

February 2022



OCMS SHALE MAIL



**Welcome to our hybrid Meeting Friday
February 11th, 2022 at 6:30 pm!**

If your joining us in-person see you at: 81 Laroe Rd Chester, NY (Town of Chester Recreation Senior Center), (From KINGS HWY, Turn left on Laroe Rd by UPS office building)

[CLICK FOR MAP](#)



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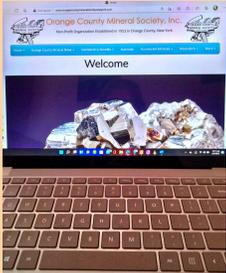
Mailing Address:

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

President's Message!

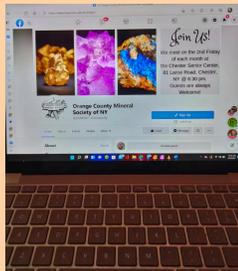
By: Mike Tedford

Four months until our annual Mineral Show and Sale at Museum Village! Please share your ideas for running a successful show June 4 & 5, 2022. Also, please contribute your ideas for updates, activities, posts, shares and likes for our OCMS Shale Mail, website [OCMSNY.org](http://www.ocmsny.org) or



<http://www.orangecountymineralsocietynewyork.com/> and facebook page [Orange County Mineral Home Society of NY](https://www.facebook.com/OrangeCountyMineralHomeSocietyofNY)

Please join our OCMSNY February 11, 2022 meeting at the senior center this Friday. After a 630 PM business meeting, geologist Eric Orlowski will present Fluorites. We are planning a full-scale live meeting following the senior center guidelines of wearing masks. The agenda includes Annual Show discussions, committee reports, old business, new business, refreshments and a mineral raffle. Thank you, Doc Bayne, for your informative history of Lakeville at our January meeting.



The November meeting was held as a hybrid meeting with twenty-three members at the Senior Center in Chester, NY and five more on Zoom remotely. Mike Tedford welcomed everyone. He gave an introduction for Alex Kerstanski's lecture. He also asked if everyone was getting the Shale Mail. He reminded us that annual dues are due.

OCMSNY January 14, 2022 Meeting Minutes

Meeting hall and OCMSNY attendance sheets were completed, Name tags were issued.

Chester senior center COVID 19 precautions were observed including hand sanitizers, mask and social distancing.

Minutes of the Meeting!

By: Mike Tedford

Meeting preparations included refreshments and the hybrid live meeting with zoom component.

The mineral book and journal swap table and the 14 raffle specimens were set out.

Thank you, Mark Kucera, for accomplishing the zoom component without WIFI access availability.

OCMSNY president Mike Tedford called the meeting to order at approximately 6:35 PM, welcoming the attendees.

Meeting attendees introduced themselves,

Mike Tedford introduced the mineral book and journal table for free use, borrowing or swapping by members.

The attendees confirmed the 2022 officers listed in the Shale Mail were accurate.

Members confirmed they are receiving the emailed Shale Mail and appreciate the breadth and quality of the articles. Editor Alison Pacut complimented Brigitte Nesteroke's personal article Birth of a Rock hound, recounting the development of her interests in mineralogy. Members agreed and thanked her for sharing.

Ron Nelson read the balances of the main checking account and show account. He mentioned that he is looking into the the pros and cons of moving the club banking to a different bank for ease of use, access, and check depositing. The Treasurers report was accepted.

Ron Nelson reported the Annual Mineral Show and Sale June 4 & 5, 2022 at Museum Village is scheduled and confirmed with Museum Village, He will email vendors in February.

Discussions for museum field trips included several museums within the surrounding states.

This business portion of the meeting adjourned 7PM for the presentation, refreshments and raffle.

Doc Bayne presented the history of Lakeville, NY dovetailing with the history of Sterling Forest area iron mining and processing history.

The mineral raffle included 14 unique items, including local and exotic specimens.

Many Faces of Fluorite!

By: Eric Orlowski

Fluorite – a common mineral of uncommon beauty. While a simple halide mineral found in many places, fluorite can occur in any color of the rainbow – sometimes even several colors in a single specimen. Fluorite is sometimes regarded as one of the most deeply and vividly colored of all minerals – not an understatement in my humble opinion. Fluorite crystallizes most commonly in cubes, but it can also form in botryoidal groups, banded masses and more. It is also famously fluorescent – in fact, the term fluorescent was coined from fluorite.



Calcite on Blue Fluorite –
Baluchista, Pakistan

In this presentation, we'll look into the background of this commonly uncommon mineral, look at some world-renowned localities and types of fluorite and consider some of its commercial and lapidary uses. I'll provide a number of photos at micro and macro scales, and even some under UV light – and I'll even present some pieces from my own collection to enjoy in person.

I hope you'll come and enjoy – it will be an interesting journey to study this beautiful mineral and it's many colorful forms!



Green Fluorite,
Weardale, England

Calcite, Strontianite
on Purple Fluorite,
Hardin Co., IL



Life at Lakeville!

Before I begin talking about the hybrid lecture that was given January 14th. I want to say its has been a few months since I was able to see a lecture on Zoom but kudos to you Mark! You really pulled it together. It was great watching the meeting online, so please if you can't make the meeting in person enjoy it from your home on your cell phone or computer. We thank you Mark for all the hard work you put in each month to bring our meeting to us on zoom.

Doc Bayne thrilled us both at the community center and at home with the evolution of ore mining at Lakeville and what it would have been like to live there. Thank you Doc for the awesome lecture!



1738 was the year the colonists built the bloomer. Needing fuel they began making charcoal to feed the fire. The water wheel was run by the stream which would make the fire roar. The men heated the ore shanks till they glowed. The ore bars where removed from the bloom and beat it with sledge hammers until almost all the impurities were gone. Now the blacksmith can slice the pure ore, heat it, then shape it like you would clay into different products. It created many, many jobs. The workers that came could stay right on the property. Other supplies began to flow in too so, they could create the many different products.

Life at Lakeville! - cont.

At first, the houses were basically just for resting and sleeping. Built out of log and clay. The occupants were unable to build a fire indoors meaning no cooking indoors. Later, they learned to build fireplaces but didn't actually build the chimney attached to the house. On a dirt floor the fireplace rested while the chimney made out of wood and clay sat outdoors detached from the house. If it caught fire someone would simply run outside and push it away from the house, allowing it to burn.

Women were not allowed to work at the mine so their job was at the home front. Although they had pens of sheep, goats, cows they were the hunters of the family. They would hunt for turkey, bear, deer, fox, squirrel, coyote and ground hogs. They even tossed waste products outside trapping white mice for mouse stew, YUMMY! The woman also kept house, did laundry and had wagons to cart supplies to and from the mine.

Another great food source was fish. They didn't have to travel too far from home to fish but



they needed to get into the deeper water. The Native Americans taught them how to make a dug-out. Setting fire under a tree until it fell over then, burning the top of the trunk all the way along. They kept burning and burning until there was a boat. Now they could fish the larger fish in the deeper water.

The men were working like crazy in the mine drilling holes and filling them. Then something new comes along to lighten their load. An



ore car! It made it a lot easier to move the ore out of the mine.

The production of ore became so great it was laying everywhere. Instead of only selling it to the blacksmiths they put furnaces in. 1751 marked the building of the first furnace.

In order to make iron they had to add limestone to it. Limestone acted as a flux agent so they would make a puddle of it first in the bottom. They would then add the iron, when the iron melted it would flow right to the bottom creating liquid iron. There were two holes in the furnace so when they opened the top hole the 30% waste product would run out which made good road. As soon as the liquid iron began to run out the men plugged the waste hole allowing the iron to run into the sal. Once the iron cooled they were left with iron rods called pigs.



Life at Lakeville! - cont.

Now because Britain had shown the colonies how to make furnaces, they passed the iron act in 1950. All pigs had to be a certain length and all pig iron was to be sent to England. England would make products from the iron and sell the products back to the colonists at a much inflated price.

Their houses began improving. They were making shingles. They needed people to work in the forest gathering wood but, they were also cutting rocks. They also worked day and night at the burning making charcoal. They worked twelve hour shifts to keep the fire burning.

Houses are still improving through this period as they now have stone chimney's and some



even had small basements where they could store things. They also had a small food storage attached to the side of a mountain or hill. Lumber mills were popping up everywhere too. Now that they had boards, the or cars were improving so they can just push them in and out of the mine.

1776 saw the revolt of the colonists against England. In 1778, Peter Townsend built a secret forge 2 miles away from the furnace. They skimmed pig iron from England's supply to the secret forge, heated it and began making the great chain. When winter came Townsend transported the links to West-point where they linked them together stretching the chain across the river. Thus preventing England from getting supplies to

their men who were slated to attack the colonies.

In 1797, they used the secret forge to make a huge anchor for the stronger, faster ships they



were building to outrun England's fleet. The USS Constitution was one of five ships they made. They needed better ships to outrun England's pirates who were attacking the colonists ships after the revolution.

In the 1800's, mules and horses transported goods in and out of the mine. boys managed the livestock. The only time the horses and mules left them mine was to cart or out. The mine was fitted with stalls for them. The boys fed and cleaned them right inside the mine. When they began blasting the magnetite, they had another job for the boys. After blasting, the pieces were collected so the boys could take hammers and break the magnetite free from the unwanted material.

Once the Southfield furnace was built in 1804 they had to replace the men every six months because they were working indoors with all the smoke. Then came transportation so stage coach drivers were needed. Wells Fargo began shipping things for people. Again, they needed to find more drivers.

The houses were constructed of log and wood now, whatever you could get your hands on at the time. They even had a house in the lake. If you worked there rent was \$2.00 a month. The

Life at Lakeville! - Cont.

better your position the better your house. For instance the manager had an eleven room house whereas the school teacher had a one room shack in poor condition. They even began cutting ice so they could have ice boxes indoors.

The general store was built out of the wood from the boxes that goods were shipped in. At the general store workers could pick up goods then on pay day their account would be deducted from their pay.

1865 they were making charcoal for their furnaces at a rate of four acres per week. This is what Sterling forest looked like back then.



So, 1865 they brought the Sterling Railroad in to ship coal from Pennsylvania to run the furnaces. This was the first engine.

1866, dynamite appears. They also had a new type of drill called the widow-maker. This drill ran on air pressure blowing little bits of charcoal at the user causing bleeding lungs. The miners were dying. Three years later they were able to solve this dilemma by blowing water through the drill instead of air.

In 1885 they had electric motors to run their stuff. 1887 Scott Church was built. By 1891 the electric motors were running the whole system inside at furnace number three and they were al-

lowing kids there.

In 1918 the Ramapo Ore Company took over. One of the pieces of magnetite they found went



under Sterling Lake. They built a cable house that used cable cars to pull the material out of the mine. They were piling the ore up near the cable house so they built a crusher that crushed the ore to the size of baseballs. Crushed material was dumped in a pile and loaded onto wagons for transport. Then the railroad began using ore cars to transport ore to the furnace.

A boiler house was built giving them heat indoors so the workers could work all winter long. They added a rail line that went to the crushers and magnet separators were added as well. The ore would stick to the separator and the waste would be thrown. Now they could separate material after it was crushed to the size of big marbles. They added a raw ore storage unit to load when the electric went down. After an extremely cold winter they found a need to build an ore dryer because the ore actually froze.

In 1919 new buildings were built. A mess hall, water storage, a warehouse, a shop, a firehouse, They built a large bunk house that would sleep four men to a room.

In 1920 they began selling and shipping the iron straight to Pennsylvania. They also built the

Life at Lakeville!-Cont.

village of Lakeville. They installed pipes that went to a septic system. There was a well in which they installed pipes for running water indoors. They even had a hotel because iron was a big business so they always had people coming in and out .They built a school so the kids could not only work there but attend school as well. The school later became NYU but now it's up for sale.



Sterling ore is now being sent out of state to Pennsylvania by train. Every piece of ore they can find is being shipped. West of the Great Lakes at Mesabi Range there was a huge deposit of ore. Although it was only 60% pure it was able to be strip mined because it was on the surface. It was not as pure and the Mesabi Range was further than Sterling was to Pennsylvania so they continued to buy Sterlings 70% pure ore. Until, 1923 when they expanded the Erie Locks in the Great Lakes allowing Mesabi to ship ore for pennies a ton. Unable to compete Sterling went bankrupt.

The friends started archaeological dig because we want to make Sterling forest a National Historic site but we ran out of money. So we're on hold right now. The Friends of Sterling Forest have spent \$15,000 on archaeological digs. Were two-thirds of the way through but until we finish the archaeological dig the park will not let us open the trail to the public. Watch Facebook friends or sterling parks and look for events. We have hikes and lectures again, so come join us! Be the Change you wish to see in the world!

Rocks Used For Color Pigments!

By: Keith Allen

To go with the cliff paintings, many rocks provided the colors used by the ancients. In the case of the Columbian cliffs, Red Ochre was found at the site.

Tammy Hodgskiss, an archaeologist at the University of Witwatersrand in South Africa, has studied sites in that country such as Rose Cottage Cave, where evidence of ochre use spans more than 60,000 years. "People may say ochre is the earliest form of art and symbolism, but there's more to it," she says. "Ochre shows how our brains were developing, and that we were using our environment. It bridges the divide between art and science."

Confidently dated archaeological sites showing ochre worked by humans now go back more than 300,000 years, close to the emergence of Homo sapiens. And we're not alone in the use of ochre. Numerous sites in Europe and western Asia show that our closest evolutionary kin, the Neanderthals, also used ochre beginning at least 250,000 years ago, although their applications of the material appear much more limited. Intentional ochre collection and use, however, may have begun much earlier in our family tree.

Himba women still apply ochre to their hair and body in northwestern Namibia.



Rocks Used For Color Pigments! - cont.

Most pigments in Egypt were derived from local minerals. White was often made from gypsum, black from carbon, reds and yellows from iron oxides, blue and green from azurite and malachite, and bright yellow (representing gold) from orpiment. These minerals were ground and then mixed with a plant or animal based glue to make a medium able to attach to the walls. They could be applied as a single plane, but were also layered to create subtle effects and additional colors, such as pink or gray. More information on the materials used to make pigments, as well as a discussion of the symbolism of various colors may be found in the article [“Aspects of Color in Ancient Egypt” at Egyptological.](#)



Students are familiar with a world of color. They do not realize that the colors that we use today in crayons and other items are chemical "copycats" of colors originally made of finely crushed **minerals**. The first **paints** were produced by crushing colored rocks and mixing the powders with animal fats. Wax was also used in paints (en-caustic painting), dating back to ancient Greece. This incredibly durable medium was used to adorn not only sculptures, but mu-



als, boats, and buildings. The Greeks also used wax paints in the earliest known form of easel painting. Many of Greek pigments were from plants and flowers as well.



There were only four colors in the Australian aborigine's palette; red ochre, yellow ochre, china clay, charcoal. His palette was much used in the north, diminishing as he went further south; it was apparently unknown in the southwest. It is uncertain if this absence was due to lack of ochre. Earthy clay pigments were unequally divided across the continent; but the Australian, who traveled very little, made excursions to obtain the most valuable of them all, red ochre. The pigments were first watered down; then, with his finger or a piece of frayed wood used as a brush, the artist spread the background tint, generally yellow ochre. After drying it, he traced on this background a broad red line, or some other motif, like the paw of an emu. In this way he decorated cave walls and ceilings as well as domestic items such as the handle of a tool, a wooden basin, or similar utensils. This art of organizing red, black or white lines on a yellow background demanded a technique of its own; for it was a form of language.



Rocks Used For Color Pigments! - cont.

The prehistoric colour palette used in African cave painting by Bushmen artists consisted mostly of earth pigments. Reds and browns from bole or haematite; yellows, orange and reds from ochre; white from zinc oxide; blue from iron and silicic acid; blacks from charcoal or soot. The blue pigment used in Africa is especially unusual and does not appear in the parietal art of Europe.



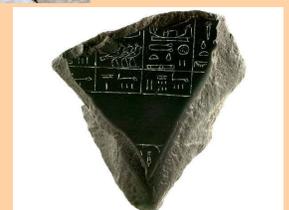
Nearly all the colors used by Stone Age artists are founded on mineral oxide (either iron or manganese) or carbon (mostly charcoal). Thus their limited palette was produced from three primary colors: red, black and yellow. Blacks were derived from manganese ores and charcoal; the reds, yellows, and browns came from limonites and hematites (ochres and siennas), in a range from reddish brown to straw color. Tones of red-violet were probably a result of natural peroxide of iron transformed slowly and naturally into violet oxide.



Here in the United States, there is no better place to see nature's pigments, than the Artists Palette in Death Valley. The rocks exposed here belong to the Miocene Artist's Drive formation. Mineral pigments have colored these volcanic deposits: iron salts produce reds, pinks, and yellow; decomposing mica causes the green; and manganese causes purple.



Today's paints are a fluid suspension of crushed matter in a liquid film that converts to a solid film when a thin layer is applied to a metal, wood, stone, paper or other related material. Many minerals have been or are used as paint pigments. A number of these pigments are toxic to humans, so their use has been discontinued. In many cases, pigments derived from plants have been substituted for mineral colors.



OCMS members are covered by Society-sponsored insurance.

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