



SHALE MAIL

AUGUST 2020

Orange County Mineral Society, Inc

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Our next meeting is scheduled for Friday August 14th, 2020 at 6:30 pm and will be held digitally on Zoom due to covid-19. Details will be emailed to you, if you don't receive the email please contact Heather Shields or Mark Kucera.

Speaker: Derek Yoost

Topic: "Micro Structures in Meteorites and their Relation to the Formation of the Solar System"



Officers:

President:	Mike Tedford	845-542-6441	mtd@frontiernet.net
VP/Programs:	Mark Kucera	914-423-8360	mark_j_kucera@yahoo.com
2 nd VP:	Alex Kerstanski	845-978-4141	glowrocks703@gmail.com
3 rd VP:	Ryan Richardson	845-629-5120	dertdiggers@gmail.com
VP Emeritus/Historian:	Frank Clyne	845-361-4710	clynefrancis@gmail.com
Treasurer/Facebook:	Ron Nelson	845-469-9080	rn33@optimum.net
Min.Show Chairman:	Ron Nelson	845-469-9080	rn33@optimum.net
Secretary:	John Pacut	845- 883-0019	john.pacut@gmail.com
Editor:	Alison Pacut	845-883-0019	pacutgarnet@gmail.com
Webmaster:	Heather Shields	845-649-9623	hms Shields@optonline.net

Mailing Address:

254 Rt. 17K, Suite 204, Newburgh, NY 12550-8300

Rock BBQ Meeting is on!

Space For Lawn Games!

When: September 5, 2020

Where: Hansen Memorial Park

For those of you with **GPS** the coordinates are:

Latitude: 41.3347222

Longitude: -74.5688889

GNIS ID: 2440154



Tennis Courts!

Kitchen!



Bring Items To Display Or Sell!

Bring a dish! See Presidents Message!

Horseshoe Pits!

The Orange County Mineralogical Society Will supply The Meat!

Bathrooms!



Ball Field!

Join us! All Members welcome!
The BBQ replaces your September Meeting!

And starts at Noon ending around 5 pm.

Presidents Message

By: Mike Tedfordt

Please join us for our August virtual meeting via zoom. You will get an email reminder via mail chimp with the meeting link. You can listen and see if you do not have a camera on your computer or you can choose to not be on video if you do. You can also access the meeting on your smart phone using the zoom app. We have had interesting presentations with clear digital slides and photos over the past few months. Not all EFMLS clubs have been as active as ours with continued monthly lectures via zoom. We have been fortunate to have an active VP programs, Mark Kucera, who has arranged excellent speakers and topics through these past few years and has set up our zoom meetings successfully. We are not sure when the Chester senior Center will again open and be available for our meetings. (The center closed the day after our March 2020 meeting.) Mark your calendar for Saturday, September 5, 2020 on Labor Day weekend.. We will have a real live meeting under the pavilion at Hansen Park, Ridge Rd, Westtown, NY.

That will be our popular Rock Barbecue meeting in the outdoors. We believe this will be a safe outdoor setting with some advance surface preparation that day.

EFMLS has had 2 virtual directors' meetings including many member societies presidents who also serve as EFMLS directors. We had a chance to compare and share concerns such as membership, meetings, field trips, mineral shows and more. We are very lucky to have as our members major contributors to EFMLS tasks and responsibilities. Heather remains involved in EFMLS website as well as our own OCMSNY.org, Mark is on the Board for WildAcres. Alison has been a contact/coordinator/liaison to supply website contestant information to the website competition judges. Thank you all for your contributions.

Thank you to Frank Vigilante who presented at our July 2020 meeting. He gave us an overview and layout of Big Brook, NJ and the fossils we might expect to find there. We look forward to a field trip....

Thank you to Mark Kucera, Heather, Alison, Ron, Shane, Bobby, Ryan and all the members that contribute to our face book, Shale Mail and web

pages. All our members are welcome to visit , like and share our Facebook pages and postings. Thanks for the postings by dert diggers, area 51, and those trips cross country to excavations etc. You are welcome to bring some representative specimens to our virtual meetings and to our September barbecue. For those of us who miss attending mineral shows and sales in person, we have many online shows and sales events posted on our pages.

August is typically vacation and travel time for many. Please be safe with in your activities. Safe with respect to work safety if you are prospecting and mining like several of our members, safe in your activities. Use work gloves, safety shoes, helmets, harnesses, eye and head protection as needed. Please hydrate and be aware of possible of heat exhaustion and heat stroke. Be cautious with regard to personal interactions, especially indoors, touching common surfaces and observe social distancing, masks and hand washing.

BBQ Information!

Good afternoon! Our annual Picnic is right around the corner. Maggie has made a list of things we need that you can bring. We are striving to avoid duplicates. The list is as follows:

- **potato salad** ***macaroni salad**
- **mixed salad** ***fruits or fruit salad**
- **Chile** ***vegetable tray**
- **Ice** ***assorted canned soda**
- **bottled water**
- **your personal specialty**

Maggie & I will bring all the meats, condiments plates and forks and spoons and charcoal and lighter. So we can keep track of everyone and what they're bringing please use my email address (rn33@optimum.net) to let me know what you intend on bringing.

Thank you and we'll see you all there! Remember, only members can attend for insurance reasons!

Thanks! Ron

Minutes of the Meeting

July 10, 2020

By: John Pacut

July 10th Minutes: Read by Ron Nelson and approved

Treasurer's report: The treasurers report was read by Ron Nelson and accepted.

Committee Reports: N/A

Webmaster/FB: N/A

Programs: Under the circumstances Mike said we would be using Zoom for future meetings. Invites will be sent via email each month, we encourage everyone to join us. When the status changes concerning our meeting we will email the information out as well as post it in the Shale Mail.

Show Report: The Show has been cancelled.

Membership Report: Ron stated that he has 10 new members. Ron reminded everyone that the date you joined the club is your renewal date each year.

Shale Mail Report: Alison is looking for articles from members, please email your articles to her.

Old business: Our rock picnic is still being held on September 5th at Hansen Park.

New business: There was a small discussion concerning our annual picnic in light of covid-19 and a reminder from Mark that as of this meeting Wild Acres is cancelled.

Zoom Meeting Agenda

August 14, 2020

By: Mike Tedford

Call to order: 6:30 PM Thank you Mark Kucera for hosting ZOOM

Welcome: Introduction of officers and members.

Review and acceptance of July minutes

Committee/officers reports:

Treasurer

Show Chairman

Membership Chairperson

Field trips

Other Shows

Next meetings schedule September, October, November, December. Zoom/senior center/Hansen Park

Webmaster

Shale Mail Editor

Facebook update

Mail Chimp update

Old business

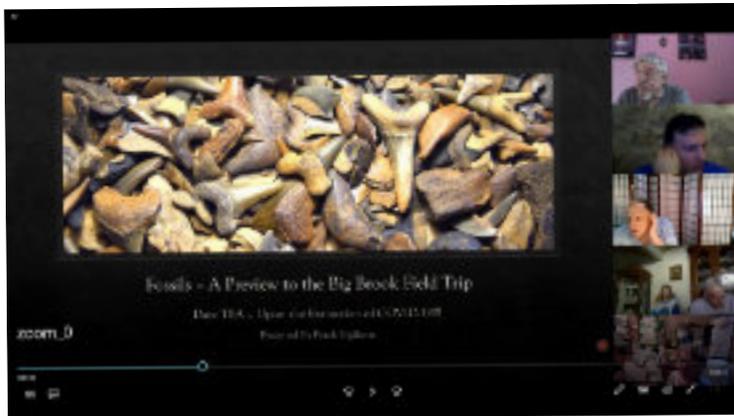
New business:

Adjourn business meeting: for Derek Yoost's Zoom presentation on "Micro Structures in Meteorites and their Relation to the Formation of the Solar System".

Fossils- A Preview to the Big Brook Field Trip

By: Frank Vigilante

The Orange County Mineralogical Society would like to extend our gratitude to Frank Vigilante for a very nice presentation on Big Brook fossil collecting.



He started out with a quick review of the types of fossils that can be found, the main two being altered and unaltered fossils. In the altered type of replacement there is : permineralization and petrification, replacement via minerals moved by ground water, carbonization and/or distillation (preserve soft body tissues). The unaltered are comprised of encasement which does not allow decomposition by bacterial decay examples: amber, tar and ice.



He went on to discuss the difference between body fossils and trace fossils. Body fossils are comprised of bones, claw, teeth etc. give the fossil structure and size. Trace fossils do not contain the re-

mains of the actual animal but like in a footprint or burrow give evidence the animal lived there. He went on to discuss the use of CT scans where a thin slice of material is examined using rads at a mico level. It was mentioned that NJ was explored for fossil remains early and was a source of the earliest finds. the first mummified (Edmontosaurus) nick-named Dakota was used to show the excellent preservation of soft tissue like skin and muscles.

The Geology of Big Brook is explored. Using a map of NJ displaying the relative geological time periods we got a sense of the scope of time and where fossils from each time period could be found in NJ.

Several types of fossils that could be found in Big Brook included several shark teeth, belemnites, oyster shells, iron ring like structures possibly the outside structure of the belemnite going through it, mososaurus teeth and fish teeth were discussed. He discussed the preserves rules and policies and what type of things to bring. In his conclusion he asked all of us to share our personal observations about trips we had already gone on.

I found the overall presentation very good, this was my first time listening to Frank . I look forward to future presentations from him.



Micro Structures in Meteorites

By: Derek Yoost

The full title of your August 14th meeting presentation is “Micro Structures in Meteorites and their Relation to the Formation of the Solar System”.



Did you ever wonder how scientists know how the solar system formed and its age? Probable not! Tonight we will look at some of the meteorites that show interesting structures under magnification and how they relate to the large scale formation of our sun and solar system.

Most of these meteorites are about 4.5 Billion years old, and come from the very earliest stages of solar system formation. Meteorites represent the ONLY samples that we have preserved for study from that long ago.

This power-point presentation was put together using several different microscopes, lighting schemes and cameras.



Editors Notes

Alison Pacut

I know this has been a really trying time for everyone. Some of us are quarantined in our homes, some of us are unable to work while others of us may be working on the front lines of this pandemic it is a great time to write an article. Write about whatever inspires you perhaps there is a hounding trip that you took that just keeps coming to mind. Write the “How I became a rock hound” story and send them to pacutgarnet@gmail.com.

I’m sure with the extra time on your hands your collections are all straightened out and labeled. Why not write about your collection, your favorite specimen or how you label. As you can tell I really want to make the Shale Mail your newsletter. To make this a well rounded newsletter it needs to be inclusive. It needs writings from the members about the members.

On page 7 and 8 I have added an article from Rock and Gem Magazine about a young man who fell in love with fluorescent minerals. He was featured in Rock and Gem Kids. It is my hope this article will inspire more of our young members to follow their dreams and passions. The young are the future of our clubs and this young man has the support of his mother and his club. Lets follow their example and give all the support we can to the young people in our clubs. Trent has also prepared a presentation that he gives to clubs upon request via Zoom or other platform.

I really do hope that all of you will join our Zoom meeting on Friday August 14th at 6:30 pm. Its always a great time and although we can’t connect in person this is the next best thing. I love seeing everyone on the video and chating back and forth. It just makes me feel good to be able to socialize with you all. The only downfall is the donuts, yes the donuts, so if you want them you need to go to your local donut store and buy yourself a supply before the meeting. Don’t forget to make a nice cup of coffee to go with them and it will be just like being at a phisical meeting at the senior center. See you all on Zoom!

SPOTLIGHT ON JUNIORS

Trent Meyers and His Glowing Fascination

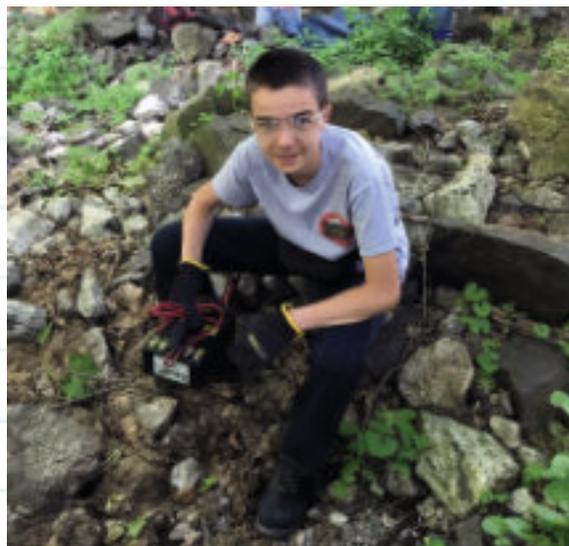
Figuratively speaking, some of us “glow” about our rockhounding interests, whether they involve gems, minerals, fossils, field trips, prospecting, or lapidary arts.

But Trent Meyers has an interest that literally glows! Trent is a 15-year-old member of the Central Pennsylvania Rock & Mineral Club (CPRMC), a club for which his mother, Carrie, has served as president. Trent attends both junior and adult meetings whenever he can. With Carrie also serving as their club delegate to the Eastern Federation of Mineralogical & Lapidary Societies (EFMLS), Trent has tagged along to the last three EFMLS shows and conventions also.

At the convention, where he is often the only junior in attendance, he has shown unusual interest and maturity for a young teen. As an example, being starstruck for Trent very likely included the thrill of meeting legendary Rock & Gem’s Senior Consulting Editor Bob Jones at an EFMLS show in Bristol, Connecticut.

Bob Jones has noted how his fascination with minerals was spurred by a fluorescent mineral display that glowed in the dark under ultraviolet lamps. Like Bob, Trent became hooked by fluorescent minerals. When his family joined CPRMC in 2015, a fellow club member gave a presentation about fluorescence. At every meeting after that, Trent posed questions to that member, who became a valued mentor and eventually gave Trent a box of fluorescent minerals as a gift. In 2016, Trent and his family spent a day and night at the annual “Super Dig” of the famed Sterling Hill Mineral Museum in New Jersey, which boasts world-class fluorescent minerals. Attending the “Super Dig” marked a turning point. For Christmas that year, Trent received a short- and long-wave UV lamp and still more specimens for his collection. This tradition has continued every Christmas since.

Trent has become a local expert on this fascinating class of rocks and minerals. He has provided talks on fluorescence for both CPRMC and the Lancaster County Fossil & Mineral Club, of which



With his portable UV lamp, Trent enjoyed success seeking fluorescent minerals during a 2018 field trip.



Trent shares his growing knowledge of fluorescence via presentations like this one for the Lancaster County Fossil & Mineral Club in February 2019.

he is also a member. Additionally, he is a member of the Franklin-Ogdensburg Mineralogical Society, the Mason Dixon Gold Club, and the Pennsylvania Flintknapping & Stone Tool Guild. He has exhibited specimens from his collection at CPRMC shows and at “Rocks 4 Kids” junior outreach days, where he has



Trent went under wraps to seek fluorescent minerals at Sterling Hill, New Jersey.

also served as a presenter. Furthermore, he has received EFMLS awards for articles he's written about field trips.

Trent became captivated by fluorescent minerals because—in his own words—“you never really know what you're going to get until you put a light on them.” Goodness, has he ever put a light on them! His assembled collection fills the family den, which is affectionately known as “The Rock Room.” The collection includes nearly 1,000 specimens. In addition to pieces visibly on display, many appear in an enormous display case and storage cabinet built by Trent's grandfather. Among the most popular specimens in Trent's collection is that of hackmanite from Ontario, Canada, willemite, and esperite cabochons from Franklin, New Jersey, tugtupite from Greenland, and fluorite from the Rogerley Mine of Durham, England.

To parents of budding rockhounds, Trent offers the following advice: “Take it slow and make sure your kids are committed, especially before purchasing expensive materials like UV lights.”

To fellow juniors, he advises, “Specialize in one field.” The one field Trent has chosen, and that he shares with his broader community, truly glows! 💎



Trent's interest in fluorescence blossomed during the 2016 Super Dig of the Sterling Hill Mineral Museum in New Jersey.



Jim Brace-Thompson began and oversees the AFMS Badge Program for kids and has been inducted into the National Rockhound & Lapidary Hall of Fame within their Education Category.

Mining Life

By: Keith Chip Allen

Since we run across lots of old mines when rock-hounding, my history post is a look inside of these mines and the lives of those who worked them. Most of the interior pictures are from people who are experienced in underground exploration.

Workers after the Civil War saw their incomes flatten during business cycles that reflected the world's economy. Severe depressions during the 1870s and 1890s left hundreds of thousands of workers without work for a year or more.

Gold and silver lured prospectors to the West. Once here, they discovered other metals like copper, lead and zinc and non-metallic minerals like asbestos, talc and borax.

Life in a mining camp wasn't easy. In addition to the hard work, miners had to deal with the threats of raids from Native Americans as well as bands of robbers looking to steal their hard-earned wealth. Disease, floods, fires and injuries also were constant threats.



From 1888 to 1900, hundreds of people died of typhoid fever, according to Arizona Memory Project documents.

Miners also had to endure (or enjoy, depending on their perspective) the attention of others hell bent on separating them from their money.

Jerome, for one, became a hotbed of prostitution, gambling and other vices. It was described as the wickedest town in the West by the New York Sun newspaper in a Feb. 5, 1903, article.

Some early miners used a series of ladders that descended hundreds of feet into the ground. At the end of the day, when the miners were tired, not everyone made it to the top successfully. Some miners were injured in explosions and others fell off ladders, slipped on rocks, inhaled silica dust, or suffered from mercury, lead or arsenic poisoning. Many got sick from drinking dirty water and living too close together. Miners faced immediate dangers, as well as health problems that developed over time. Improved technology increased production, but added new risks.

Those hard rock miners in mining camps like Jerome, Arizona faced a number of hazards including gas pockets, cave in's, silicosis of the lungs caused by dust from the steam drills, caverns holding 170 degree scalding water, (150 degrees would cook meat), and men sometimes fainted and fell hundreds of feet ricocheting off the timbers and into the scalding sump. Once a dog fell into the shaft and tumbled 300 feet landing on two miners and killing both.



Mining Life Cont.

Early excavations used hand drills and black powder. The late 1860s saw the invention of dynamite and the mechanical rock drill. They supported underground workings with wooden timbers, the best known of which is the "square-set timbering" invented in 1860 on the Comstock, and unexcavated rock pillars or the "shrinkage" system by the beginning of the twentieth century. Early miners hand carried ore or used simple machines such as windlasses, whims, or small steam engines. Deep mining on the Comstock in the 1860s and 1870s introduced new hoisting technologies such as large steam engines and high-speed cages. A system of air passages connected to the outside ventilated some mines and others used hand bellows or engine-powered fans. Early mines drained underground workings with tunnels or bucket bailers. Deep mining on the Comstock introduced large, steam-powered Cornish pumps.

Placer miners used simple tools such as pans and bateas, rockers, sluices, Long Toms, and dry washers to separate free metals from gravels. They sometimes used mercury, which forms an amalgam with small particles of gold and silver. Miners used mechanical crushing and grinding machines to break up ores for further processing. Early miners used Mexican arrastras or stamp mills, which reached their peak in the late nineteenth century, to crush ores into sand-size particles. Before going to stamp mills, ores often went through rock crushers, which were like nutcrackers.

Regardless of the risks, mining in the Old West was as common as "fleas on a dog."

For many, the lure and risks of mining represented the American dream. Mining was the ultimate form of gambling. Most miners came away from the table with little or nothing, but some who staked their own claims in gold strikes at Sutter's Mill, Cripple Creek and Alder Gulch came away as big winners. The flip side of these stories, however, is one of sudden or premature death, crippling injury and wasting, disabling disease.

While underground, miners faced risks of fires and carbon monoxide, poor lighting, little ventilation and even altitude sickness. In addition, there were

no consistent engineering practices to avoid cave-ins. Most mines offered no sanitation or clean water; if a worker "had to go" while underground, he often went right where he was working. Personal protective equipment was hardly ever provided by mine owners. If you did not lose a finger, an eye or a foot, you then faced the wear and tear of arthritis, the destruction of your lungs, the risk of infection or the poisoning of your nervous system from arsenic and mercury contamination in the gold ore that you were so optimistically seeking.

The hammer, hand steel, pick and shovel had been done for centuries. The hammer, hand steel, pick and shovel were still the primary tools of the trade. Yet in the hands of an experienced miner, these tools were used in a most skillful way. Mining was, and remains, truly a skilled craft with many talented men engaged in its execution.



This holder with the original candle is part of my mining collection.

Light is essential to penetrate the absolute darkness of an underground mine. Hard, white stearic acid candles were the preferred choice, as they did not melt in the desert heat and burned slower. These candles were typically held in a steel holder with a looped handle, a thimble to hold the candle, along with a sharp point and a hook. The holders were either stuck into timbers* or hung from the rock walls of the mine.

Mining Life Cont.

To be sure, this was hard work; work filled with danger for the careless or inexperienced; work often performed in harsh and difficult places. One had to endure the near darkness and the hardships of heat, of breathing stagnate and humid air. It was physically demanding to be a miner, but skill more than strength, made a good miner. The skill to drill for hours using a four pound hammer in most any position. The skill to shovel the heavy, broken rock quickly to make room for the next round to be drilled. The skill to “read” the ground and securely put in timber, thereby making the workplace safe for himself and all around him. The almost occult of skills - to know which way the ore was headed and follow it with a minimum of wasted effort.



The miner is a skilled worker in every sense of the word. He has years of experience in his job and knows it well. Both his life and income depend on his experience and abilities. A miner must have a quick understanding of the ever-changing work environment which he meets on a daily basis. Every foot of advance and every ton moved are different in some regard, often so subtle as to defy description, but the miner must recognize the change in an almost occult way, and adapt seamlessly. Only thus may he keep this inherently dangerous environment safe and therefore efficient and productive.

The miner had to understand the changing ground conditions under all circumstances. This was fundamental as from the very beginning to the very

end; most accidents were related to the “fall of ground” - rocks falling from the back or rib. The miner had to always keep one eye on what was above him for his own safety and that of those working with him. He was, after all, the man in charge of the work happening at that point in the mine.

This man had to be sure that all loose rock had been removed before allowing anyone under the unsupported back. Sometimes a rock would sound loose then struck with the bar, but refuse to fall no matter how much effort was expended. These were all potential death traps and must be temporarily supported. Then came the task of understanding when to put in the permanent timber, what kind of timber support and, most importantly, how to install it so that it will remain soundly in place after the blast he was to set off at shifts end.

Good miners were never common – never, and they knew it, which bred in some a deep sense of independence and wanderlust. Oft times a good miner would flow with the seasons, south to Arizona in the winter and north to Montana or the mountains of Colorado in the winter. These fiercely independent souls, often called “tramp miners,” were both the boon and bane of the mining companies. Their skills were desperately needed, but their free spirit and independent nature often caused them to quit over a minor matter, leaving the mine shorthanded. A stable workforce was highly desirable to the long-lived mines.

Most of the men who worked in these stifling hot, poorly ventilated tunnels considered it a “daily descent into hell.”



OCMS members are covered by Society-sponsored insurance.

OCMS Disclaimer

The editor and the OCMS are not responsible for the accuracy or authenticities of information in the articles accepted for publication, nor are the opinions expressed therein necessarily those of the officers of the OCMS or the editor.



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