

Paleo Footnotes

Newsletter of the
Paleontological Society of Austin

Austin and Central Texas



Volume 1, Number 1 – November 2006

From the President

The Paleontological Society of Austin has hit the ground running. With our first meeting last month, we had a great speaker, new officers elected and great enthusiasm for a local collecting site brought to our attention by one of our members. All this with forty people in attendance! Then the society members helped put on two shows, one at Glen Rose, the other in Rock Rock. The public is bound to know something about paleontology after such an intense exposure to the new PSA.

We also have a new program chair, and a new editor. And for the record, our society's monthly meetings were voted on to take place the third Tuesday of each month, 7 pm., at the AGMS clubhouse.

Is it time to breathe yet? It seems we will elect some board members to fill out our seven, as per our bylaws. And what will the new logo be? The old CTPS shirts and caps were given out to the dealers after Fossil Fest since they were out dated. Bring us your ideas and designs.

Our next public outreach will be at the AGMS Gem Caper's show December 1-3. Please sign up at this month's meeting to volunteer some time for this large show. The society will be advertised in the AGMS show brochure.

We have also been invited to exhibit a case at the Clear Lake GMS show in Pasadena, TX in February. This will get our new name out there.

By now, many of you have heard of Don O'Neill's death November the third. Personally, I would not be collecting if it weren't for his sharing of his passion for paleontology. Even after he moved from the Austin area and started a new life, virtually all conversations with my paleo buds had Don included somewhere in our talks. What an influential figure he was to Texas collectors. And UT has lost one of its best fans. Our hearts go out to his wife, Linda, his young son, Shawn, and his daughter, Julie.

John Hinte

Next Meeting

Tuesday November 21, 2006
7:00 p.m.
Austin Gem & Mineral Society Building
6719 Burnet Lane, Austin, TX

Refreshments: Mindy Threadgill and Kathleen Howard

The meeting will be a continuation of the auction of Ed Bowden's books. The sale of the books will go toward the setting up of a scholarship fund.

Minutes of the October Meeting

October 17, 2006, Austin G&MS building. The meeting was called to order by John Hinte, president. The name of the society will be "Paleontological Society of Austin."

Meetings will be held at the Austin Gem and Mineral Society (AGMS) building on the 3rd Tuesday of each month. There is additional parking we can use in front of adjacent buildings, if we don't block the driveway.

The Christmas Party will be held at the AGMS building also. The date to be determined after checking the AGMS schedule.

Paleontological Society of Austin dues for 2007 are set at \$20/family, \$15/individual, and \$10/associate (non-voting, receiving newsletter) membership.

Bill Hill will post only members on the Yahoo site. Mike Smith is coordinating the web sites.

Payment authorized to South Central Federation of Mineralogical Societies for dues of \$2.00 for adults and .40 for junior members and \$3.00 each for third party insurance.

The AGMS has again asked our society to provide fossil identification and cleaning demonstration at their show which will be held the first week in December 1, 2 and 3. Jamie Young is coordinating with AGMS and will need

your cooperation for volunteers to staff the table.

Nominations for officers for 2007:
 President John Hinte
 Vice President (and Fossil Fest Show Chairman)
 Linda McCall
 Treasurer David Lindberg
 Secretary Eric Seeberg
 Board of Directors: Jamie Young,
 Kathleen Howard,
 Erich Rose

Committee chairmen:
 Ed Elliott Field Trips
 Diann Strout Programs
 Erich Rose Newsletter Editor

John Hinte will high-grade Ed Bowden's fossils so that they can be sold for the scholarship fund which has been established in Ed's memory.

Mindy Threadgill and Kathleen Howard volunteered to furnish refreshments for the November meeting.

Erich Rose is in need of volunteers at the Austin Children's Museum for Science Sundays from 3 P.M. To 5 P.M. Contact Erich at 626-9930.

Volunteers are also needed at the Texas Memorial Museum on week ends in the basement.

Submitted by Joan Crane, Jean Wallace for Wally Downs, Secretary

November Field Trip

WACO PIT

Meet at 8:30 at the parking lot for the Waco Pit. This parking lot is not huge, so you are encouraged to car pool. If you have some, rubber boots could be a definite asset. The pit can be a morass when it is wet. Collecting here is mostly small stuff. The formation is the Del Rio (Cretaceous).

To get there:

I35 north to Waco.

On the north side of Waco, exit on 340/2491/Lake Shore Dr.

Turn left (west) under the freeway onto Lake Shore.

While you are on Lake Shore it will curve around to the south.

Pass the intersection with Lake Brazos/Steinbeck Bend and go over the

Bosque River.

Take Lake Shore to FM 1637 / 19th St. Turn right (west again). Proceed to Steinbeck Bend. (Careful. There was an earlier intersection with Steinbeck on Lake Shore Dr. Don't confuse that one with this turn off.)

Turn left on Steinbeck Bend. At the intersection of Airport and Steinbeck Bend (which is a block or two past the turn) there is a cement or asphalt plant on the SE corner (across the intersection on the left).

Just past the plant the parking area for the pit is on the left.

There is a locked gate. If it's not open, wait on the side of the road until someone arrives to open it.

Places to be...Things to do

Nov 18 - 19 Dallas G&MS Show. Resistol Rodeo Exhibition Hall, Mesquite

Dec 1 - 3 Austin G&MS Show "Gem Capers", Palmer Special Event Center

Jan 22 - 23 Fredericksburg Rockhounds Show, Lady Bird Johnson Park

Jan 27 - 28 East Texas G&MS Show, Tyler

Feb 24 - 27 Clear Lake G&MS Show, Pasadena

March 23 - 24 Fiesta of Gems, Southwest Gem & Mineral Society Show, Freeman Coliseum, San Antonio

April 28 - 29 Waco G&MC Show Heart of Texas Fair Complex, 4601 Bosque Blvd, Waco

October Field Trip Report

It was a clear chilly morning in October at Eisenhower State Park. Gary and Kathy Rilander, Paul Hammerschmidt, Tom Oliphint, John Hinte, Jeri Powers and her two teenagers, Ron and Janet Root and Eric Seaburg bundled up and headed for Russwood.

We spent until 1:00 at Russwood looking for echinoid plates, jellyfish imprints, regular urchins, sharks teeth, razor clams and trigonias among the other wonderful things. New member Jeri Powers found the prize of the day, one of the best jellyfish imprints I have ever seen. I hope she brings it to the meeting to show off!

Everybody but Gary and Kathy headed off the area above the dam to look for ammonites and urchins. Gary is in love with the Russwood area, so they spent the entire day there. I hope he too brings some of the prizes he finds in the buckets of gravel he took home to the meeting. It was sunny and warm by then and several people had brought there kayaks, so when we got to the dam they unloaded and started paddling for

"ammonite ridge". When we headed back around 5:00 it was with backpacks and kayaks loaded with ammonites.

When we met the next morning the temperature was in the 50's with a steady rain. The plan was to go to an area on the Oklahoma side that is only accessible by unimproved roads (read red mud). That plan was quickly nixed. Kathy said their truck had already been stuck one two many times. So back to Russwood we headed! Seven of us put on the most waterproof clothing we had and started splashing down the beach. Paul even borrowed a Longhorn parka! We lasted about 3 hours before we said uncle. But it was well worth it. The wet rocks brought out things one would not have noticed if they were dry. The find of the morning was two ammonites with original shell found by Janet. We headed back to Austin all agreeing this had been one of the best field trips ever!

See you at Waco Pit in November,

Ron Root

Book Review

The following is a review of a book Greg Thompson used in his Oct program.

Trilobite!: Eyewitness to Evolution
By Richard Fortey

Alfred A Knopf ISBN 0-375-40625-5,
American edition 2000.)

Reviewed by J. W. Downs

Richard Fortey has the same enthusiasm for trilobites that the late Steve Irwin had for crocodiles. As a senior paleontologist at the Natural History Museum in London and a member of the Royal Society, his credentials are impeccable to author this book and several others related to evolutionary

science. It is reasonably technical, but not so much that it bewilders readers who are just interested in the subject.

Trilobites stayed around for more than two hundred and ninety million years, and must be expected to have evolved and diversified considerably over this period. The book takes chapter by chapter the principal parts of trilobites, starting with a chapter each for shells, legs, and eyes, and then takes up the controversial subject of the Cambrian Explosion.

There are several little bits of information that I had never considered before. Most (if not all) arthropods, including trilobites, shed their exoskeletons the same way that lobsters and crabs still do. This means that a single trilobite can leave a number of empty shells during its lifetime. Normally, the shells are shed piecemeal, so that a complete empty shell is seldom fossilized. This is responsible for the disarticulated "trilobite hash" found when a large number of empty shells accumulate and are fossilized. Some trilobite fossils may only be empty shells and not the critter itself.

Fortey named one trilobite *Cloacaspsis* because it had evolved the ability to live in stagnant, sulfurous water that was almost devoid of oxygen. It was fossilized in iron pyrite, and even now a sulfurous smell is detected when the rock strata are split open. He derived the name *Cloacaspsis* from the *Cloaca*, the canal that channeled waste and sewage from Rome to the Tiber River. This is also the term used by zoologists describing the terminus of the alimentary canal in the anatomy of reptiles and birds.

Dr. Fortey's explanation of trilobite eyes has some points that are hard to accept. He claims that trilobites' compound eyes are made of pure calcite crystals oriented along the c axis. (Calcite crystals exhibit double refraction, having two indices of refraction according to the planes of polarization. The c axis is neutral to this effect.) Exactly how trilobites pulled this crystal -growing feat is a secret that died with the trilobites. The crystals had to be rounded on the exposed end, which is not a favored shape of crystal terminations.

He further explains how one species, the *Phacops*, corrects for spherical aberration in the calcite lenses by including atoms of magnesium in the crystal structure. Since magnesium carbonate and calcium carbonate have different indices of refraction, the spherical aberration was supposedly corrected. This study was done by Dr. Riccardo Levi-Setti, a nuclear physicist at the University of Chicago. While not wishing to cast doubt upon his conclusions, there are some rather serious flaws in the explanation. Simply combining two materials having different indices of refraction will not do much. This might possibly pass for a flawed explanation of correction for chromatic aberration in lenses but has nothing whatsoever to do with spherical aberration, which is best corrected by the shape of the lens. Combining calcium carbonate and magnesium carbonate would have the optical properties of dolomite.

The chapter covering the Cambrian Explosion, titled *Exploding Trilobites*, is excellent but is at odds with some of the other explanations, notably that of Stephen Jay Gould. Fortey cited several

instances of opposing theories on how so much life suddenly appeared during the Cambrian Period. One prominent paleontologist launched a personal verbal attack on Gould resulting in acrimonious statements reminiscent of James Thurbur's fictitious rival paleontologists, Drs. Millmoss and Ponsonby. (During one encounter, Dr. Millmoss was heard to say, "A Millmoss assumption is more important than a Ponsonby proof. Dr. Ponsonby retorted, "The old boy [Millmoss] has never dug up half as many specimens as he has dreamed up.")

Dr. Fortey's account of the Cambrian Explosion was that it was more of an explosion of size rather than a sudden proliferation of new species. His favored theory is that the fauna of the Cambrian Period had been quietly evolving for a long time, but was small and not prone to leaving remains that were conducive to preservation as fossils. It is not necessary to be large to be perfectly good arthropods. The sea swarms with tiny arthropods today that have left no fossil records of their ancestry. For example, tiny copepods,

which are members of the plankton, are so numerous that they can turn the seas black, yet their only fossil is a species preserved in the bodies of fossil fish.

(In jest, I propose that if trilobites were sufficiently smart to grow calcite eye-lenses oriented along the c axis, they might have developed a kind of Paleozoic steroid to enhance their growth.)

Having read Trilobite! and Stephen Jay Gould's Wonderful Life, which preceded the former by eleven years, my conclusion is that both are excellent books. Trilobite! was written for non-professional people who have a healthy interest in paleontology, while Gould's book is so technical in places that I question how many of the people who bought it and put it on the best seller list actually understood and retained much of the material. Also, Fortey's book has taken advantage of intervening eleven years of intense research to present several views of the Cambrian Explosion, of which there is no clear consensus.

Baking Soda in the Field

Here are some reasons you will be glad you took a box of natural soda along on your field trip.

1. Insect bites, minor burns, poison oak: add water to make a paste and apply to affected area.
2. Sunburn, wind burn and prickly heat: add ¼ cup to a basin of water and bathe or sponge on.
3. Acid indigestion: add ¼ teaspoon to ½ glass of water and drink slowly.
4. Tired feet: add three tablespoons to a basin of warm water and soak.
5. Tooth cleanser and breath freshener: use as much as needed on moist toothbrush.

6. Hand and fingernail cleaner: rub dry on moistened hands to remove pine pitch, odors or grease
7. Fire extinguisher: for grease fire, throw a box full at the base of the fire.
8. Freshening camp coolers and thermos jugs: add 2 teaspoons and partly fill with water, shake and rinse.
9. Deodorant: sprinkle some inside your boots or hiking shoes.

10. Safe, natural cleaner for camp dishes and pans: add 3 tablespoons to a pan of warm water and soak

11. Cleaning a dirty, bug splattered windshield, chrome and camper frames: rub damp sponge sprinkled with baking soda.

12. Freshening RV water tanks: flush with a solution of ¼ cup of soda and 1 gallon of water. Rinse with clear water.

Source: The RockCollector Nov 2005 via Quarry Quips -May 2005 via Strata Gem 9/05, Stoney Statements May 2006.

Don O'Neill

Don O'Neill passed away on November 2, 2006 at home in his sleep. As most club members are aware, Don had been ill for a number of years. He is survived by his wife, Linda, and son, Shawn.

Most of the older club members owe Don an enormous debt of gratitude for generously sharing his enthusiasm for fossils and knowledge of localities with us over many years. He was one of the founders of both the Austin Paleontology Society and Central Texas Paleontology Society, as well as serving at one time as President of the Austin Gem and Mineral Society.

Don was a tireless and enthusiastic collector. I remember showing up one weekend for a field trip in the pouring rain. The only two people present were Don and I. As far as Don was concerned, pouring rain in 100 degree weather was a benefit, since it made the

fossils stand out better. And then there was the field trip to Montana, still one of my most memorable. Again, in the rain, on mud roads in Don's van, racing to get to the next locality, slaloming between the fences on either side of cattle guards. I thought I was going to die. I still regret not making up t-shirts for that trip that said "I survived Poisen Spider Road".

He will be missed.

By the time this newsletter appears, the funeral will be over. But for those who did not receive the email, Don asked that rather than flowers, money to be given for a scholarship for Shawn O'Neill. Go to MYSA.com/obituaries and look up Donald O'Neill. There should be details of a Washington Mutual account number that has been set up for donations to Shawn's scholarship fund.

Michael K. Smith

Humor

You might be addicted to trilobites if:

You bought a trilobite instead of having your youngest child vaccinated against early childhood diseases

You don't understand the danger in asking your wife if you can display your trilobites in her new china cabinet

You fall asleep by counting trilobites leaping over crinoids (stems AND crowns)

Your pet rock is just a matrix for your favorite trilobite

You can remember the age of every trilobite in your collection, but can't remember your anniversary

You sleep in an enrolled position

You tell your wife to get off her pygidium and cook you some supper

Your last child's middle name is Psychopyge

You've surpassed the limit on ALL your credit cards with trilobite purchases

Santa filled your stocking with nothing less than 250,000,000 years old

All your on-line time is spent at Kevin Brett's Trilobite Page:
<http://www.geocities.com/trilobitologist/>

Note from the Editor

First let me apologize to those of you who will be getting this newsletter at the very last minute. What had originally looked to be a simple process of copy and paste turned into one of the bigger exercises in computer mayhem I have had to deal with in a number of years.

Well the fixes are all in the works and I will be in good shape before the December newsletter goes out. But in the mean time I would love to hear from everyone regarding what they would like to see & read in upcoming Newsletters. Since I am taking up where both Hollis and Jean left off I have not one but two great predecessors to equal. So feel free to send your ideas, submit articles, pictures, or anything else you like. And

always feel free to let me know what you feel doesn't work.

The other big issue to resolve is the name of our Newsletter. I have combined the former names as a temporary title but would like to hear suggestions. I have one from my wife Gail: "The Paleo Files." In addition we will be developing a new logo to identify the society. For this issue I have used the Dimetrodon on the outline of Texas.

Again your suggestions or even submissions of new art are requested.

To contact me the best is e-mail:
erichrose@austin.rr.com or call me: 626-9930

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

The meetings of the Paleontological Society of Austin are held the third Tuesday of each month. 7:00 p.m. at the Austin Gem & Mineralogical Society building, 6719 Burnet Lane, Austin, TX.

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

PSoA WEB Page: <http://www.texaspaleo.com/ctps/>

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The Paleontological Society of Austin is a member of and affiliated with the

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And the

American Federation of Mineralogical Societies

PALEONTOLOGICAL SOCIETY OF AUSTIN

Erich Rose, Editor
807 The Living End
Austin, TX 78746
e-mail: erichrose@austin.rr.com

Dated Material - Meeting Notice

FIRST CLASS MAIL