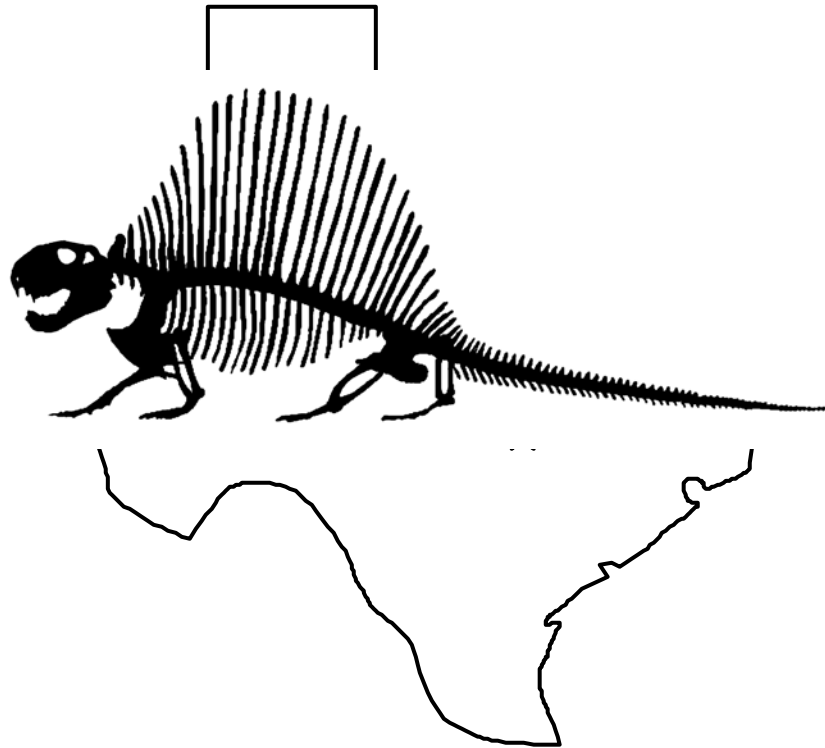


Paleo Footnotes

Newsletter of the
Paleontological Society of Austin

Austin and Central Texas



Volume 2, Number 11
November 2007

PRESIDENT'S NOTE

This is the best time of year. It's like all the fall/ winter holidays rolled into a three week period. Our annual Lake Texoma trip each October was especially anticipated due to the fact the high water levels of June had dropped 20 feet, terracing the banks with fresh exposures. The now normal level could have been a foot or two lower to make things slightly better for collecting, but the weather was *sooooo* nice for camping and collecting. All of the new members should be sure to come next year on this trip as their right-of-passage into the PSA.

The next two weekends were followed by Fossilmania and Fossil Fest, the time to get together with old friends and talk of collecting trips and encounters from past years. As you know, it is very hard not to get excited in these "candy" shops the dealers present.

Our non-profit society is blessed with a great field trip leader and a great bunch of volunteers dedicated to putting on the best shows possible.

Diane Strout, our speaker chair, has picked member James Lopez to speak this month about his many trips to the Marfa area to help paleontologist Jon Kalb excavate Eocene mammals. You all know James as the guy who always pulls cool stuff from his pockets that he's recently collected, and hands you a loupe to see what you think.

And lastly, it is time to select some new officers to lead the society into it's second year. You do know of the provision that I can select any member to these positions, especially if you are not present? It is like the "need not be present to win" part of the raffle prizes at our recent shows. I have your number! I'll see you all at the meeting. In the meantime, go help inventory the UT collection the first two Tuesdays of the month.

John

October Meeting Minutes

The treasurers reported approximately \$16K split between the two accounts.

The Fossil Mania report was given.

Fossil Mania raffle tickets were for sale at the meeting. Have sold 86 tables thus far for the 25th annual Fossil Mania.

The new society t-shirts were unveiled. Workers at the shows get to buy them at cost.

The Fossil Fest report was given.

The Christmas party was set for Dec. 15th.

The main presentation was "An Egyptian Cultural

Adventure from Tut to the Dinosaurs" by Patricia Kane Vanni (paleopattie@hotmail.com) It was a visual delight of both Egyptian culture and quest for fossils in the desert.

The presentation also drew in the following guests:
Dr. Peter Dodson - University of Pennsylvania
<http://www.vet.upenn.edu/faculty/dodsonp/>
Lucy Queszan - BLM
Rachael Benton - Park Ranger - Badlands

Planned the field trip to Lake Texoma.

SHOW REPORT

Well, Fossil Fest 2007 is over and those who worked the show are exhausted but happy.

The numbers are in - and they aren't too shabby. Attendance and club profits were both up from last year. Lots and lots of kids Saturday and Sunday. Still lots of room for improvement though. While it's still fresh on every-body's mind, could those of you who worked the show jot down your observations

(what went well - what didn't) as well as any ideas you have for how we can improve next years show and either email them back to me or bring them to the meeting (email is faster...) ;)

I learned that the time to start planning for NEXT year's show is NOW!!!!

Thank you all SO MUCH for all your help and hard work and uncounted hours spent away from home

and family (unless of course you brought them with you - which could be fun too!)

The show would not have been a success without the hard work and dedication of it's club members. A special thanks goes out to all those who helped so tirelessly in it's preparation as well as those who unselfishly gave so much of their time at the show.

Applause to all!

And now, get me those ideas so we can make 2008 even better!!

See you all at the meeting! I'll bring pix of the show!

Linda

ADDITIONAL CLUB SHIRT ORDERS!

The T-shirts were a hit!! I know we ran out of some colors and sizes of T-shirts before everyone who wanted one got one. If we can get an order close to 36 we can order more T-shirts in colors/sizes needed and still get them for \$6 for those who worked the shows and \$12 for everyone else. Please tell me at the meeting, or email or call me with what you would like ordered and I will make a list. We already have 6 pre-orders.

colors: white (still have lots)
grey (still have 2 L left)

sage green (none left)

light blue (2 XL left)

pink (3 SM left)

Sizes we can order SM, M, L, XL, XXL (could go XXXL if somebody needs one)

I will have the shirts we have left at the meeting if anyone wants to buy one.

Thanks!

Linda

Next Meeting – November 20

"Eocene Fauna of West Texas"

7:00 PM

Austin Gem & Mineral Society Building
6719 Burnet Lane, Austin, TX

Our November program will be given by our very own James Lopez on the Eocene Fauna of West Texas, or "Hunting the Texas Rhinoceros". James, who is one of the few native Austin-ites, finished school in Pflugerville and works as a carpenter. He found his first fossil in Shoal Creek while on a third-grade field trip and became 'hooked' (sound familiar?) An incidental invitation from paleontologist Jon Kalb to search for this rhino near Marfa has resulted in his monthly treks since April.

Don't miss seeing his incredible pictures!

Hello! Volunteers Needed!

The AGMS "Gem Capers" show is just around the corner. Our club has traditionally furnished a demonstration table for them, and this year is no exception!

Our club booth will be similar to last year's with

demo's on cleaning and identifying fossils, we will add the microscope and touch table stuff and now all we need is folks to man the booth! This is another excellent venue for reaching kids.

Please contact Linda McCall at 512.422.2322 or

at lndmccall02@yahoo.com if you would like to volunteer. The show is November 30th, December 1st and 2nd. We need folks all three days. It would be great if we could have the big magnifying light like we did last year too - Frank, was that yours?

I will have a sign-up sheet at the meeting, but you can also call or email me now to volunteer - hope to see a lot of you there!

Linda

Evolution for the Faithful

By J. W. Downs

Nearly all of us have been drawn into conversations with people who question or reject evolution. Feelings against it run so high that some fundamentalist groups claim that evolution is the greatest threat that America faces today, although they fail to elaborate. When my book on cones and conic sections was being edited for publication, the editor asked me to change the wording of one sentence. I had written, "Some sea birds, such as the murre that nest on rock cliffs, have evolved the ability to lay highly conical eggs. If an egg rolls out of the nest onto a flat surface, it will roll in a circle and return to the nest." I was told that I had brought up a controversial subject that could jeopardize book sales in some states. The offending "e" word (evolved) was expunged and changed to developed, solving the problem.

Some reject evolution because they have not been exposed to the evidence, while others categorically reject the concept on religious grounds, but neither group can give an accurate definition of evolution. It is wrong to say that someone "believes in" evolution. We can "believe in" astrology, pyramid power or a flat earth, but we "acknowledge" a spherical earth, heliocentricity and evolution. Belief should not be a matter of the will, but a conclusion reached after considering the best available evidence. In *Through the Looking-glass*, Alice said to the Queen, "One can't believe impossible things." Queen replied, "I daresay you haven't had much practice. When I was your age, I always did it for half an hour a day. Why, sometimes I've believed as many as six impossible things before breakfast."

Some common ground may be found by explaining that some organisms can change in a short time. Bacteria that have been treated with an insufficient amount of an antibiotic will become resistant to that antibiotic because the quantity administered only killed the weaker germs, leaving the more tolerant

ones to reproduce. This has led to the development of strains of tuberculosis and staphylococcus bacteria that are nearly impossible to control. Change can come fast with bacteria since their life cycle is short. Another example can be found in the speckled white moths that rest on the white birch trees in England. This camouflage protected them from being eaten by birds. In the nineteenth century, smoke from the factories and mills of the industrial revolution blackened the trees, making it difficult for the lighter moths to hide. The lighter moths were eaten by birds, but those fortunate enough to be born with more black spots than white were protected and were able to pass this on to their offspring, restoring their camouflage. A hundred and fifty years later, when electricity replaced coal power in industry, the birch trees returned to their former white color, the darker moths stood out and were eaten by birds, at which time the lighter moths reproduced their kind and changed back to be mostly white with small black spots.

Few people can fail to see the logic of such change and the reason for it. Dogs, pigeons, and farm animals have been selectively bred for about ten thousand years. Although humans have made the selection for the improvement of these animals, essentially the same thing happens when the animals are left to their own devices. In nature most creatures produce more offspring than can survive. Offspring are not identical to their parents. Those that are better suited for survival and reproduction will tend to pass the ability to the next generation. This is especially noticeable when there is an environmental change, such as in an area that slowly becomes desert. The survivors of each generation are the ones who have inherited the ability to adapt to a more arid lifestyle. In discussions of this kind, be careful not to use the dreaded "e" word. Creatures may adapt, change or develop, but don't say evolve. It is best to leave humans out of these discussions, at least in the

beginning. This is probably the greatest obstacle in explaining evolution. It may be all right for animals and plants to evolve, but people like to exclude themselves from the process.

Possibly the biggest stumbling block in the acceptance of evolution is our inability to comprehend the vastness of time that has been available for life to evolve. Science has taught us that space and time are not infinite, but geology, paleontology and astronomy have shown us that we are confronted with incomprehensibly large amounts of both time and space. At best we can scale space and time into segments that are more easily understood. To put time into a more understandable perspective, we can engage the services of a number of standard meter sticks. Each meter stick is divided into ten decimeters, one hundred centimeters and one thousand millimeters. Using the scale of one thousand years per millimeter, each meter stick will represent one million years. At this scale, Christianity would be represented by the first two millimeters, or slightly over one sixteenth of an inch. Alexander the Great would appear only a third of a millimeter beyond that, and Egyptian civilization would be placed at five millimeters, or less than a quarter inch. (A single human life-span would equal .07 millimeters, or only .003 inch, approximately the thickness of ordinary typewriter paper.)

The end of the last ice age and the extinction of the Woolly Mammoths would be placed at one centimeter, or three eighths of an inch. The people who drew on the cave walls at Altamira, Spain, thirty five thousand years ago, would appear at three and a half centimeters down our scale, or at one and three eighths inches. Three more meter sticks would have to be laid end-to-end to show Lucy, the oldest complete skeletal remains of a human ancestor, at three and a half million years. Lucy would be marked at three and a half meters, or 3.5 million years.

To arrive at the end of the Age of Dinosaurs, we would have to lay out a total of sixty six meter sticks in a line and place a mark at sixty five and one half meters. From our present position on this scale, that point would be placed at two hundred fifteen feet, or about two thirds of the length of a football field. Remember that this marks the end of the Mesozoic era. To include the entire era ruled by these reptiles we would have to set out 185 more meter sticks end-to-end. This means that untold numbers of species of these dinosaurs evolved and became extinct without the opportunity of meeting (and eating) their relatives since, in reality, they were displaced in time by millions of years.

Since we have quite a few meter sticks left over, we should use them to continue to show some other milestones in Earth's history. By adding 291 more meter sticks end-to-end, we can show the Paleozoic Era. This will bring the total to 542 meters representing that many million years. We can mark the rise and fall of trilobites, and the rise of sharks and cockroaches which are still with us, by extending the length to equal six football fields. To go back to the time that the Earth was formed we would have to set out 4,600 meter sticks, extending nearly three miles (if we haven't already exhausted our supply of meter sticks.) It would require 13,700 meter sticks (8.5 miles) to take us back to the Big Bang.

It becomes evident that trying to observe evolutionary changes in plants and animals during a human lifetime would be analogous to our looking for signs of growth by examining a flash photograph of an oak tree.

It is alarming that those seeking political office must make a show of rejecting evolution if they hope to receive the evangelical vote. At a recent Republican debate, prospective candidates for the presidency were asked for a show of hands if they did not believe in evolution. Brownback, Huckabee and Tancredo raised their hands. This means that they are either scientifically illiterate or that they must profess to be so in order to get the votes of a poorly informed but substantial electorate. Carl Parker of the Texas Legislature observed, "If you took all the fools out of the Legislature, it would no longer be a representative body." While this was aimed at the Texas Legislature, it is true of all representative government. Ironically, those who reject the evidence for evolution, profess to believe in a six thousand year old universe and that there were dinosaurs on board Noah's ark, are the people who select science texts for our schools. They feel that only through blind faith, fear of divine punishment and hope for heavenly rewards can we achieve spiritual values, not realizing that the same values can be attained by studying the observable world.

During the fourteenth century, Christian philosophers such as Nicole Oresme and John Duns Scotus considered inquiry to be a form of worship, admonishing their followers to look for natural explanations for poorly understood phenomena rather than to attribute them to miracles and direct divine action.

J. W. Downs, November 7, 2007

Field Trip Report – October 2007

It was a beautiful crisp morning at Eisenhower State Park with nine members in attendance. Tom and Marilyn Bowers, John Hinte, Melvin Noble, Linda McCall, Gary and Cathy Rylander, Bob McDonald and myself. We seldom see Bob. So it was an added pleasure to talk to an old friend.

At our first site it was obvious that the water was still a couple of feet higher than we would have liked. Water filled inlets that we normally walked across; effectively cutting us off from large areas we would usually hunt. Some of the “easy” walking beach was covered so we occasionally had to go over boulders and such. Certainly none of this prevented us from having a good time. There were more than a dozen nice ammonites found. At least that many good *Macrasters* were picked up. Linda found the second *M. obesus* I’ve seen come from this site. Both Cathy and Bob found ichthyosaur vertebrae. Numerous *Rastellum carinatum* slabs were hauled off. Melvin had never made the Texoma trip before so John’s truck drove up the hill with the bumper dragging. A very good stop.

Saturday evening was spent having our traditional catfish dinner at Wendy’s in

Oklahoma. Laughing and talking around a big table is always a good end to a day of collecting. For the few of us that camped out, the last few hours were around a camp fire. Very nice.

Sunday we met and drove on to Lake Randall. We found small to medium sized ammonites and a good number of small *Macrasters*. Cathy found a very nice *Idiohamites fremonti*, nearly complete.

After a late lunch stop we went to Lowe’s Highport. Again a large section was cut off by high water. We were limited to small ammonites, some *Macrasters* and not very many *Holaster* simplex.

Despite the water level we all had a good time. Beautiful weather, a lovely location, lots of fossils and good friends to share it with; what could be better?

The next trip will be decided at the meeting. See you there.

--Ed Elliot

- Places to Be...Things to Do

Nov 30- Dec 2--AUSTIN, TEXAS, "**Gem Capers 2007**"; **Austin Gem & Mineral Society**; Palmer Events Center, 900 Barton Springs Rd.; Fri. 9-5, Sat. 10-6, Sun. 10-5; contact Susan Postlethwait, 6719 Burnet Ln., Austin, TX 78757, (512) 458-9546; e-mail: gemcapers@austin.rr.com; Web site: www.austingemandmineral.org.

Nov 30-Dec 2--EL PASO, TEXAS, **El Paso Mineral & Gem Society**; El Maida Auditorium, 6331 Alabama; Fri. 10-6, Sat. 10-6, Sun. 10-5; contact Gem Center USA, (877) 533-7153 or (915) 533-7153; e-mail: gemcenter@aol.com.

Jan 1--BIG SPRING, TEXAS, **Annual show; Big Spring Prospector Club**; Howard County Fair Barn, behind the Rodeo Arena; Sat. 9-5, Sun. 10-5; 2200 Cecillic, Big Spring, TX 79720, (432) 263-3340; e-mail: rockhound11@yahoo.com.

Jan 19-20--FREDERICKSBURG, TEXAS, **39th annual show; The Fredericksburg Rockhounds**; Pioneer Pavilion, Lady Bird Johnson Park; Sat. 10-6, Sun. 10-5; 208 Castle Pines Dr., Kerrville, TX 78028, (830) 895-9630; e-mail: jeffbrenda@kfc.com; Web site: www.fredericksburgrockhounds.org.

Jan 26-27--TYLER, TEXAS, "**Gem, Mineral, Jewelry Showcase**"; **East Texas Gem & Mineral Society**; Rose Garden Center, 420 S. Rose Park Dr.; Sat. 10-6, Sun. 10-5; contact Keith Harmon, 8316 Oxford Dr., Tyler, TX 75703, (903) 581-4068; e-mail: kharmon1219@sbcglobal.net.

Feb 16-17--PLAINVIEW, TEXAS, **46th annual show; Hi Plains Gem & Mineral Club;** Ollie Liner Center, I-27S; contact Mildred Matlock, 701 Zephyr, Plainview, TX 79072, (806) 293-3476.

Feb 23-24--PASADENA, TEXAS, **Clear Lake Gem & Mineral Society;** Pasadena Convention Center, 7902 Fairmont Pkwy.; Sat. 10-6, Sun. 10-5, contact Mike Reves, 218 Lazy Hollow Dr., League City, TX 77573, (281) 282-6117; e-mail: demmikeer@hotmail.com; Web site: www.ghg.net/gpenning/index.htm.

What's In a Name?

There are two places that would appear to be of some geological and paleontological interest. One is a shopping center in San José, California, called Cambrian Park. This would appear to pre-date Jurassic Park by some 340 million years. One of the businesses there is the Cambrian Animal Clinic, which conjures up thoughts of early veterinarian valiantly trying to save trilobites and eurypterids from extinction.

The second is a business at the corner of Anderson and Lamar right here in Austin. It is the Continental Collision Center, where one

would assume that something was finally being done about the damage wrought by plate tectonics. For eons, continents have been colliding, backing off and smashing into each other again.

Unfortunately, the people involved in the day-to-day operation of these places are completely unaware of the implications of their names.

Wally Downs
September 22, 2007

Proposed New Logo

Here is a new logo design as proposed by Linda McCall.
We will discuss this at the next meeting.



The purpose of the **Paleontological Society of Austin** is the scientific education of the public, the study and preservation of fossils and the fossils record and assistance to individual, groups and institutions interested in various aspects of paleontology.

Meetings of the **Paleontological Society of Austin** are held the third Tuesday of each month, 7:00 p.m. at the Austin Gem and Mineral Society building, 6719 Burnet lane, Austin, TX. The public is cordially invited to attend.

Annual Dues: \$15/individual, \$20/family and \$10/associate (non-voting, receiving newsletter)

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