

# March 2021

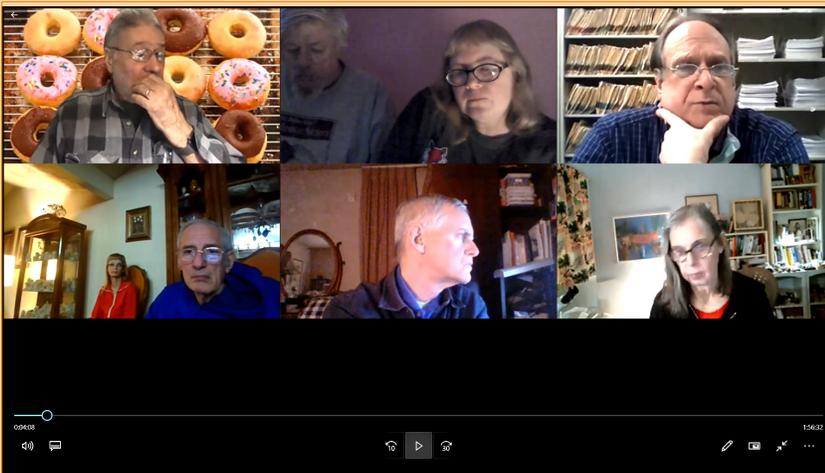


# OCMS SHALE MAIL



Join us for our monthly meeting via zoom on March 12<sup>th</sup>, 2021 at 7 pm. As you can see it's a good time with exceptional visuals so pull up your couch, make a coffee and join us for a little rock hound socialization. Look Ron even brought the donuts!

**SEE YOU ALL THERE!**



## What's Inside?

President's Message!	2
Zoom March 12th @ 7 pm!	3
Minutes of the Meeting	4
Sterling Forest	4
Sterling Forest-cont.	5
Sterling Forest-cont.	6
Shale Mail ... Okay what is Shale	7
Human Fossils	8
Human Fossils-cont.	9
Real Live Gem Shows	10
Orange County Mineral Society, Inc. Officers:	11

## Mailing Address:

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

# President's Message!

Mike Tedford

Please join us Friday 3-12-21 for a ZOOM business meeting to plan 2021 at 6:30pm, followed at 7pm when Derek Yost presents the next in his geologic/fossil history featuring the Cambrian explosion. We need some volunteers to man committees for our June 5-6 outdoor show, a May rock barbecue, and the preparation of Museum Village for our June 5-6 mineral show. With careful planning, we can accomplish these safely. NY and Orange County Covid-19 statistics are slowly improving due to each person's careful diligence. Thanks for the informative discussions regarding vaccines at our February meeting.

Our monthly business meetings with lecture program will continue via zoom until the Chester Senior Center is again available. The audio-visual quality on your personal computer actually can be better than the senior center. When you are on the road, your smart phone gets you to zoom also.... Thank you to our February lecturer, ex-Ranger at Sterling Forest Doc Bayne, for an informative presentation on the Orange County history of iron mining and processing. And again thanking Scott Bradley for his impressive photography of the site and micro mounts from Red Cloud Mine in January.

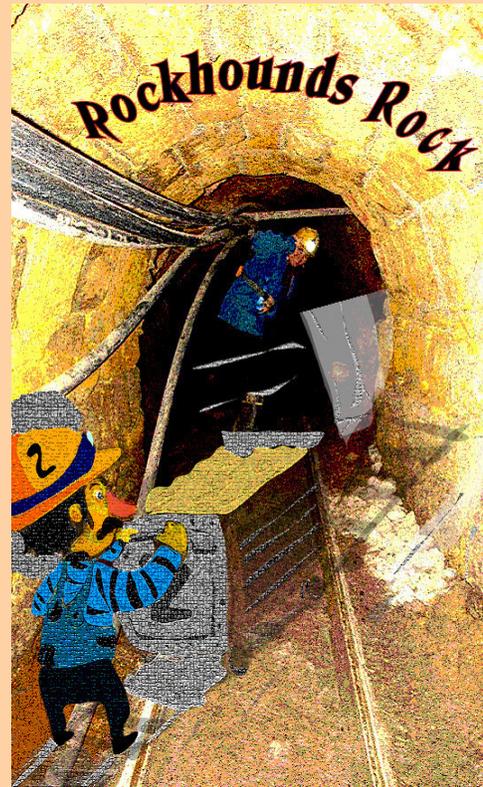
## 2021 Calendar

Jan 8, Feb 12, Mar 12, Apr 9, May 14 or spring rock barbecue, June 5-6 mineral show, Jul 9, Aug 13, Sep 4 rock barbecue, Oct 8, Nov 12, Dec 10.

## Shows and field trips

Temperatures are supposed to hit 60 degrees this week, but my windshield was frozen solid this AM at 13 degrees! Come on Spring! Each year we embrace spring weather. It is more comfortable for field trips and an excellent opportunity for new finds uncovered by winter's erosion. We really do intend more local field trips this year. There are some field trips being run successfully prior to the

winter freeze, on a smaller scale, and inclusive with our sister societies in the EFMLS.



We all appreciate keeping current with the progress of other clubs and shows that have run successfully later in 2020. We will appreciate the experience and insight from Gary Kerstanski to help with our June show. Our annual show is definitely scheduled at the most scenic outdoor venue, Museum Village, 1010 Rt 17M, Monroe, NY 10950 June 5-6, 2021. We are reminded at our zoom meetings that we are invited to a lot of meetings, shows, sales and lectures on line. Many are posted on our Facebook page as well. You can be occupied every day with virtual events. Please check out the newsletters from our regional and national societies. EFMLS and AFMS. We also get invited to attend other virtual meetings and we are grateful for these opportunities shared by our sister organizations. Our Program VP, Mark, and Shale mail editor, Alison include links to our lecturers, website and Facebook pages.

# Zoom March 12<sup>th</sup> @ 7 pm!

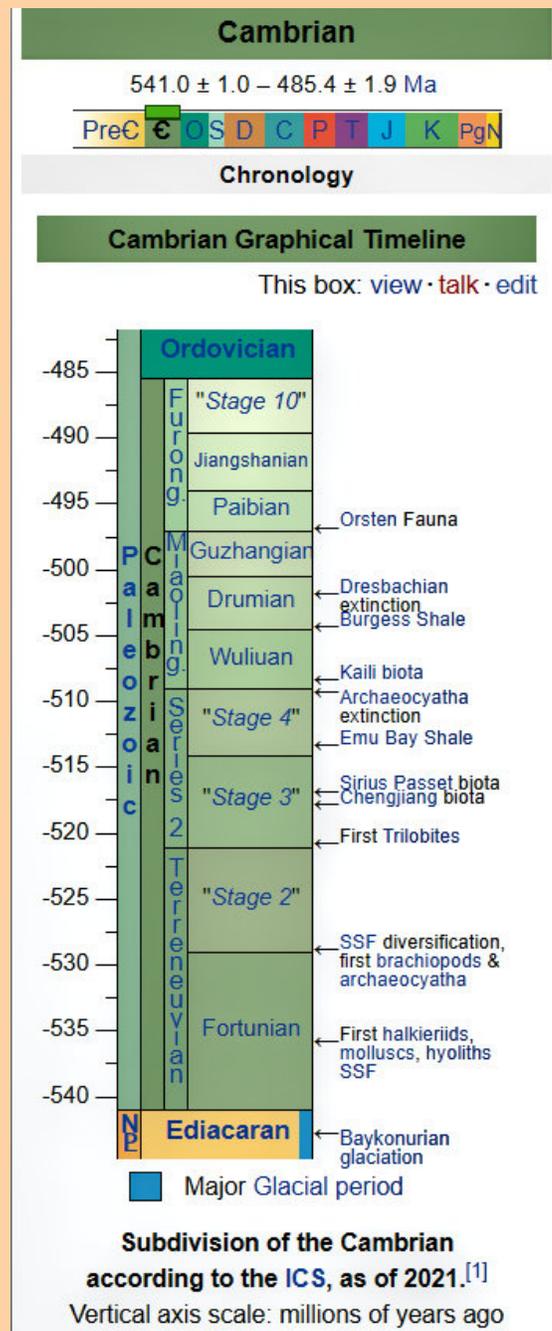
With Derek Yoost

## "The Cambrian Explosion"

The Cambrian Explosion was the single most important event in biological history. All modern orders of complex plants and animals can trace their lineage back to this pivotal point in time. Even primitive vertebrates are present 541 million years ago. Come to this month's meeting to see what makes the Cambrian period so interesting. See for yourself some of the rare samples of fossils that will be on display.



My passion for fossil collecting started when I was 10 years old and has never stopped since. Starting at the age of 14, I worked in a rock shop (Jim's Gems) in Wayne NJ and gleaned a vast knowledge for the collecting and lapidary hobby. For the past 27 years, my collection has grown to include fossil amber, fish, reptiles, and mammals that are unique to New Jersey, New York, Pennsylvania, and Maryland. I also collect local minerals from New Jersey, shells, bones, meteorites and other natural history items and artifacts. This hobby has brought me to many interesting localities and fascinating people. I also maintain a web site on my favorite fossil collecting site, Big Brook at [njfossils.net](http://njfossils.net). To date, I would guess that my favorite fossil that I found is the insect (a blood sucking Midge that may have feed on dinosaurs) that I found in Cretaceous aged sediment in Sayreville NJ. It was new to science and was eventually named after me (*Culicoides yoosti*).



<https://en.wikipedia.org/wiki/Cambrian>

## Minutes of the Meeting!

February 12, 2021

John Pacut

## STERLING FOREST

Article by: John Pacut

### Life of Lakeville by: Doc Bayne.

**Business Meeting:** Mike Tedford brought the meeting to order on Feb 12<sup>th</sup> Minutes were approved as written in the Shale Mail.

**Treasurer's report:** There was a motion to accept the treasures report.

**Programs:** will continue via Zoom, however there is light at the end of the tunnel now that vaccines are getting into arms much quicker.

**Presentations:** Mark has a really interesting line-up for most of the year. We discussed the possibility of having a speaker at the BBQ but it was thought that socialization when we get together would be best.

**Show Report:** Ron will be sending out an email looking for a few volunteers to clean Museum village a week or two before the show. John suggested that members start collecting partial Windex bottles and paper towels that we can use to clean with. We will need people to help escort the vendors at the show. There will be no designated spots and everything will be prepaid.

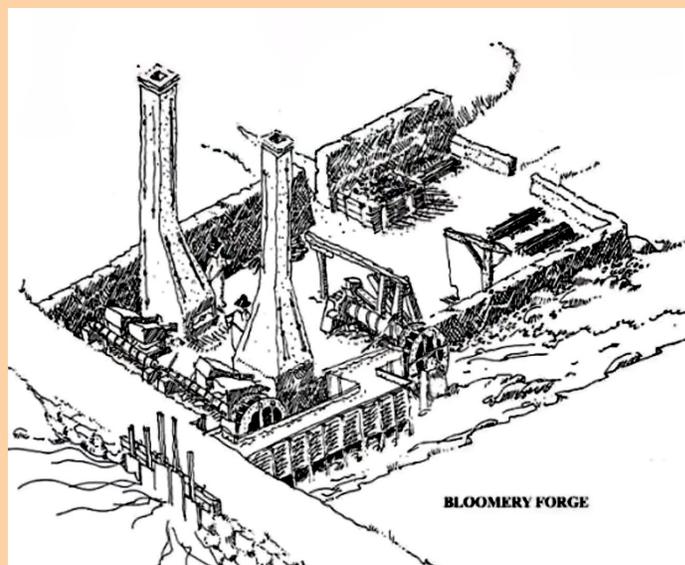
**Membership Report:** Mike is looking for someone to design a new membership brochure.

**Shale Mail Report:** Alison is looking for articles from members & Officers on any topic.

**New business:** Adjourn business meeting: Motion and accepted.

In 1736 a farmer named Cornelius Board discovered magnetite on his property. He learned from the native Americans about different minerals in the area. Magnetite was very instrumental in the areas prominence to produce iron ore.

In the beginning wagons and rails made of wood would carry the magnetite to the blacksmiths. As the mine got bigger columns of stone would be left to support the roof. To dig out the ore of magnetite they used a rod and hammer method. On the end of the rod was a star point, as the rod got struck by the hammerer it would rotate and dig the hole deeper. Oxen would be used to sometimes pull the carts out of the mine to go on their journey. Kilns were used to combine charcoal with the magnetite and the lime to separate the impurities from the magnetite. Using charcoal in 1738 Bloomery forges were used with water forges to heat up the ore then hammer crews would work the product to shape it.



# STERLING FOREST-cont.

A small mining town was born. Miners were needed so small buildings were erected to house them. Privy's sprung up to the south east of these houses to take advantage of prevailing winds. Women were not allowed to be miners but took on all the other duties like hunting for game laundry maintaining the home so, they were basically were the first jack of all trades. A small school was started. Clay chimneys were added to the outside of the houses. The chimneys were not attached to the house so, in the event of a chimney fire they could be pushed over to prevent the house from burning down.



As the community began to grow and innovations came along like iron rails and iron mining equipment to ride the rails. Young boys were allowed to work and would chip away at the magnetite with small hammers and they also did other menial tasks like look after the oxen. Use of black powder put into the holes made by the rotating star bits allowed for the ore to be extracted quicker.

“The Hudson Highlands region of New York is an uplifted area of metamorphic rocks

with a northeast-southwest structural trend. Together with the New Jersey Highland and Pennsylvania's Reading Hill they form a geological province called the Reading Prong that connects the Blue Ridge (Virginia) and the Green Mountains (Vermont) as part of the Appalachians (Gates et al, 2004).

The Hudson Highlands are divided into three major regions that are separated by old faults. The rocks from the central and eastern areas initially sedimentary rocks deposited in a shallow sea environment (shales, limestones, and sandstones), igneous rocks (gabbro and granite), and volcanic rocks were metamorphosed during the Grenville Orogenic Cycle and host iron deposits. Limestones, sandstones, and volcanic were the pre-metamorphic rocks of the western region. After metamorphism, the limestones became what we know today as the Franklin Marble, host for the wonderful suite of minerals from the Franklin and Sterling Hill mines (New Jersey) and from Edenville, Amity, and other famous localities in Orange County, New York.”



# STERLING FOREST-cont.

It was lucky indeed that in one small area charcoal and coal, high grade magnetite ore and limestone were all located near each other.

“The Adirondack Mountain region is morphologically and geologically divided into the Adirondack Highlands and Adirondack Lowlands; the two areas are separated by a wide zone of deformation called the Carthage-Colton Mylonite Zone. Rocks of igneous origin, such as anorthosites, gabbros, and granites, form the Adirondack Highlands. These rocks were metamorphosed to granulite facies between 1.090 to 1.050 Ma during the Ottawan Orogeny (McLelland et al, 1988) of the Grenville Orogenic Cycle’ the peak metamorphic conditions occurred at depths of around 25 kilometers and 750 C (Bohlen, Valley, and Essene 1985). The Lyon Mountain Gneiss of 1.070 Ma age (McLelland et al. 1988) envelopes the Adirondack Highlands in the northeast and hosts the most important iron deposits in the eastern and northeastern part of the Adirondack Mountains. The southern and southwestern regions of the Adirondack Mountains contain sequences of metasedimentary rocks. The lowlands comprise sequences of marine sediments, volcanics, and igneous rocks that were metamorphosed to upper amphibolite facies, at temperature of 600-650 C and pressure of 6-7 kilobars (Bohlen, Balley, and Essene 1985), The marbles from the lowlands host a varied and beautiful suite of minerals that have attracted the attention of mineral collectors since their discovery.

## Classification of the Iron Deposits:

A detailed classification of the iron deposits of New York is difficult to prepare, and although not a principal issue of this article, it is necessary to bring to the readers attention the character of the deposits and thereby possibly assist in where to look for specific minerals. Based on criteria

such as the main commodity of a deposit mineralogical composition, and host rock, the iron deposits from New York State are as follows:

1. Gneiss-hosted low titanium iron oxide deposits: these include the Adirondack Mountains: Mineville mining district and Skiff Mountain mine (Essex County), Ausable and Lyon Mountain group of mines (Clinton County), Benson mines (St. Lawrence County); and the Hudson Highlands: Hogencamp, Pine Swamp, Greenwood, Boston, Bradley, Redback, Daters, Surbridge, Clove (Wilks), Sterling, Standish, and O’Neil mines (all in the Orange County) and Phillips mine (Putnam County).
2. Anorthosite and gabbro-hosted high titanium iron oxide deposits: Tahawus, Split Rock, and Craig Harbor mines (Essex County).
3. Skarn-hosted magnetite and vonsenite (Jayville and Clifton mines, both in St. Lawrence County) and iron oxide (Tilly Foster mine, Putnam County) deposits.
4. Sedimentary-hosted iron deposits (Dutchess and Columbia counties and Clinton-type deposits).
5. Weathering crust-hosted iron oxide and hydrated oxide deposits: Staten Island (Richmond County), Antwerpkeene blet (Jefferson and St. Lawrence counties), and Chub Lake, Dodge mine, and other similar deposits from St, Lawrence County.”



**Source:** Minerals from the Iron Deposits of New York State

By: Sam Savage May 14.2008

[https://www.redorbit.com/news/business/1384499/minerals\\_from\\_the\\_iron\\_deposits\\_of\\_new\\_york\\_state/](https://www.redorbit.com/news/business/1384499/minerals_from_the_iron_deposits_of_new_york_state/)

# SHALE MAIL ... OKAY WHAT IS SHALE

Shale rock has always fascinated me. I love the feel of it in my hands, the way it seems strong and unyielding one moment, yet pulls apart or crumbles in another. I love the colors and variations, almost magical in design and form. Some shale is white and sparkles like snow on a sunny day, due to the quartz content. Others are red, almost every shade of red you can imagine, full of rich iron oxide and hematite. Then there are grays and charcoals and deep, deep blacks, which contain varying amounts of organic matter and unoxidized carbon in differing degrees.



Bright Angel Shale in the Grand Canyon

<http://www.karoessler.com/canyon2.htm>

These are only a few of the myriad shale colors to be found. Since shale is the number one sedimentary rock on Earth, forming a whopping 70% of the Earth's crust, you can well imagine the color variance. What most draws me to shale is the beauty of shale-layering effects that can be found everywhere on the surface and subsurface of the planet. Mention a location almost anywhere on the globe, and you can find the glorious views and multiple striking colors of stratified shale layers. Shale is anything but boring!

Shale is composed from silt and clay particles, in other words, mud. Fine-grained shale mudstone eventually becomes laminated (formed into thin layers) and can fissile (split into thin layers). Some shale is so brittle it will crumble into

pebbles in the hand. Other forms will pull apart into thin sheets that can be written on or painted. Then there is the shale that can be broken only by a good swing of a hammer. Why such a difference in texture and strength? Time and location of course!

When mud is buried and compacted for a long period of time, it is heated by the Earth's crust and forms shale. If the shale is heated long enough, it forms slate. In other words, shale in its old age becomes slate, a harder and more rigid version of itself.



Marella Fossil of the Burgess Shale

[https://en.wikipedia.org/wiki/Fossils\\_of\\_the\\_Burgess\\_Shale](https://en.wikipedia.org/wiki/Fossils_of_the_Burgess_Shale)

As if all of this isn't fascinating enough, shale also holds infinite mysteries within its layers. Those mysteries have come to be known as fossils, the preserved remains of Earth's past flora and fauna. Imagine, some insect or animal crawls into the mud and falls asleep. He gets trapped in that mud – the mud becomes compacted around it – and eventually, after uncounted years, that mud turns to shale. Then along comes a rockhound like you, attracted to the beauty of shale, and you discover an exquisitely crafted fossil within.

When next you see shale, fissile it. You'll never know what you've got until you investigate closer. Have fun rockhounding!

Fran Brandow  
Quebec, Canada

# HUMAN FOSSILS

I found this story very interesting and thought I'd share it. The longest run of human footprints of a prehistoric woman carrying a toddler while dodging saber-toothed cats and giant sloths has been unearthed in the US. The prints, which stretch for almost a mile and were discovered in the White Sands National Park in New Mexico, USA, date back 13,000 years.

Scientists say the newly-discovered track, and the story it reveals, could go on even further into the wilderness "but a US military missile range neighboring the park means they are unable to follow the trail to its end. "We just don't know how far they went," said Prof Bennett, the co-author of a study of the trail, published in the *Quaternary Science Reviews*. "It would be really nice in the future, perhaps if we have access to the ranges, to trace it further."



The prints tell the remarkable story of a woman and a small child as they made their way across the mudflats with large predators crossing their path. An analysis found the woman was moving at a rapid pace, intermittently carrying and putting down the child.

On the outward journey, her prints show that she was slipping, suggesting conditions were wet and treacherous. But on her return, following the

same path almost exactly, she was alone and no slipping marks were detected.



They found details in the footprints' shapes that reveal how the traveler's weight shifted as they moved the child from one hip to the other. At some points along the journey, the under 3 year old, toddler's footprints appear as well, most likely because the walker set the squirmy child down to rest or adjust their position. Just like parents do in today's world. For most of the trip, the older caretaker carried the child at a speed of around 3.8 miles per hour—an impressive pace considering the muddy conditions. There are no child footprints on the return southbound journey, suggesting that perhaps the trip was taken in order to drop off the child somewhere.



# HUMAN FOSSILS-CONT.



Fortunately, the woman and child seem not to have been menaced; instead, they may have scared some of the animals that encountered their track-way. After the pair passed north, a set of animal tracks shows that a giant sloth ap-



proached their tracks, reared up — perhaps sniffing the air? — and then shuffled in a circle before veering away. The human then stepped on these sloth tracks when returning south-bound. Previous research in the area suggests that humans hunted giant sloths, perhaps explaining why the sloth footprints reveal signs of

nervousness on the part of the animal.

The footprints were just below the loose white gypsum sand. These tracks were originally made on wet ground. As the water evaporated, it left behind the minerals dolomite and calcite, which created rocky molds of the footprints. After being baked by the sun and covered over slightly by drifting material, the tracks have stayed near the surface of the lake for over 10,000 years.

Where did the people responsible for these artifacts come from? It was long a commonplace belief among anthropologists that ancestral Native Americans descended from people living in Asia who crossed into the Americas over a now-submerged open tundra bridging Russia and Alaska, the Bering Land Bridge, also known as Beringia.

The basic story some geneticists have gleaned from this and other finds is that a so-called

Beringian population would have diverged from Siberian populations around 36,000 years ago. About 25,000 years ago, the Beringians became isolated, and a new genetic population emerged, one that scientists have confirmed relates to contemporary Native American people, splitting into two main lineages around 17,000 years ago.

Article by: Keith Allan

# Real Live Gem Shows

## New York Southern Tier Geology Club Show - 04/10/2021

**Start Date:** 04/10/2021

**End Date:** 04/11/2021

**Contact:** Thomas Ogden

**Contact Phone:** (607)-226-2319

**Venue:** Johnson City Senior Center

**Address:** 30 Brocton Ave

Johnson City Senior Center

Johnson City, NY 13790

**Website:** <http://www.facebook.com/pages/category/Non-profit-Organization/New-York-Southern-Tier-Geology-Club-571826199572927/>

## Orange County Mineral \* Jewelry \* Gem \* Fossil Show - 06/05/2021

**Start Date:** 06/05/2021

**End Date:** 06/06/2021

**Contact:** Ron Nelson

**Contact Phone:** 914-850-2486

**Venue:** Museum Village

**Address:** 1010 Route 17 M

Museum Village

Monroe, NY 10950

**Website:** <https://www.orangecountymineralsoctynewyork.com/>

## Gilsum Rock Swap and Mineral Show - 06/26/2021

**Start Date:** 06/26/2022

**End Date:** 06/27/2022

**Hours:** Sat 8:00-6:00 Sun 10:00-5:00

**Show coordinator:** Rob Mitchell

**Contact Phone:** (603) 357-9636

**Contact email:** [gilsumrocks@gmail.com](mailto:gilsumrocks@gmail.com)

**Venue: Address:** 640 Route 10, Gilsum, NH 03448

**Website:** <http://www.gilsum.org/rockswap>

## Gem & Mineral Society of Syracuse Show - 07/09/2021

**Start Date:** 07/09/2021

**End Date:** 07/12/2021

**Contact:** Dick Lyons, President

**Venue:** Center of Progress Building New York State Fair

**Address:** 575 State Fair Blvd

Center of Progress Building New York State Fair

Syracuse, NY

**Website:** <http://gmss.us/>

## Herkimer Diamond Gem Show & Festival - 07/17/2021

**Start Date:** 07/17/2021

**End Date:** 07/18/2021

**Hours:** Sat 9:00-6:00 Sun 10:00-5:00

**Contact:** Billie Jo Muller

**Venue:** Herkimer County Fairgrounds

**Address:** 135 Cemetery St

Herkimer County Fairgrounds

Frankfort, NY 13340

**Website:** <http://www.herkgemshow.com/>

## Mid-Hudson Valley Gem & Mineral Society Show & Sale - 09/17/2021

**Start Date:** 09/17/2021

**End Date:** 09/19/2021

**Contact:** Linda Wuest

**Venue:** Gold's Gym Family Center

**Address:** 258 Titusville Rd

Gold's Gym Family Center

Poughkeepsie, NY 12603

**Website:** <http://mhvgms.org/>

**OCMS members** are covered by Society-sponsored insurance.

**OCMS Disclaimer**

*The editor and the OCMS are not responsible for the accuracy or authenticity 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.*



**Clickable Interactive Directory**

[OCMS Sponsored Mindat Page](#)

[OCMS sponsored Town Page](#)

[Federation Newsletters](#)

[Wildacres](#)

[OCMS Facebook](#)

[OCMS Website](#)

[Sneak Peek](#)

**Orange County Mineral Society, Inc. Officers:**

President:	Mike Tedford	(845) 542-6441	<a href="#"><u>Click to email Mike</u></a>
VP/Programs:	Mark Kucera	(914) 423-8360	<a href="#"><u>Click to email Mark</u></a>
2 <sup>nd</sup> VP:	Alex Kerstanski	(845) 978-4141	<a href="#"><u>Click to email Alex</u></a>
3 <sup>rd</sup> VP:	Ryan Richardson	(845) 629-5120	<a href="#"><u>Click to email Ryan</u></a>
VP Emeritus/Historian:	Frank Clyne	(845) 361-4710	<a href="#"><u>Click to email Frank</u></a>
Treasurer/Facebook:	Ron Nelson	(845) 469-9080	<a href="#"><u>Click to email Ron</u></a>
Min.Show Chairman:	Ron Nelson	(845) 469-9080	<a href="#"><u>Click to email Ron</u></a>
Membership Com Chair	Brigitte Nesteroke	(845) 386-4119	<a href="#"><u>Click to email Brigitte</u></a>
Secretary:	John Pacut	(845) 883-0019	<a href="#"><u>Click to email John</u></a>
Shale Mail Editor:	Alison Pacut	(845) 883-0019	<a href="#"><u>Click to email Alison</u></a>
Webmaster:	Heather Shields	(845) 649-9623	<a href="#"><u>Click to email Heather</u></a>