: Regular echinoids *Gagaria* sp.? left and *Arbacia crenulata* right (Site 391)



**FIGS 34-36:** Sea biscuits *Rhyncholampas gouldi*? above, barnacles *Balanus* sp. center, scallops and gastropods below (Site 391)



**FIGS 37-38:** Cool gastropod from a construction site near Debra's house

April 8, 2007: South Florida Day 3

Sunday morning got off to a slow start but we finally hooked up with Deb's friend Ollie and headed to her "5000 shark tooth per day" honey hole on a south FL stream. The site lived up to its name. Ollie had to leave early but not before laying hands on 2 huge (2+ inch) mako teeth *Isurus hastalis* and several smaller meg teeth *Carcharias megalodon*. The rest of us stuck it out for 6 hours or so and landed 3000-4000 lemon, bull, mako, snaggletooth and dusky shark teeth along with a couple whale earbones, fish vertebrae, gar teeth and scales, turtle shell fragments, a giant armadillo dermal plate *Holmesina floridanus*, a couple horse teeth, Deb's small piece of mammoth skull, and other assorted goodies. Debra had left a few potholes undisturbed so after raking and screening some of the gravelly flat areas Ron and I began scooping gravel out of the holes by hand and landing some nice teeth.

The evening found us back on Chuck's property sitting tight for hogs that never materialized, but it was fun to sit tight in ambush predator mode clutching our 30 caliber weapons nonetheless. It was a beautiful property and Ron and I certainly appreciated the invite.

Again I stayed up late prepping Ron's sand dollars and sea biscuits as he doesn't have the tools to do so at home.



FIGS 39-41: The author and Ron Hunter working creek site 392 above, results of one productive gravel load below



**FIGS 42-43:** Big teeth from Site 392 including mako *Isurus hastalis* (outermost 2 in top frame), snaggletooth shark *Hemipristis serra* left of quarter, unidentified right of quarter and below



**FIGS 44-45:** Deer antler base *Odocoileus virginianus* upper left, remaining specimens horse teeth including incisor far right (Site 392)



**FIGS 46-47:** Unidentified bird bone and gator tooth *Alligator mississippiensis* above, partial dugong vertebra *Metaxitherium* sp. or *Trichechus* sp. and giant armadillo osteoderm *Holmesina floridanus* below (Site 392)

April 9, 2007: South Florida Day 4

Debra was back at work on Monday so Ron and I returned to the mastodon tooth hole we dug on Friday. Again I manned the shovel and loaded our 2 screens which we washed in the river and picked through for fossils. I was quick to land a big horse upper molar while Ron secured a nice deer antler base with partial skull attached and a nice little 1 inch meg tooth. We both got an assortment of shark teeth including some nice snaggletooth uppers. Near the end of the morning I got down on my hands and knees in the muck “raccooning” around in the gravel extending up under the bank and came away with a nice *H. floridanus* scute. One of my final screens revealed a 3 inch meg tooth with one side of the root broken off plus several nice inch wide *Galeocerdo* (tiger shark) teeth.

Then the unthinkable happened – while poking through the clay and gravel I managed to break Debra’s favorite custom made \$250 stainless steel fossil shovel! Man, I felt like the biggest jerk! We pulled the plug early and ran back to her house to drop off her equipment, clean her house, and whisk me off to the Tampa airport in time for my return flight. After showing us her good sites, putting us up in her house, and driving us around all weekend I showed my gratitude by destroying her equipment. Fortunately it looks repairable. I hope she is happy with it once she gets it back.

Aside from that episode this was a landmark chapter in the tapestry of my fossil collecting experiences. I was ecstatic to take home my first mastodon (or any sort of elephant) tooth. Our little fossil hunting commune worked out pretty well. Everyone threw what they could into the ring for a successful community effort, but special thanks goes to Debra as she was the “queen bee” of the whole operation. Her good sites and generosity made the trip a success. Ron provided jocularly, picked me up and dropped me off at the airport 90 minutes from Deb’s house, and put more than his share of financial backing into the trip. They both gave me the majority of their finds for the weekend since this was my first outing there. I provided good examples of TX fossils, some rare, to both of them and did a lot of the grunt work like digging and fossil prep for Ron. We all threw in the ring what we were best able to and the end results were well cemented friendships and a heap of cool fossils. Next time I go to FL I just hope a certain stainless steel shovel doesn’t find the side of my unsuspecting head at 100 MPH!



**FIGS 48-49:** Gray shark (dusky and/or bull) teeth *Carcharhinus* sp. above, extinct (*Galeocerdo contortus*, weakly serrated) and extant (*G. cuvier*, strongly serrated) tiger shark teeth below (Site 390)



**FIGS 50-52:** Snaggletooth shark teeth *Hemipristis serra* above, lemon shark teeth *Negaprion brevirostris* middle, giant white shark tooth *Carcharocles megalodon* or “Meg” below (Site 390)



**FIGS 53-55:** Damaged 3 inch Meg above, sand tiger shark teeth *Odontaspis taurus* below (Site 390)



FIGS 56-57: Ray teeth *Myliobatis* sp. above, dugong rib, horse molar, and alligator teeth below (Site 390)



**FIGS 58-59:** Unidentified bird bones and deer antler fragments above, giant armadillo osteoderms *Holmesina floridanus* below (Site 390)



**FIG 60:** Turtle bone and shell fragments (Site 390)