

PALEO FOOTNOTES

NEWSLETTER OF THE PALEONTOLOGICAL SOCIETY OF AUSTIN

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AUGUST 2021



President's Note

Have you been getting out this summer?

I've spent a few hours here and there on local cuts. Mostly mornings before the day got too hot. This last weekend I had a chance to collect a spot I know near Sante Fe, New Mexico. It was a site that required a steep climb up a dry wash and then some crawling around on the exposed shoulder of the ridge. It wasn't a long climb and the temperature wasn't "Texas" hot. But it proved tougher than I had remembered. And what I had forgotten about was altitude. At 7,800 feet above sea level the air was much drier and clearer (continued on page 2)

This Month's Talk

Club Show and Tell

Presented by: All of us!

Hello everyone – this month we are going to try something new! While I know we are all excited to be back together in person, we remain relegated to Zoom for the time being. In place of a speaker this month we were planning to devote our time to sharing with each other our favorite discoveries over the past year and half. We are looking for exciting new fossils that you have found, traded, or purchased during our COVID year(s) that you would like to share with the club. This might be a fossil you found on one of the club (continued on page 2)

AUGUST 2021

PSoA Regular August Meeting

Tuesday August 18th - 7pm

Meeting will be held on Zoom

Join Zoom Meeting

<https://us02web.zoom.us/j/84454324286?pwd=Y29hbjB4a0h0Z3k2VHBMK1Z6bXIKZz09>

Meeting ID: 844 5432 4286

Passcode: 837511

PSoA August Field Trip

Saturday August 21st

9:30am in Hillsboro

(see page 2)

Show Committe Meeting

Tuesday August 24th - 7:00pm

on Zoom (see page 2)

President's Note

(continued from page 1)

making the sun that much more powerful. And secondly the air was thinner. I could feel it in my chest. I needed to move slower and take more breaths than I would here in Texas.

Every year I try and remind everyone about summer safety. Wear clothes that will protect you from the sun's harsh rays. Find a good hat and wear it. And stay hydrated. Water, water, water, not mention maybe some form of electrolytes like sport drinks or pickle juice. But also as I described above, remember to consider where you are. Are you higher or lower in altitude than usual? Do I need to give myself extra time to get in and out of the collecting site? Be safe, be prepared.

Hope you all are being safe,

Erich Rose
PSoA President

Minutes from July's Meeting

The meeting was brief since there was no speaker. We did cover upcoming field trips and the show committee meeting. We look forward to seeing you at the next one.

Emelia Rose
PSoA Secretary

July 2021 Field Trip: Hillsboro

DATE: Saturday August 21st - 9:30am
Hillsboro: Texas Through Time Museum

We have a Museum Field Trip planned this month! We are going to the Texas Through Time Museum in Hillsboro. They are letting us in at 10am rather than their usual 11am opening, so meet there by 9:45 at the latest. It is free entrance, but there is a gift shop! It is located at 110 North Waco Street (corner of Francher St and Waco).

After the museum, some of us will be going to the Waco Research Pit. It will probably be quite hot and we do have to get permits beforehand (each person will need to email the Corps of Engineers separately) and those permits do only allow you to collect TWO fossils. So it is up to you if you feel that you want to go hunting at the Pit. If you do, email me and I will send you the email for the permit. So, see you at the Museum!

Jamie Shelton
Field Trip Co-Chair

This Month's Talk

(continued from page 1)

trips that you would like to share or something from a personal trip that gives us a taste of the pickings out of state. Folks will be in attendance to help with identifying your fossils if you have some questions – and this is a perfect time to bring to the table some really unusual finds. Closer to the meeting time we will send out an email blast with specific instructions on how we will share. If you are interested in sharing, please take 3-4 nice close-up photos with your phone so that we can share the images during the meeting. Look forward to “seeing” everyone and keep your eye out for the email instructions!

Brian Bedrosian
Editor



Austin, TX

Fossil Fest Update

The next Show Committee Meeting will be held on Tuesday August 24th at 7pm on Zoom. Please email Heather at fossilfestchair@gmail.com for the Zoom link.

Here are the notes from the July Meeting:

T-shirts: We are currently waiting on the estimate from the screen printer, but I should know final T-Shirt pricing soon.

There will be youth shirts this year. However, the brand of shirts that we usually order are not available in the colors we chose in youth sizes. I should know more regarding all topics related to shirts by the next meeting on 08/24. When I have details on the colors that are available for youth shirts I will let everyone know that wished to purchase one on alternative color choices.

Vendors: I have received at least verbal confirmation from 10 vendors in total and we have received deposits or full booth payments from 8 of those 10 thus far.

Please feel free to join in on the show chair meetings. The more the merrier!

Heather Radford
Show Chair

A quick note: We are monitoring the current COVID spread and paying close attention to our health officials and their recommendations. We plan to have a brief discussion about how this will effect how or if we hold this years Fossil Fest at the next meeting. The safety of our members, vendors, and guests is of our upmost concern which means we are taking all of this very seriously. We look forward to your thoughts. - b



Group photo at the first site. Photo by Melvin Noble

July 2021 Field Trip Report: **Bandera**

Clouds overhead, hills in the distance

On a nice summer day in July that turned out to be cloudy in the morning and fairly pleasant we all met at the post office in Pipe Creek.

Joe Watkins, Alan Keith, Paul Hammerschmidt, The Rylanders, Mark and Benjamin Reed, Rick Goldgar, Joshua Leach, Leslie Riddle, Eric and Jack Jones, The Oliver Family and Ed Elliott, Jamie and myself, Melvin, drove from Pipe Creek to the Bandera site and the collecting begin.

Folks found a variety of different specimens and the kids all had a good time. Cathy Rylander found lots of Calianassa Crab leg pieces. The Oliver kids found a nice Leptosalenia. The clubs promising young paleontologist, Joshua, found a nice interesting ammonite piece (**fig. 1**). I found my first Solanocrinites Crinoid - I did not have one before - and Jamie found two (**fig. 2**)! Joe Watkins also found a nice specimen of one of the oblong Crinoids (**fig. 3**). There are are about seven different types of Crinoids at this site and they have not yet had a paper wrote on them if I am correct.

By 11:30 am some people were interested in going somewhere else so we carpooled to get snacks and gas at a gas station in Bandera and then we drove to the lake Medina site. I found a nice perfect nature cleaned Leptosalenia. Alan Keith showed us some interesting stuff in the back of his truck he found from Oklahoma.

We collected till about 2:00 pm and it just started to get so hot we decided to call it a day. Me and Joe went over to another small site for a little while to look around a little bit but did not find much so we decided it would be better to come back some other day when when it was cooler.

All in all it was a nice day to collect in the summer with the cloud cover over head and the beauty of the hill country in the distance. I must say, it was nice to have my old buddy Edward Elliott collecting with us once again.

Melvin Noble
Field Trip Co-Chair



Fig.1 Unidentified Ammonite chunk found by Joshua Leach



Fig. 2 Solanocrinites Crinoid - one of the many types of free floating crinoids at this site



Fig. 3 Free floating Crinoid found by Joe Watkins



Tailings...

In The News

Giant, Dragon-Like, Flying Reptile Fossil Discovered in Australia

A rare specimen reveals a new species of pterosaur with a staggering 23-foot wingspan.¹

Corryn Wetzel, *Smithsonian Magazine*, August 11th 2021

Tyrannosaurs Dominated Their Cretaceous Ecosystems

Studies of body size and bite force show that the predators, from babies to adults, filled many niches in their environment.²

Riley Black, *Smithsonian Magazine*, August 2nd 2021

This Sponge Fossil May Be the Earliest Record of Animal Life

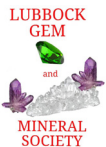
The 890-million-year-old relic predates periods of extreme cold and the planet's second oxygenation spike.³

Shi En Kim, *Smithsonian Magazine*, July 28th 2019

SCFMS Convention 2021

This year's convention will be held during the Lubbock Gem and Mineral Society's Annual Show and Sale in Lubbock, TX.

Date:	September 25th -26th, 2021
Location:	Lubbock Memorial Civic Center 1501 Mac Davis Lane, Lubbock TX
Admission:	Adults \$4 Seniors \$3 Children 6-12 \$2 Children 5 and under Free! Scouts, Military, and Peace Officers in uniform are also Free!



Visit their website for information:
www.lubbockgemandmineral.org

2021 Field Trip Schedule

September:	Brady Road Cut - Pennsylvanian Santa Anna - Pennsylvanian
October:	Moody Road Cut - Comanche Peak Evant Road Cut – Comanche Peak
November:	Brownwood or Jacksboro - Pennsylvanian
December:	TBD

Dangers of Rock Dust

By Glen Kuban

Many collectors use a mechanical rock saw to cut, trim, or abrade rocks and fossils in the field or lab. Dangers of this activity include flying rock chips, wounds from the blade itself or broken blades, and rock dust, which is extremely dangerous to inhale. Always read and understand the proper operation of any mechanical tool before using it. Whenever cutting or grinding rock, wear protective eye goggles. Also wear a good respirator, or use a dust collection system, to avoid inhaling rock dust which accumulates in the lungs and can cause a variety of serious illnesses.

For those not convinced that rock dust is a serious danger, or that they can get away with not wearing a respirator or working under a hood (if working indoors), I encourage you to read the message below. The original message was posted on 7-14-97 in the Rocks and Fossils News groups, and my reply was sent to that list as well as the Dinosaur List, VrtPaleo and Fossil Nuts.

The original message I am responding to was posted in Rocks and Fossils, but I am sending my response to the other paleo-related lists as well, because I feel this is an important safety issue. It affects anyone who even occasionally cuts rocks or fossils, or does fossil preparation work. It will be very worthwhile if it prevents even one person from suffering lung problems or dying prematurely. With that deliberately onerous introduction, let me quote the post that prompted my response:

Peter's Post:

"Last night I spent an hour cutting sandstone sidewalk blocks with a composition blade made of fiberglass and carborundum grit. This is a dry saw and it was a still night and clouds of dust were all around. Some of it hung in the air for minutes. I am not really concerned about a one-shot exposure, but it did make me wonder if this is the size of silica which DOES represent a health hazard. Of course, I do not know for sure that the fine dust was silica, as opposed to calcium carbonate (the cement in the sandstone) or material from the new blade..."

(continued next page)

1. <https://www.smithsonianmag.com/smart-news/giant-dragon-flying-reptile-fossil-discovered-australia-180978411/>
2. <https://www.smithsonianmag.com/science-nature/tyrannosaurs-dominated-their-cretaceous-ecosystems-180978289/>
3. <https://www.smithsonianmag.com/science-nature/sponge-fossil-may-be-earliest-record-animal-life-180978297/>

(Dangers of Rock Dust - continued from previous page)

Glen's Response:

"It's funny, or really not so funny, that you should write now. I'm suffering a chronic lung irritation, and seeing doctors now, because of the results of a similar incident. In short, yes, one or a few exposures to significant amounts of freshly-cut rock dust can cause serious problems. Silicosis is only one of the many lung problems that can be caused by rock dust, many of which (like fibrosis) can occur no matter what the composition of the rock. Wearing a good respirator or hood with dust collector if working indoors is a must. If you don't have the proper safety equipment, don't cut the rock!

Unfortunately, I found out the hard way, I hope everyone learns from my mistakes. About a year ago our fossil club went to Ontario to collect trilobites, and we took along a diamond rock saw. I only sawed out a few trilobites for fellow members (without wearing a mask, I forgot to bring one) and I tried to not inhale the dust. However, large clouds of it were kicked up each time, and it was impossible to avoid inhaling quite a bit of it. By the next morning I had significant lung irritation, and have had it ever since - some days worse than others. I have frequent coughing and uncomfortable sensation in my upper chest. After this went on a few weeks, I went to a doctor, not knowing if I had contracted a bacteria, fungus, or other microbe at the quarry, or just had accumulated too much dust in my lungs. An x-ray was clear, but that is not unusual in such cases (it sometimes takes years for fibrosis, TB, cancer and other diseases to develop). Apparently the rock dust itself is the cause of the current lung irritation, and it may never get better. In fact, it may worsen into other conditions, as explained below.

Many people assume years of exposure to rock dust is needed to cause serious problems, and this is generally true when dealing with wind-blown, low concentration dust, which usually has already weathered to some degree. But not so with freshly cut rock. After I started having my problems, I began talking to doctors and doing lots of reading. I also talked to an uncle who used to work in a quarry, and is now dying of pulmonary fibrosis at the age of 55. I am now going to his doctor.

It turns out that not only do rock particles of any composition tend to stay and accumulate in the lungs, but freshly cut rock is the worst, and extremely pernicious. Even one or a few incidents of significant inhalation of such dust can cause long irritation and start a process of increasingly serious lung damage. The microscopic particles are like millions of razor-edged shards that damage lung tissue directly, as well as create

conditions promoting the development of TB, microplasmas, fibrosis, and cancer. Experiments with rats and other animals have shown that inhalation of fresh cut rock dust is far more damaging than worn rock dust of any composition, and leads to far greater rates of several diseases, including pulmonary fibrosis and lung cancer. But even accumulations of worn rock dust in the lungs greatly increases chances of lung disease.

I've also made many fossil molds and casts over the years, and although I often wore a mask while working with plaster, sometime I did not. I may well have accumulated plaster in my lungs as well, which may have contributed to or aggravated my lung condition. Plaster hardens when in contact with moisture, wherever it occurs, including one's lungs. But I did not have the constant lung irritation until after the Ontario trip using the rock saw (on hard shales and siltstones), and have had it ever since.

I have another appointment with a pulmonary doctor on Thursday, but from what I have learned, such damage is generally irreversible, and the best I may hope for is to have my condition not get worse. I may have to live with lung irritation and chronic cough for the rest of my life, plus increased chances for the serious conditions I listed above.

So PLEASE, whenever you are cutting or grinding rock of any kind ALWAYS wear a respirator (not just a cheap dust mask). If working indoors, use a dust collecting hood, or don't do it. Your health is not worth any rock or fossil.

There are serious inhalation dangers in the lab also, including solvents, urethanes, glues, and other chemicals used on prep work. These too can have accumulated effects, and lead to a variety of health problems. Work with such chemicals only with very good ventilation, or under a hood, or don't do it. Again, a rock or fossil is not worth your health. If I scared anyone, I can't feel too bad, because I wish someone had scared me before I did what I did, and now may have to pay the price the rest of my life.

Pete, in your case, I hope you do not have any problems, and can only urge you not to do it again, at least not without wearing a respirator. The dust you created by cutting sandstone probably included a mixture of siliceous sand particles, calcium carbonate particles (from the cement between the grains), and fibers from the fibrous saw blade. All could be dangerous to inhale.

Thank you
Glen Kuban

Editors note:

The above cautionary tale is from an article which was first printed in our CTPS newsletter in December 1997. Ed Elliot brought it to my attention and mentioned that it was a very important message and thought it worthwhile to present to a new audience. Aspects of Glen's story have taken on entirely new meaning in the world we currently live in where respiratory diseases are all around us and mask wearing is never more important as it is today. His personal story gives a face to dangers which we often look at in the abstract or assume are things we have to worry about some day in the future. Perhaps when we are able to take our masks off again, we will consider putting them back on to protect ourselves from the other dangers around us that we should take more seriously. Hope you are all safe and healthy and that we get to see each other again very soon. b

The purpose of the Paleontological Society of Austin, a 501(c)(3) non-profit organization, is the scientific education of the public, the study and preservation of fossils and the fossil record, and assistance to individual, groups and institutions interested in various aspects of paleontology. Meetings of the Paleontological Society of Austin are normally held on the third Tuesday of each month at 7:00 p.m. in the Austin Gem and Mineral Society building located at 6719 Burnet Ln. in Austin, Texas. The public is welcome to attend. Visit austinpaleo.org for more information.

Please note, due to COVID 19, in person meetings have been temporarily paused, and monthly meetings are instead being held on Zoom. Please see instructions above to attend the meetings virtually. Please note all virtual meetings are recorded and the Society may elect to publish the video of these meetings, in part or in total, to the Society's website or another publically accessible venue as benefits the goals of the club listed above.

Membership Information

2021 Officers

Annual Dues:	\$18/individual \$24/family \$12/associate (non-voting, receiving newsletter)	President	Erich Rose	president@austinpaleo.org
Pay on-line at:	https://www.austinpaleo.org/newMembership.html	Vice President	Heather Radford	vicepresident@austinpaleo.org
Send payment to:	Treasurer, Paleontological Society of Austin, P.O. Box 90791, Austin, TX 78749-0791	Treasurer	Mike Smith	treasurer@austinpaleo.org
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