

Fossil Footnotes

Central Texas Paleontological Society
May 2004

President's Message

We had a terrific auction at West Cave Preserve. The club took in what I believe is a record amount, \$704. After paying for barbeque and making a donation to the Preserve, the club's net was \$531. This success was due in no small part to the terrific quality of the donated material provided by the club members. And we had some spirited bidding, strongly encouraged by our now traditional auctioneer, Danny Harlow.

Some of the highlights included the 3 versions of Hal's Mark IV Walking Stick / Fossil Flicker (Z, Kit, and Econo models), a really nice Riker mounted set of Eocene fossils from the Highway 21 site near College Station, multiple crinoid bulbs from Oklahoma, a jellyfish from Texoma, some plant material from Pennsylvania collected 20 years ago (and tough to find today), the usual Archaeocidaris, and Roemer's "Texas". The last is an account by Ferdinand Roemer (the Father of Texas Geology) of his travels through Texas in 1845-1847.

The barbeque and side dishes were excellent (I ate next to nothing on Sunday). Thanks again to John Ahrns and all the folks there for welcoming us. It is a great location for this annual event.

I understand the following weekend we had the most comical field trip in recent memory. Unfortunately, no camera was present. See the field trip report. And if the attendees start foaming at the mouth at the next meeting (more than normally) you will know why.

Note the changed date for this month's field trip to NTC.

- Mike

Please remember the Meetings For This Year.....are not always on the second Tuesday of each month...

We will always meet in the Board Room at the LCRA Building but the dates and days are as follows:

May meeting	Tuesday May 11th
June meeting	Wednesday June 2 nd
July meeting	Tuesday July 13 th
August meeting	Monday August 2 nd
September meeting	Wednesday Sept 8 th
October meeting	Wednesday Oct 13 th

May Meeting

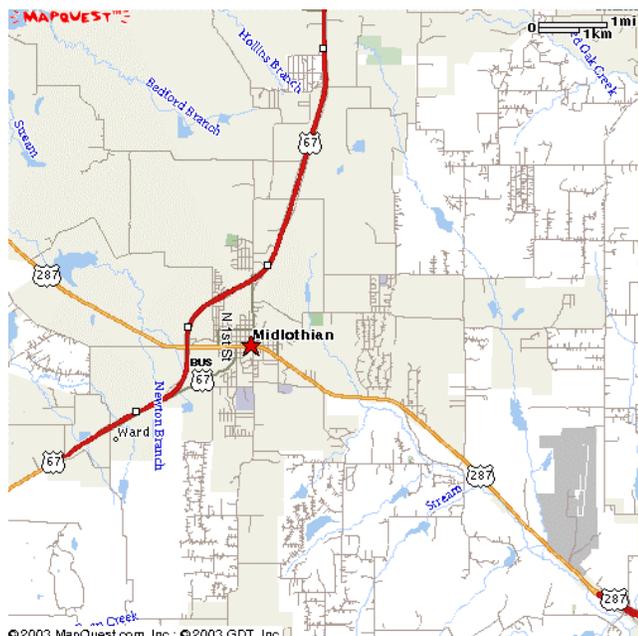
The May meeting will be held on May 11 and our speaker will be Jonathan Wagoner from the University of Texas. Jonathan's talk is titled, "Latest Cretaceous Faunal Provinciality in Western North America", summarizing some of the work done by Wan Langston, Tom Lehman and Jonathan.

May Field Trip-Moved to May 22nd

The May field trip to the NTC Quarry in Midlothian is on, but it has been moved to the 22nd. Be there by 7:45 am. We will need to fill out releases and they will need to escort us in. There is no guarantee that you will be able to get in if you are late.

No one under 18 is permitted. You will need to sign a release. I have provided a map of the vicinity of Midlothian showing the exit off 67. To get to Midlothian you have two options. Go north on I35. After Hillsboro you can take 35 E to Waxahachie and then take 287 through Midlothian to 67. Or, you can take I35 W after Hillsboro and at Alvarado, take STATE 67 to Midlothian. Past Midlothian, take the

Gifco Exit, cross over the freeway going west and stay on Gifco until you get to the NCT plant. Meet in the parking lot.



Eagleford Shale/Austin chalk contact-mainly shark teeth found. I have seen fish found and I have heard of other vertebrate materials being found. Some oysters, lots of phosphate replace gastropods, ammonite pieces, etc.

CTPS *April 2004 Minutes* by Eric Seaberg

We had a good turn out again for this meeting. We have had a nice string of presentations that have been excellent and quite enjoyable. This week Mike Smith gave a presentation on a locality he has had the opportunity to collect several times. It is the Lyme Regis area of England. It has a World Heritage Site status.

<http://www.worldheritagesociety.com/index.html>
This site is so interesting because of the span of time it covers and the spectacular finds it continues to produce. The fossil wealth was first pointed out in 1673 and continues to produce today due to the constant battering the ocean inflicts upon the coastal cliffs. Mike points out that February may not have the most pleasant weather, but the fossil collecting was the best at that time. Evidently, collecting can be

tricky as one has to keep careful track of the tides as the collecting area becomes awash. Mike spent some time on Mary Anning who seems like an interesting individual who collected fossils for a living in Lyme Regis. Overcoming obstacles such as her sex and social status, she made many contributions to science through her fossil discoveries of specimens of ichthyosaurs, plesiosaurs, and pterodactyls. The following link has more information on her.

<http://www.ucmp.berkeley.edu/history/anning.html>

The following link has some good information regarding the Lyme Regis area with photos for those who were not able to attend or are curious for more information.

<http://www.soton.ac.uk/~imw/lyme.htm>

<http://www.soton.ac.uk/%7Eimw/lyme.htm>

Eric

April 17- Club Picnic and Auction

It seems that everyone had a great time and many added some pretty neat fossils to their collections and according to David Lindberg, finished off the barbeque.

David reported that the total auction proceeds were \$704.00. The cost for food furnished by the club was \$73.10 and a donation to West Cave Preserve of \$100.00, gave the treasury a net deposit of \$530.90.

Start saving for next year, both your dollars and those extra fossils you can donate to the auction.



Danny Harlow as auctioneer



Texas Gem & Mineral Shows

May 29-30, Fort Worth, TX-Fort Worth Gem & Mineral Club. 53rd Annual Show-“Crazy for Crystals” featuring crystals of the earth. 29th from 10-6; 30th 10-5. Elsie Kennedy/Terry Biegler; 817-246-1403, 817-626-6383; elsiegeorg@aol.com, terry@rockingbird.com

August 14-15, Arlington, TX-Arlington Gem & Mineral Club, 47th Annual Show; Bluebonnet Ballroom, Hereford Hall, University of Texas at Arlington. 14th from 10-6; 15th from 10-5. Carl Wells, 817-451-7861; novacar@evl.net

Remember Sue

Sue will be at the Institute of Texan Cultures-801 South Bowie, San Antonio, Texas 78205-3296 on the exhibit floor Aug 15 to Nov 7 (210) 458-2300
Admission \$6.50 adults, \$3.00 children 3-12, children under 2 admitted free.

Fossil Fest Report

from Ron Root

Dealer signup for Fossil Fest is going very well. All 5 large tables and 5 of the seven small tables have been filled.

Large tables:

Scientific Specimens (Mark Randall)
Earth Works (Pat Napalitano)
PaleoScene (Glen Kuban)
Shu's Minerals & Fossils (Chuck Shuler)
Natural Selection (Joe Bone)

Small tables:

Natural Treasures (Bob Ferguson)
Nature's Treasures (Karen Richards)
Earth Wonders (Hollis Thompson)

Cold Creek Fossils (Danny Harlow)
Miram Hall

Who Was St. Helens?

An article taken from Gems of the Rogue
February 2004 issue

Mount St Helens, renowned as the most beautiful snow-capped peak in the Cascade Range, was named for St Helens, the English Ambassador to Spain by George Vancouver who explored the Northwest in the 18th century for England and named all the important West Coast features. The Indian name for it was Lawala Clough or smoking-mountain.

Mount St Helens is a relatively young volcano, being just shy of 40,000 years old. Geological studies indicate that it's greatest eruption occurred about 1900 B.C. when it spewed about three times as much ash and rock than in the latest eruption, 18th May 1980. In recent times, it springs to life about every 150 to 500 years or so. It had been relatively docile since its last eruption 143 years ago in 1857 and it is the first volcano to erupt in 66 years in the continental United States, the last being Mt. Lassen, 400 miles to the south which erupted in 1914.

Amazing Find on a Golf Course

Greg found this on the Internet

<http://cnn.netscape.cnn.com/news/package.jsp?name=fte/golfamazingfind/golfamazingfind&floc=wn-ns>

Rare fossilized tracks of a small mammal dating to the age of dinosaurs have been found on a golf course in Golden, Colorado-named oddly enough, the Fossil Trace Golf Course.

Similar prints were also found in Rifle about 10 years ago, which is in western Colorado. The tracks were made about 68 million years ago by a mammal the size of a rat. This is the first time mammal tracks from the dinosaur age have been found in the Western United States.

When we think of the age of the dinosaurs, we think Triceratops, Tyrannosaurus rex, and Velociraptor. We don't think about all the tiny mammals-not a one of them larger than a house cat-who scampered at and even beneath the feet of the behemoth dinos. There

is a reason for that. Geologist and internationally known dinosaur expert Martin Lockley of the University of Colorado at Denver, says the delicate bones of the small mammals are rarely found in fossils, and the tracks they made in the mud are even harder to find.

How rare are these small mammal tracks? The Golden and Rifle sites are among just four places in the world where unambiguous mammal tracks from the dinosaur age are preserved, Lockley told AP. The other two are in Maryland and Argentina.

Lockley found the tracks on the golf course while he was there studying sandstone walls. They consist of five regularly spaced tracks that were likely made by a hopping animal. Each four-toed foot track is about three quarters of an inch in length. The Fossil Trace Golf course is also home to tracks left by horned dinosaurs and crocodile-like champsosaurs.

The tracks found in Rifle a decade ago, consist of 40 prints on a sandstone slab that is only 2 feet long and 18 inches wide. They were originally made in mud about 75 million years ago, when that part of Colorado was a vast river delta on the edge of a shallow sea. The mammal tracks found in Colorado are described in the Paleontology Journal Ichnos.

Creature Unlike Any Other Found in Chile

Article via the Internet

Two Chilean scientists have found a dinosaur fossil-one that is unlike any other and could well be a totally new species of dinosaur.

Paleontologists David Rubilar, 28 and Alexander Vargas, 26, can tell this much from the specimen that is about 40 percent complete. It was a long-necked plant eater with a single skelton that roamed the earth 70 million years ago.

They told Reuters other interesting facts they have discerned about the creature:

The animal lived near the end of the dinosaur age in the Late Cretaceous Period. It measured about 25 feet long and its hips reached a height of about 6.5 feet.

Unlike other dinosaur species, this one has extremities that are slightly more elongated and thin.

It most likely dined on Araucaria, also know as monkey-puzzle trees, which are native to the area.

The creature belongs to a little-known family of dinosaurs called Titanosaurus that have long tails and inflexible necks.

Fossils from this family of dinosaurs have been found in South America, Madagascar and India.

“When we first figured out that this was something new, we visited fossil collections in Argentina and Brazil and we realized this creature has no name,’ Vargas explained to Reuters. So they named it: Domeykosaurus chilensis. It honors the 19th century Chilean scientist Ignacio Domeyko. To be officially listed as a new dinosaur species, the find must be approved by the scientific community. This process will begin when the two paleontologist publish their findings later this year in a Chilean geological journal.

The Paleo Jank Jonathan Wagner May 3, 2004

The Austin Paleontological Society has nominated, and the South Central Federation of Mineral Societies Scholarship Committee has selected, DR. JAMES SPRINKLE as the 2004 AMERICAN FEDERATION OF MINERAL SOCIETIES SCHOLARSHIP HONORARY WINNER. Each year the American Federation of Mineral Societies provides two, two-year \$2,000 scholarships to each of six Regional Federations; these scholarships are awarded to an honorary winner, who is then asked to dispense them to deserving graduate students. Since the first scholarship was given in 1965, 430 graduate students have received a total of over one million dollars. Dr Sprinkle has been a member of the Austin Paleontological Society since its formation in 1981, and he serves as one of the APS' three professional advisors. -- Courtesy of Frank Crane, President, Austin Paleontological Society

Maybe this is overkill, but I thought Mike's program on Lyme Regis was pretty good. I have taken his power point presentation and condensed it some hopefully hitting on the high points that are the most important. Your Editor

Lyme Regis Part of the Dorset & East Devon World Heritage Site

Fossils and Geology Mike Smith April 2004

Sources

Nomination of the Dorset and East Devon Coast for inclusion in the World Heritage List, Dorset County Council, June 2000.

Women of Dorset, Diana Trenchard, Dorset Books, 1994; *Geology of the Dorset Coast*, Michael R. House, Geologists' Association Guide No. 22, 1993.

Lyme Regis & Charmouth

Fossil wealth was first realized in 1673; James Hutton "the father of modern geology", visits the area in 1770; William Smith – first map of geology of coast, 1795; Dr. William Buckland (1784-1856) Oxford University, visited before 1801, multiple publications. Sir Roderick Murchison (1792-1871), President of both the Geological and Royal Geographical Societies, visited 1825. Invited Mary Anning to London for her only visit there; Adam Sedgwick (1785-1873), Professor of Geology at Cambridge, 1830-44 bought 6 ichthyosaurs from Mary Anning.

Some History

Gideon Mantell (1790-1852) the discoverer of the Iguanodon, visited Mary Anning 1832; Sir Henry De la Beche (1796-1855), founder of the British Geological Survey, lived Lyme 1811; Professor John Stevens Henslow (1796-1861), Darwin's Tutor at Cambridge, 1836 described Portland fossil trees; Sir Charles Lyell (1797-1875), pioneer of uniformitarianism, Visited 1810; Professor Richard Owen (1804-1892), superintendent of the Natural History Museum, London. 1839 collected with Anning, Buckland and Conybeare; Louis Agassiz (1807-1873), the Swiss founder of modern glacial geomorphology, visited 1834, collected with Anning.

More History

A second specimen of plesiosaur discovered by Mary Anning (1799-1847) is now displayed in the Musee Nationale d'Histoire Naturelle in Paris. This and other material from Dorset was used by the great French vertebrate paleontologist Georges Cuvier (1769-1832) in his epoch-making *Recherches sur les Ossements Fossiles 1821-1824*. He also collected with Anning. He suggested that fossils found in the area around Paris are "thousands of centuries" old. His observations pushed the age of the Earth well beyond its commonly accepted limits. He also noted that the fossils he studied bore no resemblance to

anything still living, an unambiguous endorsement of the theory of extinction.

Mary Anning (1799-1847) was a poor woman, uneducated, working class in field dominated by wealthy male amateurs. Her Father sold fossils as curiosities. He died when she was 11 and she and her brother continued the trade. Some of her discoveries included: The first well-preserved ichthyosaur (w/ brother Joseph), First complete plesiosaur, First British pterodactyl, Plus numerous important invertebrate finds. In addition to her relation to the previously mentioned geologists and paleontologists was visited by and collected with the King of Saxony. "Her original discoveries places her in the highest rank of the pioneers of geological sciences."

Continuing Source of Specimens Complete skeletons are still being found within the nominated Site as the cliffs erode and the continuing finds of new taxa highlight the potential for new discoveries and the importance of site conservation. The published fauna of at least five different plesiosaur species and nine ichthyosaur species make the marine reptile fauna the most varied known from any Lower Lias locality. Pterosaurs Lyme Regis also produced some of the earliest remains of flying pterosaurs. *Dimorphodon macronyx* Owen is represented by two fairly complete individuals and numerous fragmentary remains. It is of great importance to the study of pterosaurs and has been found nowhere else.

Fish- Liassic fish fauna of the area are exceptionally diverse with a broad representation of both cartilaginous (sharks and rays) and bony fishes. Many were first monographed by Louis Agassiz (1807-1873). About forty-six fossil fish species are currently recognized of which thirty-five are unique to this coast.

Dinosaurs- Rare remains of land-dwelling dinosaurs are known from the Charmouth, which is the only published locality for *Scelidosaurus harrisoni* Owen. The oldest known thyreophoran dinosaur, the group that includes armored and plated dinosaurs. It therefore occupies a crucial position in dinosaur phylogeny, close to the origin of all plant-eating (ornithischian) dinosaurs.

Other Invertebrates found in this area include ammonites, Crinoids, Belemnites and Insects. The Black Ven Marls of the Jurassic Coast of Dorset are the best known source of Lower Lias insects in the world. The fauna includes Odonata (dragonflies),

Blattodea (cockroaches), Dermaptera (earwigs), Hemiptera (bugs), Coleoptera (beetles), Phasmatodea (stick insects), Orthoptera (grasshoppers' and crickets), Raphidoptera (snakeflies), Mecoptera (scorpionflies), Diptera (true flies).

Field Trip Report

By Ed Elliott

Five die-hard fossil collectors ignored the forecast of rain to show up in Bandera: Danny Harlow, Tom bowers, John Hinte, Robert Lawrence and I, Ed Elliott. While it was raining in Austin, by Blanco it had quit. It sprinkled several times during the morning, but never bothered us. It was a cool, overcast and slightly breezy day and great for collecting.

We had hoped that the obviously recent copious rains would have released great quantities of fossils from their long term homes. While this wasn't the case, several nice things were found. A few pretty crinoids, lots of crab claws and at least five Salenias were collected from the Highway 16 site. I had picked up a bad Loriolia and an ugly Coenholectypus. Upon cleaning, the Loriolia remained ugly, but the other turned, I believe, into another new crinoid. Personal rule: if it's small and somewhat interesting-take it home; you can always toss it later.

We went to sites at Lake Medina, thought the second wasn't worth mentioning. At the first site, quite a few Salenias were found –some good, most weathered. We did, however, have a close encounter of the furry kind. An obviously young squirrel joined us upon arrival and stayed close for over a hundred yards as we worked down the outcrop. Most of the time he would come up to our feet, sniff, stand up and look at us (expecting food?), and then run a few feet away. Towards the end, he took to climbing our pant legs and perching on our shoulders. He was happily sitting on top of my head when I leaned down to pick up an ugly Salenia. I made the comment that it totally lacked an apical plate. No sooner than we all said Cidarid, John made the comment that it was really the squirrel that had made the find. Regardless, it's now in MY collection. About the time, a man who lives nearby came and collected our little friend. He had cut down the nest tree. Feeling bad about it, he had raised three young squirrels. It was a fun addition to our collecting experiences.

We all agreed that, being somewhat in the neighborhood, we should visit Don O'Neill down toward Hondo. I'm pleased to report that his cancer has slowed down to a crawl. He is able to be up and about and enjoying his family, friends and fossils. We enjoyed the visit and were all happy to see him in better health.

Still having daylight, we decided to go exploring. We went back to Bandera and took 470 to Tarpley. The trip from Tarpley, through Utopia, to Leakey and on to Vanderpool, is really a lovely drive. This is one of the prettiest sections of the hill country. One outcrop before Tarpley seemed to have some promise. The others we stopped at, didn't. Sundown caught us near Leakey. Being out of the city, visiting friends, hunting fossils and seeing beautiful scenery, I'd say it was a good trip.

Provided by Ed Elliott - February 2004 Discover Magazine

A Scatological Dinosaur Surprise

as written by William Jacobs

Karen Chin, a paleontologist at the University of Colorado at Boulder, was puzzled when she found chunks of undigested meat in a seventy five million year old hunk of fossilized dinosaur dung from an ancestor of T-Rex. "It took me a while to convince myself that this was really muscle tissue." Soft animal tissue rarely survives the digestive tract, much less the fossilization process. Paleontologist Jack Horner of Montana State University examined bone fragments in the fossil dung-called a coprolite- and tentatively identified them as the remains of a thick-headed plant eating dinosaur called a pachycephalosaur. This identification makes the preserved muscle only the fifth example of fossilized dino flesh ever found and the first ever in coprolite. The ancient feces open up a new way to investigate whether dinosaurs were active, warm-blooded creatures. Cold-blooded meat eaters tend to digest their meals slowly, whereas food passes through modern warm-blooded carnivores quickly, often leaving undigested bits in their dung. Cells in the bits of tissue in the fossilized dung might offer additional clues. The preserved muscle fibers may contain telling structures or molecular signatures that could help identify dinosaurs as warm-blooded, cold-blooded, or something in between, as is suspected by some researchers. Now that Chin knows what to look for, she has found muscle fibers in a couple of other coprolites.

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Club Information

The Central Texas Paleontological Society is a scientific, non-profit, community-based organization devoted to the study of fossils, advancing the state of the science, educating the public, and collecting fossil specimens. Most of us are amateurs, fascinated by fossils, who love to collect.

Meetings are held on the second Tuesday of each month at the LCRA building, 3700 Lake Austin Blvd. (between Redbud Trail and Enfield Ave.) at 7:00 PM in the LCRA Offices Board Room of the Hancock Bldg. **The public is cordially invited** to attend these meetings as well as our field trips held throughout the year.

Annual dues are: \$15 per person or \$18 per family, which includes a subscription to this newsletter, membership in the South Central Federation of Mineral Societies, and liability insurance coverage for club activities. Associate membership is \$10 per year and includes a subscription to this newsletter.

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About the Newsletter

Fossil Footnotes is distributed once a month prior to each meeting. Contact the Membership Chair to subscribe or obtain a sample-issue. If your mailing-label has a date marked with a colored pen, it means your membership has or is about to expire. Please send your check to the club Membership officer or bring it to a meeting.

We accept material from club members (and non-members at our discretion) including, but not limited to, information relevant to club activities, fossil collecting, paleontology & geology, and science education. Feel free to reproduce original material contained in this newsletter for educational purposes (including other club newsletters), so long as you credit the newsletter issue and author, if applicable. Send submissions by e-mail or hardcopies to the Editor (see above) at least two weeks before the meeting. Expect some publication delays for exotic formats.

FOSSIL FOOTNOTES
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