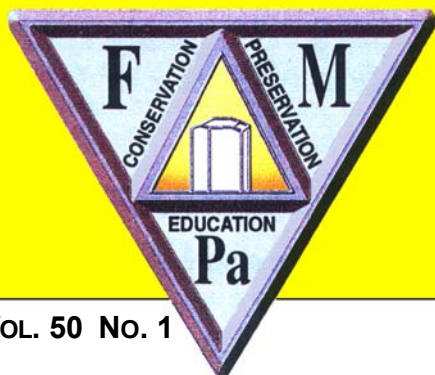




FRIENDS OF MINERALOGY Pennsylvania Chapter NEWSLETTER

VOL. 50 No. 1

SPRING 2022

Tucson Travel Log and Report

President's Message
by Bill Stephens, PG

The Tucson Show was amazing, and I'm told it has changed a lot in the last few years. I had not been to Tucson since 1984 and barely remember much, especially since I got really sick afterwards - laid in my cot for a week. I drove up from my master's thesis area (geologic mapping) in Cucurpe, Sonora, Mexico, to see the show given it was only about 100 clicks north of my field area. So, for me, this was not only a stellar adventure, but it was also a little déjà vu.

I should preface my road log by saying the main reason I justified going this year, and not in the past, was that now that I have been elected President of the Friends of Mineralogy Pennsylvania Chapter (FM-PA) and I had submitted and been approved to present a presentation on Pyromorphite from Phoenixville, PA at the annual FM Symposium at the main show, I felt it was important to attend and present in person (at least that's what I told everyone). I also went to buy and be part of the experience. The FM Annual meeting was scheduled for Friday morning and the symposium was held at the convention center on Saturday, the day before the main Tucson Gem & Mineral Show (TGMS) was to end.

I should start by saying I live in the northeastern corner of Maryland. And I drove to Tucson and back! My travel companion for the ride there, Cheryl Neary (past president of EFMLS), lives on Long Island. She took Amtrak down to the station at Aberdeen Maryland, where I picked her up at about 5:45 p.m. on Sunday February 9. I drove straight through the night and all-day Monday and by 7:00 p.m. CT on Monday, we were in Abilene Texas for the night. We got a room and a good steak at the Mesquite Pit in Weatherford, TX.

We took off Tuesday morning running Route 10 all the way except for a short detour to visit Guadalupe National Park (it was great). We did stop on the way to



FM-PA Events - SEE PAGE 8:

Saturday March 12 Bill Stephens Open House

Monday April 4 7:30 p.m. Tucson Trip - Zoom

examine the fossiliferous Permian basin carbonates exposed in many roadcuts along the way in west Texas. We arrived at our lodging about 10 p.m. MT. Pooped but Psyched.

With a good night's rest, we started off at the Mineral City Show only a few blocks from our motel. We spent



Cheryl checking out some Permian limestones along a road cut on I-10 in west Texas few miles east of the I-10/I-20 split.



"Postcard Picture" of El Capitan, Guadalupe Mountains National Park, Northern Chihuahua Desert, Texas.



Amethyst and Citrine Geode "Cathedrals". First thing to greet us inside the first dealer tent we visited. Wowza!



When I say prices have jumped, check out the price on this aqua! "45 K"

much of the morning at Mineral City, one of the larger satellite shows. Some of the big-name dealers like Kristalle and Arkenstone had moved from the Main TGMS at the convention center to this show.



Large Ammolite Ammonites, prices to match. One place in the world produces this gemstone.



We ended the day with an excellent dinner at El Charro's, which became a haunt and I highly recommend it.

We wound up going to another show to get supplies like stands and boxes. I know I spent \$500 in one store. My first big mineral purchase was actually Ammolite from Korite. Wwwwowww! And I brought some back!

Thursday Cheryl had arranged a collecting adventure with her old friend (Bill Gauge). We rallied at our motel and drove down I-19 to Sahuarita (new community) where we took some back roads towards Bill's azurite-malachite claim. We made a stop to inspect some granitic rocks exposed in a dry wash and found some veins of crystallized quartz with as yet to be determined micro minerals.

After that break we continued on our way toward Bill's claim but were thwarted by electronically surveilled gates and "no trespassing" signs that had been recently erected to protect gold mining on the private property. We



One of the best surprises was this case of the last five years of production of wulfenite from the Rowley Mine. The orange-red colored mimetite on the wulfenite windowpanes was exceptional.



Possibly gold-bearing quartz view in granite.



View looking North at recent gold mining activity in the mountains south of Tucson.

decided to return to the show and bid the mountain roads adieu. We did stop to get some drone photos of the scenery.

Thursday afternoon we decided to hit the Kino Show. I recall a bit of a "speed walk" as Cheryl and I split up to divide and conquer. Later that evening we picked Kathy up from the airport and called it quits for the night.

Friday after an early breakfast, I attended the Friends of Mineralogy annual meeting. We actually finished early and covered all the topics we expected to cover with unexpected unity of vision and purpose. I like these guys & gals. [See the following article and minutes] Two committees that I'm chairing are of general interest: (1) The committee to promote FM and its chapters as pre-approved providers of continuing education for

professional geologists for those states that have the PG licensing requirement and the continuing education requirement. Licensed Professional Geologists should be aware that FM is pre-approved as a provider and the symposia are either free or nominal cost. If you are a PG in DE, PA and NC, you can get all 12-plus Continuing Education credits you need every year from the PA chapter and National Symposia. That is a little-known fact. (2) An exploratory committee to develop a portal for clubs to find speakers for specific topics. I'm working with Ryan Klockner on this as he has already developed the speaker profile and presentation catalogue part of the code within his Geology 365. Stay tuned. If we can pull this off, it will be Rad!

I did some more buying Friday- it's such a blur as there is so much to see and remember. Some places were had such gorgeous displays with such high prices all I could do was walk through, take pics on the fly, say "hi do you have a card" and "bye," lol.

Saturday was the 40th Tucson Mineral Symposium followed by the awards banquet both held at the Tucson Convention Center. We had 11 guest speakers give presentations on "Minerals of the Apatite Supergroup and Mineral Fluorescence". Speakers included Daniel Harlov, John Rakovan, Evan Smith, Dr. Peter Megaw (TGMS Show Chairman), Markus Raschke, Ray Grant, Thomas Loomis, Nicolas Hebert, Glenn Waychunas, Madeline Murchland and me. (If you'd like a program, contact me via email) All the talks were great, some were highly technical and some like mine were more lay oriented. What an amazing assemblage of experts (myself excluded of course). The hybrid meeting went pretty well except for a brief interlude getting the last speaker's talk up and running. I managed to slip out and visit with Adam Wright and buy a couple crocoite specimens from him during the short break.

The awards ceremony was held in the adjacent conference room after the symposium. There were quite a few awards, and we said happy birthday to one of the old timers. Nearly all the faces were new to me and I was pretty beat so I'll rely on others to give more details on the awards. I can say having seen a few of the cases, even the junior cases, I was quite impressed. I was also very impressed with the 12 exhibit cases devoted/dedicated to Richard Graeme who was a well-known collector of Bisbee and other Arizona Minerals and had passed away last year. The love that went into those exhibits was a real testament to how well known, respected, and loved he was, and how influential he was in the mineral community. The show competition exhibits remain a model for collectors everywhere.

Sunday we did the last of our shopping and visiting at various shows. I found some very nice higher end vanadinite cabinet specimens for my collection and resale. Cheryl, Kathy, and I had dinner that evening with friends of Cheryl's who had retired from NY to Tucson. We had a wonderful dinner at an Italian restaurant then went back and started packing. I dropped Cheryl and Kathy off at the airport and turned my nose toward Texas and ultimately home after dropping them off about 8:30 am MT.

Anyone interested in seeing more pictures and hearing more about Tucson can join me for my Zoom presentation Monday April 4, 2022 at 7:30 PM EST. Thank you for your attention and happy hunting!

Bill Stephens, PG
President, FM-PA
1st VP and Region 4 Regional VP, EFMLS

FM National Board Meeting

from Mark Ivan Jacobson, FM President

Dear FM board members,

It is with great joy that I get to write this email to the FM National board. First off the Friday, February 11, 2022 board meeting was a pleasant meeting and a great success which is owed to many people.

My many thank-yous and appreciation follows. Bill Besse offered us his meeting place at Jewell Tunnel Imports in a spacious and safe tent, use of his internet for the first ever combined in-person and remote-virtual meeting, and television screen for viewing. With 20 possible directors, we had 19 attend, which is possibly a historical record. The directors are much appreciated for their engagement, providing ideas and agenda items so we can address your chapter and mineralogical interests.

The zoom license, meeting registration, and monitoring the remote speakers to insure they can see and hear during the meeting was provided by the FMVA chapter with Thomas Hale and Alex Venske actively involved; we were able to take advantage of their excellent skill sets in using the zoom application. FM National will be reimbursing them for the cost of license use but their hands-on help was critical to this meeting's success. Erin Delventhal updated the FM National Facebook and Webpage so that we had multiple methods of keeping FM board and the membership informed of our plans. I am also glad that both the New Jersey (Ryan Klockner) and Mississippi Valley (Mark Sherwood) Chapters empowered a chapter member to represent them at the meeting. Due to an unexpected emergency and its associated uncertainty, Matt McGill temporarily functioned as our meeting secretary documenting our motions, decisions taken, results of the board election, and recognition provided to members, directors, and awardees. I also appreciated the many directors and others who have offered to be members

of committees that will guide our future events and decisions. These committees with their members will soon be shown on our website. Alexander Schauss, our pre-meeting Vice-President, was quite busy with soliciting and coordinating judges for magazine articles and educational case judging. Great award decisions were made from his efforts. With the addition of the Canadian Mineralogist to our magazine award group we should bring more attention to their great papers.

From this meeting I have recognized several technical shortcomings which the next meeting will fix – sound volume, speaker microphones, location of the screen, and seating arrangement to enhance both sound and visuals.

This success was followed by an even more difficult effort to achieve success at the restarted FM National Symposium. For the first time this was a combined remote – virtual and in-person presentation symposium. Such an effort required significant changes/additions in electronic equipment and also the skill sets of the symposium organizers (especially me). This also required a team of people to achieve. Erin Delventhal, Thomas Hale and Alex Venske set up a pre-meeting zoom registration webpage on the FM National website. FMVA once again allowed us to use their zoom license and access credentials. The meeting was advertised on Facebook and our FM Website. The meeting program and abstract booklet was designed by Erin Delventhal and printed in Tucson by Quikcopy. Advertising by the Mineralogical Society of America via J. Alex Speer resulted in many members registering to listen to our presentations remotely.

The Tucson Gem and Mineral Show® guided by Pat McClain as a co-sponsor provided the meeting room and all the audio-visual equipment, leased from Arizona Cine Equipment (ACE) Company. The ACE company provided two equipment experts, Lenny Ostros and Michael Sallard, setup and insured the equipment worked as well as trained me in the use of their equipment – audio sound and volume, computer, two wireless microphones, video projector, cables and how they all interacted. To monitor the remote viewers, access, sound, and visuals Alex Venske worked on a second computer for the majority of the meeting with new at-large FM Director Markus Raschke also helping out. Erin Delventhal with no advance warning created a screen image for letting attendees know we will resume after lunch

We had three remote speakers – Daniel Harlov (Potsdam), Evan Smith, (New York City) and Nicolas Hebert (Perth) which all worked well. We even successfully survived (with some delay) a speaker unexpectedly using his own computer. From this, we have recognized some other mechanical and skill set shortcomings, which we will anticipate, mitigate and remedy next year.

Once again, thank you all for the numerous efforts this year.

FM National Annual Board Business Meeting

Tucson: La Fuente Tent + Zoom

Friday, February 11, 2022

09:00 MT - 10:24 MT

Approved Minutes

Attending in person: Mark Jacobson, Alex Schauss, Alex Venzke, Matt McGill, William Besse, Virgil Lueth, Erin Delventhal, Alfredo Petrov, Bill Stephens, Jessica Robertson, Randy Marsh.

Attending remotely via Zoom: Don Buchanan, Mark Sherwood, Thomas Hale, Bruce Bridenbecker, Toby Seim, Linda Smith, Ryan Klockner, Jeanine Mielecki.

President Mark Jacobson called the meeting to order at approximately 09:05 AM MT and declared a quorum present.

1) Mark Jacobson asked for a motion to approve, or revise the agenda for the meeting. Alexander Schauss made the motion to approve the agenda unrevised. Erin Delventhal seconded the motion and it was unanimously approved. This was item 1 on the pre-meeting agenda as shown below:

*Agenda, as proposed for the FM National board meeting February 11, 2022, Tucson, AZ
Virtual (Zoom) and in-person*

Action items (decisions to make)

1. Confirm or revise and approve the agenda for the meeting (President)
2. Announce the awardee's for the best article of the year 2021 in the Mineralogical Record, Rocks & Minerals, and Mineral News (Vice – President).
3. Announce the results of the FM National election for the four at-large Directors (Secretary)
4. Reconfirm or revise the FM Nominating committee for at-large delegates needed (Will need a motion and a second)
5. Thank Virgil Lueth for his years of service to FM (President).
6. Treasurer's report on fiscal status of the National
7. Re-elect/elect the four members of the executive board as needed (Will need a motion and a second)
8. A motion to add the Canadian Mineralogist to the awardees for best article of the year (Motion proposed by Alex Schauss, a second will be needed)

9. Possibly suspend for 2022 the chapters forwarding dues to National with a statement of the number of total paid members (not just money), confirm as annual payment and when it is due. Without a motion, national dues for 2022 will be expected. Dues (to suspend dues for 2022 will need a motion, and a second).
10. FM National symposium expenses for printing abstract booklet (22 booklets at \$10 each – 11 booklets for speakers – two of them mailed, one for Erin and MIJ and 10 to handout free to first come at the symposium.) (Mark Jacobson has proposed this motion and needs a second)
11. Formalize a process to provide the free advertising updates to Rocks & Minerals, Mineralogical Record and Mineral News. (Needs a formal motion with specifics and a second)
12. Recommend, approve and confirm members of the Symposium funding committee.
13. Form a committee mostly of chapter representatives (someone approved by the chapter they represent) with at least one at-large board member to revise the FM National operating regulations. The primary issue is creating an acceptable method to the chapters of executing fiscal audits. The second priority is revising the operating regulations to reflect our actual work processes. The recommended by the committee revision should be ready for submittal for board approval by July 2022. Operating regulations that none of the Chapters or National want to do, or will do is useless. As a completely voluntary, unpaid organization, our operating regulations should reflect what we as an organization WANT to do. Complete consensus for this is quite important and should be driven/guided by the chapters not national. needed (Motion proposed by President and will need a second)
14. Form a strategic vision committee to create a five-year strategic plan for the organization. This document would provide goals, objectives, and actions FM would like to take and would aid the board in creating a streamlined vision that the chapters and members can look to for their decision making. It would also assist future members and leadership in determining the health of the organization and improve our recognition with outside agencies and nonprofits. (This needs a motion, a second and a core group to volunteer to be the committee)
15. Form a committee to investigate with each State Geology licensing Board and take steps to

verify or insure that the FM National and therefore Chapters are pre-approved for continuing education units (CEU's or CE's) depending upon the specific State Board Rules for those states having state licensure. The purpose being to encourage licensed professionals practicing in the area of minerals, mining and related industries to participate in the organization. (This needs a motion, a second, and committee volunteers).

16. To coordinate at the National level and offer to the public at large, free online seminars featuring speakers with topics related to field collecting, field trips/specific sites, and collecting safety. [this motion to be rephrased into an actionable item and seconded]
17. Form a committee composed of either board members or people nominated by chapters to make a recommendation on a new or revised logo. This committee should have a decision to recommend to the board no later than 6 months after the February meeting. needed (Will need a motion and a second).
- 2) Alex Schauss (VP) to announce the awardees for the best article of the year 2021 in the Mineralogical Record, Rocks & Minerals, and Minerals News.
- 3) Jessica Robertson to announce the results of the election for board members.
- 4) Reconfirm/revise the FM nominating committee for at-large delegates.
- 5) Recognition of service to Virgil Lueth for his years of service to FM.
- 6) Bruce Bridenbecker (Treasurer) to review the fiscal status of FM National.
- 7) Re-confim/elect the four members of the executive board as needed.
- 8) Alex Schauss' motion to add Canadian Mineralogist to the awardees for article of the year.
- 9) Review status of 2022 membership dues.
- 10) Mark Jacobson proposed that FM National pay the symposium expenses for printing abstract booklet (22 booklets at \$10 each – 11 booklets for speakers – two of them mailed, one for Erin and MIJ and 10 to handout free to first come at the symposium.
- 11) Formalize process for advertisement updates for Mineralogical Record, Rocks & Minerals, and Mineral News.
- 12) Recommend, approve and confirm members of the Symposium funding committee.
- 13) Mark Jacobson's motion to form a committee of chapter representatives to revise FM national

operating regulations, specifically concerning fiscal audits and operating regulations to reflect actual work processes, to be submitted to the board for approval by July 2022.

- 14) Thomas Hale to make a motion to create a strategic vision committee to create a five-year plan for the organization.
- 15) Bill Stephen's motion to form a committee to investigate state geology licensing boards to verify or ensure FM national/chapters are approved as CEUs/CEs (continuing education units) depending on specific state rules/regulations.
- 16) Bill Stephen's motion to coordinate at the national level seminars with speakers/topics related to field collecting, field trips, collecting safety.
- 17) Mark Jacobson's motion to establish a committee to develop a recommendation on a new or revised logo, specifically as an alternative to the previously submitted proposal, to be presented to the board no later than six months from the February 2022 meeting.

Actions taken:

- 2) Alexander Schauss announced the awardees for best article of the year 2021:
 - a. The Mineralogical Record: Evan A. Jones, Peter M.K. Megaw. The Milpillas mine, Cuitaca, Sonora, Mexico. Volume 5, Issue 5.
 - b. Rocks & Minerals: Robert Cook. Gold-associated minerals from the collector's perspective. Volume 96, Issue 8.
 - c. Mineral News: Vivien Gornitz. The world of minerals: The romance of emeralds - part 1 and 2. Volume 37, Issue 3 & 4.
- 3) Jessica Robertson announced the results of the FM national election in which Erin Delventhal, Mark Jacobson, Linda Smith, and Markus Raschke all were elected/or reelected to the board of directors.
- 4) Mark Jacobson brought a motion to revise the FM nominating committee for at-large delegates to Alfredo Petrov, Alex Schauss, and Erin Delventhal. Alex Venzke seconded. The motion passed unanimously.
- 5) Mark Jacobson thanked Virgil Lueth on behalf of the Friends of Mineralogy organization for his many years of service and presented him with a certificate of recognition of his contributions.
- 6) Bruce Bridenbecker (Treasurer) presented the annual fiscal report for FM national to the board. It was established that Bruce would provide fiscal documentation of the National's finances for 2021 or 2020 to Toby Seim (PNW chapter) for an internal audit review. Mark Jacobson made a motion to

- accept the report and Erin Delventhal seconded. The motion passed unanimously.
- 7) Alexander Schauss made a motion for the executive officers as follows: Mark Jacobson was re-elected as FM national president (continuing current term), Erin Delventhal as Vice President (first term), Linda Smith as Secretary (to begin additional term), Bruce Bridenbecker as Treasurer (continuing current term). Thomas Hale seconded. The motion passed unanimously.
- 8) Alex Schauss made a motion to add the Canadian Mineralogist to the list of awardees for best article of the year. Erin Delventhal seconded. The motion passed unanimously.
- 9) The board discussed 2022 membership dues and came to a consensus that dues would not be suspended for the 2022 calendar year. Mark Jacobson made a new motion to require each chapter to provide the total number of voting members and dollars collected each year to the FM national treasurer and the total number of voting members only to the FM national President and Secretary. Randy Marsh seconded. The motion passed unanimously. There was discussion around creating an intake form to facilitate easy submission of this information on a yearly basis.
- 10) Mark Jacobson made a motion to request reimbursement of \$220 for costs associated with the printing of booklets for the FM National Symposium. William Besse seconded. The motion passed unanimously.
- 11) There was discussion around advertisement updates for Mineralogical Record, Rocks & Minerals, and Mineral News. Erin Delventhal stated that the outreach committee has been working on this topic already, and made a motion for advertisement updates to be handled by the outreach committee moving forward. Thomas Hale seconded. The motion passed unanimously.
- 12) Mark Jacobson appointed Erin Delventhal, Bruce Bridenbecker, and Alex Schauss to the Symposium Funding Committee.
- 13) Mark Jacobson brought a motion to form a committee, composed of mostly chapter representatives, to revise the FM national operating regulations, specifically concerning internal audit requirements and aligning operating procedures to match actual processes to present to the board by July 2022. Chapters may appoint or volunteer members to the committee. Erin Delventhal seconded. The motion passed unanimously.
- 14) Thomas Hale made a motion to form a strategic vision committee to create a five-year strategic plan for the organization. This plan would provide goals, objectives, and actions FM would like to take and would aid the board in creating a streamlined vision that the chapters and members can look to for their decision making. It would also assist future members and leadership in determining the health of the organization and improve our recognition with outside agencies and nonprofits. Thomas volunteered to chair and recruit members for this committee. William Besse and Alex Schauss both seconded. The motion passed unanimously.
- 15) Bill Stephens made a motion to form a committee to investigate with each State Geology licensing Board and take steps to verify or ensure that the FM National and therefore Chapters are pre-approved for continuing education units (CEU's or CE's) depending upon the specific State Board Rules for those states having state licensure. The purpose being to encourage licensed professionals practicing in the area of minerals, mining and related industries to participate in the organization. Bill volunteered to chair and recruit for this committee. Alex Schauss seconded. The motion passed unanimously.
- 16) There was discussion around coordinating seminars/speakers at a national level. It was determined that there is already groundwork done in this area, so Mark Jacobson appointed Bill Stephens who volunteered to form an exploratory committee to develop the next steps for this topic. Ryan Klockner volunteered to assist.
- 17) Mark Jacobson made a motion to establish a committee to develop a recommendation on a new or revised logo, specifically as an alternative to the previously submitted proposal to address various objections, to be presented to the board no later than six months from the February 2022 meeting. Erin Delventhal seconded. The motion passed unanimously. William Besse will chair the committee and fill as necessary.
- 18) Alex Schauss made a motion to set the date of the next annual business meeting to February 10, 2023, with time/location to be determined. Mark Jacobson seconded. The motion passed unanimously.
- With the meeting agenda completed, at approximately 10:24 MT, Virgil Lueth made a motion to adjourn the meeting. William Besse seconded. The motion passed unanimously.

-Matt McGill (acting Secretary)

FM-PA Chapter Events
FM-PA President Bill Stephens
Open House March 12
Zoom presentation April 4

Hi folks:

I'm planning an open house on Saturday, March 12, 2022 for anyone interested in mineral specimens and lapidary/cutting material. The open house will be held from 9:00 a.m. until 5:00 p.m.. I will have some drinks and finger food available. Most of the items I'm selling will be spread out on tables in my basement so if you have issues going up and down steps you might consider whether you'd like to see something in particular and I'll post on FB if I have it. Parking on the street is OK. If it snows or rains or is otherwise unsafe to travel, we will reschedule for the following Saturday.

I'll have a variety of specimens and lapidary material for sale, including some acquired at Tucson.

If you would like to attend, kindly RSVP to my email (bstephens@stephensenv.com) and I'll provide my address. I'm located in Rising Sun MD near the Cecil College off I-95. Very easy to find.

Also, I will be giving a zoom presentation on my Tucson Show travels on Monday April 4, 7:30p.m.; details to be announced at the end of March. Save the date!

Cheers and I look forward to seeing you!

Bill Stephens PG, President

FM - Virginia Chapter News
Virginia Mineral Directory 2022

Dear members and friends of the Virginia Mineral Community,

Friends of Mineralogy Virginia Chapter Inc. in collaboration with the Virginia Mineral Project, has just released its third issue of the Virginia Mineral Directory for 2022. This document is your one-stop resource for mineral-related information and organizations. The directory has a lot of new information this year, including a list of all the gem shows in the state!!!! Please share this with your friends, clubs, and anyone interested in learning more about mineralogy in the state!

A live version that will be continually updated with changes can be found on our website: <https://friendsofmineralogyvirginia.org/state-directory/>

FMVA will also have its next speaker series on February 25th at 7:00pm. Thomas Hale will be

discussing the Mineral-Security Nexus. RSVP here. In this presentation, we will explore the nexus between minerals and national security, their impact on modern society, and their growing role in decarbonization efforts and future technology. Most importantly, we will view the world's most-pressing challenges through a mineral lens; from conflict zones, critical mineral supply chains, climate change, and U.S. national security policy. While the beautiful minerals we often bring home to our collections are not the same material used in industry, they provide a window and point of engagement for the public who share a fascination of natural beauty.

- FMVA Leadership Team

Virginia Junior Academy of Science
Research Symposium
Judges Requested

Friends of Mineralogy Virginia (FMVA) has been working with our partners at the Virginia Association of Science Teachers and the Virginia Junior Academy of Science over the last year on several educational programs. VJAS has reached out to us and would like to get volunteers who would be willing to help judge and read science fair projects. This is a great virtual opportunity for clubs across the state to give back and connect with local teachers. All reviews and judging are on line so you can do it from home. Please share this opportunity with your membership so we can help fill the judge positions this year. Each club has talented members with years of experience, professional backgrounds, and educational passion. This is one small way to give back and contribute in 2022. Any questions just go to VJAS.Org for applications and examples of prior year submissions.

81st Annual Meeting of Virginia Junior Academy of Science Research Symposium
Virtual, Saturday, May 14, 2022 (Day of Presentations)

Registration Information: <http://vjas.org/judges.html>

Primary Contact: Thomas Girton, FMVA Lead
(tagirton@gmail.com)

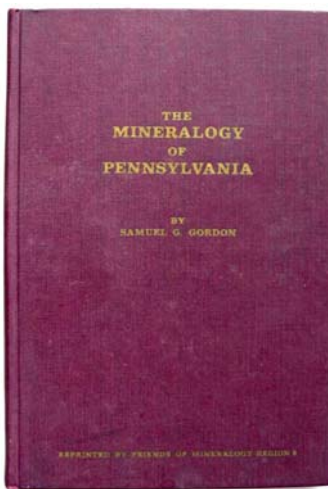
Mineralogical Record News

Mineralogical Record magazine now has digital subscriptions available. See the link at <https://mineralogicalrecord.com/> for details and to view an example.

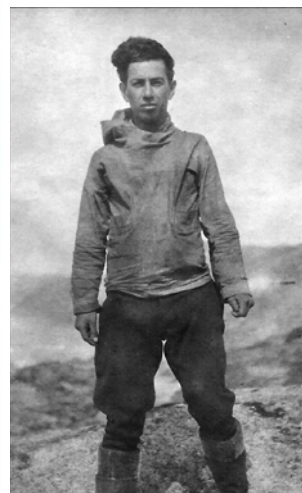
The latest "What's New" column by Tom Moore is now available online, with lots of excellent photos: <https://mineralogicalrecord.com/whats-new/>

100 Years of Gordon's Mineralogy of Pennsylvania

The Mineralogy of Pennsylvania, by Samuel G. Gordon, was originally published by the Academy of Natural Sciences of Philadelphia as Special Publication 1 in 1922. There have been various reprints since then, including the “fourth printing,” being the first in hardcover (shown at right), done in 1973 in the early days of FM-Region 3 (later to be FM-PA Chapter) under the chairmanship of Martin Anné.



D. Glick photo



Samuel G. Gordon on one of the two expeditions that he led to Greenland in 1923 and 1932.

Photograph from the Pennsylvania Geological Survey archives.

Pennsylvania Geology magazine, Issue 51-4, Winter 2021, includes a fascinating article on Gordon and his publication: **One Hundredth Anniversary of a Publishing Milestone**, by John H. Barnes, Pennsylvania Geological Survey, retired. That issue and others are available through links at http://elibrary.dcnr.pa.gov/GetDocument?docId=1751958&DocName=Hyperlinks_PaGeoMagazine.pdf (also under ‘Links’ at <https://rasloto.com/FM/>). A few excerpts are provided here to entice the reader to examine the complete article and its references. The Gordon and gordonite photos and captions at right are from Barnes’ article.

“One might suspect that a major compilation such as this would have come toward the end of a long and illustrious career, but that conclusion would be incorrect. *The Mineralogy of Pennsylvania* was published by the Academy in 1922, the year in which Gordon turned 25. ...his compilation was more complete than any previous one.”

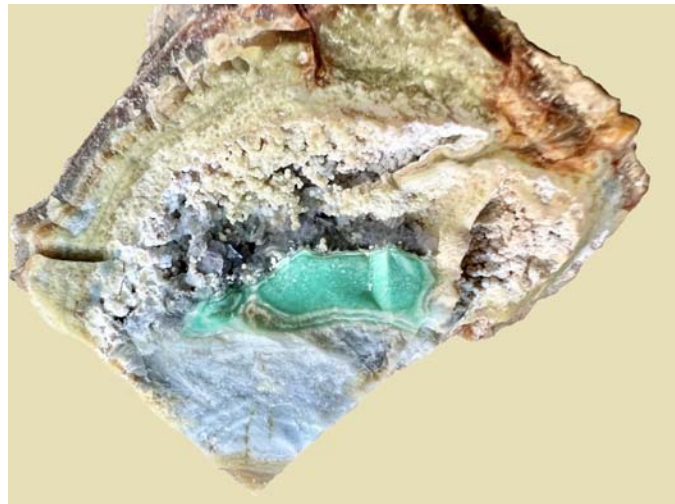
“Gordon’s formal training in mineralogy was limited to courses taken between the ages of 14 and 18 at the Wagner Free Institute of Science in Philadelphia, where he had an excellent teacher, Edgar T. Wherry, who had recently received a Ph.D. in mineralogy from the University of Pennsylvania. Wherry played an important role in nurturing Gordon’s interest and curiosity about mineral occurrences. At age 16, Gordon received a fellowship at the Academy of Natural Sciences, where he worked with a large private collection of 12,000 specimens that had been willed to the Academy by William S. Vaux. That work furthered Gordon’s interest in minerals, including his interest in attempting to understand why particular minerals are found in certain places and not elsewhere (Montgomery, 1973).”

“...Gordon had a strong interest in improving communication among mineralogists ... One aspect of that was manifested by his enthusiasm as an active member of the Philadelphia Mineralogical Society. Another, which was to have national repercussions to this day, was his spending “much of 1915 contacting individuals and

organizations and by early 1916 [assembling] a staff” of what was to eventually become an important new journal, *The American Mineralogist*, which later became the principal journal of the Mineralogical Society of America after it was organized in 1919. Gordon accomplished this when he was only 19 years old...”

“Founding *The American Mineralogist* and publishing *The Mineralogy of Pennsylvania* were only the opening acts of a long career...”

-Editor



Specimen from Clay Canyon, Oquirrh Mountains, Utah, containing gordonite, $\text{MgAl}_2(\text{PO}_4)_2(\text{OH})_2 \cdot 8\text{H}_2\text{O}$. The name **gordonite**, in honor of Samuel Gordon, was proposed by Esper S. Larsen of Harvard University and Earl V. Shannon of the U.S. National Museum, who first described it (Larsen, E. S., and Shannon, E. V., 1930, The minerals of the phosphate nodules from near Fairfield, Utah: *American Mineralogist*, v. 15, p. 307–337). They recognized its relation to the mineral paravauxite, $\text{Fe}^{2+}\text{Al}_2(\text{PO}_4)_2(\text{OH})_2 \cdot 8\text{H}_2\text{O}$, which was first described by Gordon. The gordonite is present as the relatively large, dark crystals in the cavity near the center of the specimen. The bright green mineral just below them is variscite, $\text{AlPO}_4 \cdot 2\text{H}_2\text{O}$. The bluish-gray material below that is probably wardite, $\text{NaAl}_3(\text{PO}_4)_2(\text{OH})_4 \cdot 2\text{H}_2\text{O}$. The small, lighter colored crystals in the cavity are possibly crandallite, $\text{CaAl}_3(\text{PO}_4)(\text{PO}_3\text{OH})(\text{OH})_6$. The specimen is approximately 5.5 cm in width. This specimen was in the personal collection of Arthur Montgomery, who considered it to be the best specimen of gordonite not in a museum.

UPCOMING EVENTS

**Some events are still being rescheduled.
Confirm details of events before attending.**

Mar. 12, 2022: Open House by FM-PA President Bill Stephens, Maryland, Saturday 9-5. **See page 8.**

Mar. 26 - 27, 2022: Gem, Mineral & Jewelry Show, by Franklin County Rock & Mineral Club. Eugene C. Clarke Jr. Community Center, 25 South 3rd Street, Chambersburg, PA 17201. Sat. 10-5, Sun. 10-4.
<https://www.facebook.com/Franklin-County-Rock-and-Mineral-Club-1601767103396099/>

Mar. 26-27, 2022: Annual Show, by Che-Hanna Rock & Mineral Club. Wysox Volunteer Fire Co. Social Hall, 111 Lake Road, Wysox, PA. Sat 9-5, Sun. 10-4.
<http://www.chehannarocks.com/>

Mar. 26-27, 2022: 2022 Mineral Treasures and Fossil Fair by Philadelphia Mineralogical Society and Delaware Valley Paleontological Society. Lulu Temple, 5140 Butler Pike, Plymouth Meeting, PA., (PA Turnpike, exit 333; or I-476, exit 20) Free Parking. Saturday March 26, 10-5, Sun. 10 - 4. <http://www.phillyrocks.org>

April 4, 2022: 7:30 p.m. Tucson Trip Zoom presentation online by Bill Stephens

April 30-May 1, 2022: World of Gems & Minerals Show, by Berks Mineralogical Soc. The Pavilion at Leesport Farmers Market, next to Banquet Hall, 312 Gernant's Church Rd. Leesport, PA 19533. Sat. 10-5, Sun. 10-4.

June 4, 2022: Spring Minerafest, by PESA. Macungie Memorial Park, Macungie, PA. 8:30 a.m. to 3:00 p.m.
<http://www.minerafest.com/>

From the Editor

David Glick

THANK YOU to everyone who has been providing material for the Newsletter! Everyone else - join the fun! Feel free to contact me at xidg@verizon.net, or 814-810-2116 days and evenings. Mail can be sent to 425 Armagast Rd., Bellefonte PA 16823. Materials for the Summer issue should be submitted by May 31.

Materials related to Pennsylvania mineralogy, collecting or collectors are invited for this newsletter: articles, long or short; announcements from FM-PA committees; photographs of specimens, field localities, collections, etc.; reports on publications about PA minerals or by PA authors, or actual book reviews; or other items within the mineralogy and mineral collecting areas of interest. Photographs should be of good resolution (at least 1000 pixels across) without much JPEG compression, so that they will look good in print. Please provide captions including photographers' names.

We are producing four issues each year; your material is needed! If you know people who have interesting material, please encourage them to submit it.

DONATIONS WELCOMED

The FM-PA Chapter is a 501(c)(3) nonprofit organization; donations are gratefully accepted and should qualify for deduction from your federal income tax. Donations of any size help to offset the general operating costs of the Society, helping to keep dues low.

FM on the WWW

Please explore the FM-PA Chapter web site at
www.rasloto.com/FM/

**Can you help with a new Facebook site?
Please contact Bill Stephens**

National News

The Bulletin of Friends of Mineralogy, links to other chapters, and much more can be found on their web site:

www.friendsofmineralogy.org

Friends of Mineralogy - Pennsylvania Chapter Administrative Directory

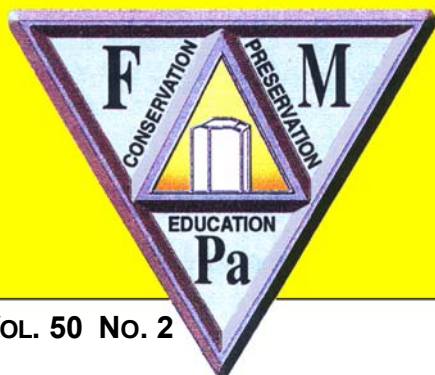
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	Mike Dunton	pocono1mike@yahoo.com	(570) 629-1246
	William Kochanov	wkochanov4@gmail.com	(717) 571-5015

COMMITTEE CHAIRS

Membership Chair	Ron Sloto	rasloto@aol.com	(610) 469-0626
Field Trip Chair	Ross Elliott	relliott@udel.edu	
Web Manager	Ron Sloto	rasloto@aol.com	(610) 469-0626
Newsletter Editor	David Glick	xidg@verizon.net	(814) 810-2116

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FRIENDS OF MINERALOGY Pennsylvania Chapter NEWSLETTER

VOL. 50 No. 2

SUMMER 2022

President's Report

by Bill Stephens, PG
President, FM-PA Chapter
1st VP and Region 4
Regional VP, EFMLS



The FM-PA Chapter has been very busy the first half of this year. I'm pleased to report that we have secured our venue for our annual symposium and field trip, November 12 & 13, 2022, and we will be returning to the Bright Side Opportunities Center in Lancaster PA; the meeting will be hybrid so feel free to join us remotely if you cannot attend in person. See the flyer below.

Our Symposium is a great value, particularly for students and licensed professionals needing inexpensive continuing education credits (5). The talks/speakers and field trip venue are TBD. Dr. Steve Lindberg (UPJ) and I are working on a talk for the New Paris Quarry near Bedford, PA, known for fluorite and fossils, and long utilized as a training site for the University of Pittsburgh at

Johnstown (UPJ). Dr. Lindberg regularly leads trips to the site for collecting and geologic education, and since being purchased by the neighboring farm landowner, it is likely that it will remain preserved for that function far into the future. The quarry is no longer active.

Steve and I met years ago when I started attending the Field Conference of PA Geologists (FCPG) to help maintain my PG licenses and he has also long been associated with the Treasures of the Earth facility in PA, and after he hosted a pre-conference field trip to that facility where they make replicas of dinosaurs and of course sell rocks, I invited him to speak at the Delaware Mineralogical Society's "Symposium at the Show", which I ran a few years ago. He's a great, engaging speaker and I look forward to him speaking at our symposium this fall.

I reached out to Steve about using the New Paris Quarry as a test site earlier this year while I was engaged in a mission to test out the effective mapping limits of the Mavic2 Pro drone, which is much easier to deploy than the Inspire 2, and test out using a spreadsheet developed by Oneida University that computes strike and dip data from three coordinate points (got wind of this tool from Dr. Martin Helmke (WCU) a couple years ago while working on a quarry project for one of my clients). Some of you may be aware that in my daily professional life, part of my



FRIENDS OF MINERALOGY - Pennsylvania Chapter SYMPOSIUM November 12, 2022 Lancaster, PA FIELD TRIP November 13

Symposium for mineral collecting enthusiasts on **Saturday Nov. 12, 2022**

Hybrid Symposium - **ONLINE** or **IN PERSON** at

Bright Side Opportunities Center, 515 Hershey Ave., Lancaster, PA 17603

Talks by knowledgeable speakers on **Pennsylvania Mineralogy and Geology**

Sales by Select Dealers - Silent Auction - Give-away Table - Conversation

Registration: watch for registration form on our web site

Professional Geologists: Five Professional Development Hour credits available for full lecture attendance

Field Trip Location to be announced. **Sunday Nov. 13** Open only to symposium registrants.

Watch for details, registration form, changes and updates on our **web site:**

www.rasloto.com/FM

For newsletters and field trips during the year, please join our chapter!

See "Join FM" on the web site

company services is surveying, and I own survey grade GPS equipment and a robotic total station with which I can take both prism and reflector-less measurements. I have always wanted to test out "shooting" inaccessible beds, joints and faults using the survey equipment but needed the 3-point solution math to do it. The spreadsheet works perfectly and I modified it a bit so I could export the output more efficiently. The tests run on the New Paris Quarry, both the flight (digital orthomosaic at <1" pixel resolution with 1-foot contours as exports), and the strike and dip data were remarkable. The spreadsheet output can also be used to reconstruct a geologic section on dipping beds. Chime in to our symposium this fall, and you will get to see some of this data.

The big event for me this year so far, and a big deal for many clubs in the region, was the machine dig I ran at Mount Pleasant Mills for recovery and study of the geology of Wavellite at that quarry. Ryan Klockner was a big help and participated in the specimen recovery. See pages 4-5 for a separate article with more details. The re-opening of this pit has been a boon for collectors so far this year. I plan to offer an updated talk on this event at the symposium where a detailed discussion of the geology and trace mineral composition of wavellite at this remarkable occurrence will be discussed, and my work on the mapping and structural geology of this quarry will be illuminated. Plan on some eye-popping specimen pics. Ron Sloto has had his article on the site accepted for publication by the Mineralogical Record, but the date for publication has not yet been released.

Ron has also published another book! This time on the mines and minerals of Bucks County, Pennsylvania, which is available from Amazon (see page 11). Man, what would we do without Ron? He's amazing. And he has access to some cool instruments for study at West Chester University (WCU).

Some of our Board members, namely Bill Kochanov, PG and others have initiated an effort to revisit and assess the status of historic collecting sites once featured in the now out-of-print PA Geological Survey "Mineral Collecting In Pennsylvania" book of the 1970's, commonly referred to as G-33 for short. As may be expected, most sites are closed, locations lost or redeveloped for other uses, flooded and the like. Our efforts are designed mainly to determine if access is still possible, and if so, obtaining permission to access and perhaps collect at these sites. An update on progress will be forthcoming.

All for now. Cheers and Happy Hunting!

Sincerely, Bill Stephens, PG, FM-PA Chapter

Friends of Mineralogy - Pennsylvania Chapter

SYMPOSIUM ON PENNSYLVANIA MINING AND MINERALOGY

IN PERSON and ONLINE

Mineral Collecting Enthusiasts Meet and Learn

Symposium Nov. 12, 2022 Field Trip Nov. 13
Bright Side Opportunities Center, Lancaster, PA

Please Register in Advance
<https://www.rasloto.com/FM/>

The Friends of Mineralogy - Pennsylvania Chapter will hold their 2022 Symposium and field trip on the second weekend in November. Mineral collectors in attendance on Saturday will check in at the Bright Side Opportunities Center, 515 Hershey Ave., Lancaster, PA 17603. Activities, including informative talks by knowledgeable speakers on minerals, geology and mining in Pennsylvania and beyond, are planned. Online attendance is also being planned. On Sunday, a field trip for those registered for the symposium will provide an opportunity for mineral collecting at a location to be announced. The field trip is open only to symposium registrants. Safety equipment will be required.

All interested mineral collectors are invited to register and attend. As usual, a few invited mineral dealers will be present, and there will be a silent auction, give-away table, refreshments, and plenty of opportunities for visiting with fellow enthusiasts. Lunch is available at restaurants within short driving distance, and there is adequate parking. Arrangements are still being made, so please see the web site <https://www.rasloto.com/FM/> for any updates, details, and the registration form.

Dates: Saturday & Sunday, November 12-13, 2022

Location: **Saturday, Nov. 12:** Bright Side Opportunities Center, 515 Hershey Ave., Lancaster, PA 17603.

Sunday, Nov. 13: collecting trip, to be announced

Registration:

\$25/person for non-members (or join for 2023 and get the member rate),

\$15/person for current FM-Pa members;

free for college students with ID, and younger students.

Parents must provide supervision of minors.

Please register in advance; a form will be available on the web site <https://www.rasloto.com/FM/>

Professional Geologists: lecture attendance qualifies for 5 Professional Development Hours toward license renewal.

Web Site: <https://www.rasloto.com/FM/>

Contact: e-mail: <bstephens@stephensenv.com>

FM-PA Invites Mineral Presentations for Nov. 12 Symposium

Friends of Mineralogy - Pennsylvania Chapter (FM-PA) is an organization devoted to the advancement of serious interest in minerals and related activities. Members include mineral collectors, professional mineralogists and curators of public and private collections. The bond uniting these people is a love of mineral specimens and a desire to spread appreciation and knowledge of minerals.

FM-PA invites submissions of abstracts to be considered for presentation at our annual Symposium. The Symposium is scheduled for Lancaster, PA, on Saturday, November 12, 2022, both in-person and online, with presentations of approximately 45 minutes including time for questions. Presentations on Pennsylvania minerals or mineral localities, or other topics of interest to mineral collectors, are invited. Abstracts may be up to two pages and should include a title and the author's name and affiliation as they should be presented. The final abstract for publication may include illustrations of sufficient resolution to look good in print; a biographical sketch and photograph of the author are also welcome, within the two-page limit. We provide an honorarium of \$100 for each presentation. Information on our previous Symposia can be found at our web site <https://rasloto.com/FM/> under 'Symposium'.

Contact Bill Stephens <bstephens@stephensenv.com> or another Board member if you might be interested, or to submit an abstract for consideration.

Please submit abstracts by **July 31, 2022**.

50th Year of FM-PA!

Note the volume number of this Newsletter - we are in the Chapter's 50th year (including the earlier incarnation of the Chapter, "FM-Region 3"). Our webmaster Ron Sloto has 50 years of this newsletter available on the chapter web site, <<http://www.rasloto.com/FM/>>.

Any reminiscences or stories from our 50-year history would be welcomed for publication in this Newsletter; see 'From the Editor' on page 12.

FM-National News

News on the next (Feb. 2023) FM-TGMS-MSA Tucson Mineral Symposium, with the theme of Silicate Minerals, is in the first National-FM newsletter of 2022 <<https://www.friendsofmineralogy.org/>> (the second issue should be available soon).

The Outreach Committee has been busy: "We encourage you to start making use of the **FM National Calendar of Events**, which can be found here: <<https://www.friendsofmineralogy.org/calendar-of-events/>>. The calendar is designed to aggregate all mineral-related events happening across the country in one easy-to-access (and filter!) location. Events include field trips, symposia, educational talks (both live and remote), mineral shows, and more! Events are not limited to FM Chapters – any organization is welcome to be included. If you would like to ensure your organization's events are being shared on the calendar, please reach out to us at <fmnationaloutreach@gmail.com>!"

"**Social media outreach** efforts will continue — in addition to continuing our #MineralMonday series, we have led off the year with a new series of educational posts introducing elements of crystallography by discussing habits of quartz crystals.

You can view this content on the following platforms:

Facebook:

<https://www.facebook.com/FriendsofMineralogy>

Instagram:

<https://www.instagram.com/friendsofmineralogy/>

Please join us in the Friends of Mineralogy community group on Facebook:

<https://www.facebook.com/groups/friendsofmineralogycommunity/>

For those not using social media, recent content is also displayed at the bottom of the "Welcome" page of the web site."

FM National announces a new partnership with the Young Mineral Collectors and Geology365 in introducing the **Mentorship Program**. See pages 14-16 of that newsletter.

The Mineralogical Society of America affiliate section lists free links to all **American Mineralogist** issues 1914-1999 <<http://www.minsocam.org/msa/ammin/toc/>>. The **Handbook of Mineralogy**, authored by John W. Anthony, Richard A. Bideaux, Kenneth W. Bladh, and Monte C. Nichols, is now online and free to anyone at <<http://www.handbookofmineralogy.org/>>. In addition, it is being updated by Kenneth W. Bladh to include new minerals and now has 5082 species. See pages 26-27.

Report on Re-opening the Mount Pleasant Mills, Snyder County, Pennsylvania, Wavellite Occurrence

by Bill Stephens, PG

Friends of Mineralogy-PA Chapter President
EFMLS 1st VP & Region IV RVP

Many of you are aware of the Wavellite deposit at the National Limestone Quarry (NLQ) at Mount Pleasant Mills (MPM), Pennsylvania, located approximately 40 minutes north of Harrisburg in Snyder County, Pennsylvania. Many of you have seen my PowerPoint presentation at least once. © For those of you that haven't and by way of refresher for those that have, green was discovered by the Quarry owner Eric Stahl in the early 2000's while clearing a perimeter roadway on the southerly, upper bench of the quarry along the southerly property line. He invited a local rockhound/expert collector or two to investigate, they did some digging and confirmed the species to be wavellite. They mined a bit, word got out and clubs began asking permission to come and dig.

Wavellite and associated species identified at the site including planerite are phosphates, largely of mineralogical interest, though non-specimen grade wavellite had been mined around the turn of the 20th century at another site in Pennsylvania for matches. It blew up and that was that (Stefanic, Michael, Masters Thesis). The type and classic locality for specimen quality wavellite in the US is in Arkansas, and pretty much any mineralogy/ mineral book you pick up that has examples of wavellite will show a color specimen from Arkansas. What we now realize is that specimens from NLQ-MPM rival any from Arkansas in size and quality, and the deposit is just being explored. MPM wavellite is not documented in the literature beyond an abstract two paragraphs long in a proceedings book from the mid-2000's.

I first visited this site in 2015 (I think) and had great success. I went back several times as the first time the adit was open and we were able to get at the veins in solid rock, not spoils. I and others got some killer specimens. I prepared my first PowerPoint presentation that year and have updated and amended it every year since. In 2017 I started considering developing a peer-reviewed article, probably for Mineralogical Record and teamed up with Ron Sloto, formerly of the USGS and now retired but doing

independent research at West Chester University on Pennsylvania minerals, to work toward the goal of publishing the definitive guide to MPM wavellite. A death in the family while onsite followed by other work-related commitments and the COVID forced me to post-pone my efforts until this year. Ron had already submitted his article, which has been accepted for publication in the Mineralogical Record.

I spoke with Eric again after several years, explained what I wanted to do and paid to conduct excavation work for specimen recovery and geological work before the first club was scheduled to arrive April 9th, 2022. Over the last few years the site and road have become overgrown, and fresh specimens unobtainable on short half-day club trips, and as productivity dropped off to near nothing, so did the digging. As part of the excavation mission, I had Eric's son clear the road, so it was passable for any vehicle, and remove the waste overburden and expand the hole first downward, and then forward. We built up the ramped portion of the roadway with waste spoils to soften the grade change which left room to place new spoils in the old mined-out section and allow room to build a pad for the track hoe over the mined-out area.

Machine-assisted excavation and documentation of wavellite veins was conducted 5 days over a period of about a month, with other geologic work ongoing. Take a look at the images below showing the quarry and westerly wavellite pit as of April 13, 2022.

My geological work is on-going and you may see me up there some Saturday during a club dig. If you are interested in going, you must belong to or join a club that is scheduled to or can schedule a trip with the quarry owner. Safety meeting and the owner's orientation and Christian testimony usually take place at the Middleburg quarry and collecting usually starts at Middleburg and ends up at MPM. Both quarries produce nice calcite, strontianite, some fluorite and occasional celestine, but the wavellite is only on the upper bench at MPM. No individuals are permitted in the quarry and safety gear as well as insurance and sign-in sheets are required. If you want to know more about this site feel free to shoot me an email, check out my Facebook page or contact the quarry owner to schedule your club for a trip. Happy Hunting!



Needs some cleaning, but greening. Love the shimmer.



Wavellite "Astroturf"©

Check out some of these pictures of Mount Pleasant Mills wavellite specimens which have only been pressure washed. Photos by the author.



"Pina Colada" wavellite



"Peas Popping"

Some Minerals from the Phoenixville Mines, Chester County, Pennsylvania (Is It what the Label Says It Is? Part 2)

Ronald A. Sloto, P.G.
West Chester University

Introduction

The 2021 Friends of Mineralogy Pennsylvania Chapter Symposium field trip reawakened my interest in minerals from the Phoenixville lead mines. As I looked over the minerals in my collection, I wondered if some of them were really what was on the label. I decided to investigate.

Analyses were performed at the West Chester University Center for Microanalysis and Imaging, Research and Training (CMIRT). Imaging and chemical analyses were done using an FEI Quanta 400 environmental scanning electron microscope integrated with an Oxford AZtec X-ray energy dispersive spectrometer. Samples were unpolished and uncoated.

This article, hopefully, will also serve as a guide to the identification of some of the minerals from the Phoenixville mines. The Phoenixville mines and their minerals were described by Sloto (2009).

Yellow Pyromorphite

Mimetite, lead arsenate chloride [$\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$], is the arsenate analogue of the lead phosphate chloride pyromorphite [$\text{Pb}_5(\text{PO}_4)_3\text{Cl}$]. One of the minerals in my collection is yellow hexagonal crystals on matrix



Figure 1. Yellow pyromorphite crystals from the Brookdale mine (RS-328).

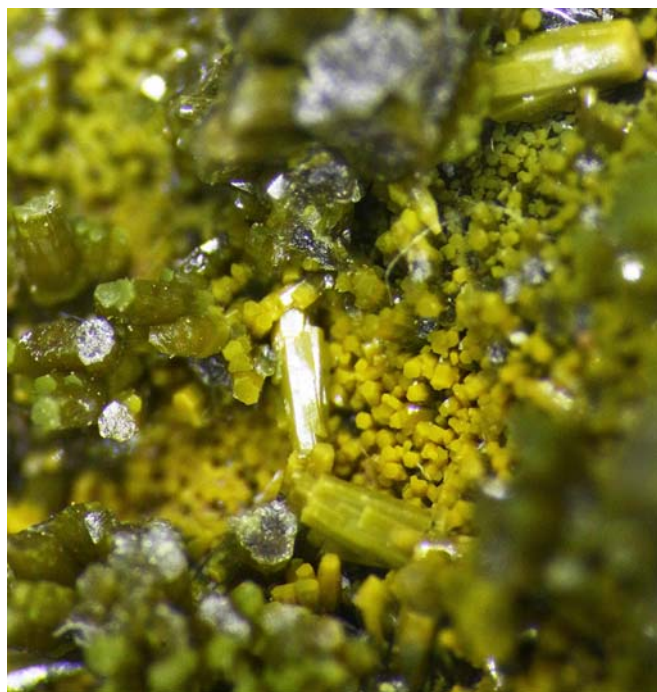


Figure 2. Yellow and green pyromorphite crystals from the Chester County mine (RS-2693).

(RS-328, fig. 1). I collected it at the Brookdale mine and identified it as mimetite based on the yellow crystals. A second specimen, which was from the Chester County mine, had sections of small yellow hexagonal crystals (RS-2693, fig. 2) among green pyromorphite crystals. Mimetite has been reported from the Phoenixville mines as yellow hexagonal crystals (Sloto, 2009, p. 150). SEM-EDS analysis did not indicate the presence of arsenic and indicated the presence of phosphorus; therefore, the yellow crystals in figures 1 and 2 are pyromorphite.

Vanadinite

Vanadinite, lead vanadate chloride [$\text{Pb}_5(\text{VO}_4)_3\text{Cl}$], is the vanadate analogue of pyromorphite and mimetite. Two specimens in my collection, RS-2712 (fig. 3) and RS-1301 (fig. 4), both from the southwest Chester County mine, were labeled vanadinite, and SEM-EDS analysis indicated that they were correctly identified.

I acquired a specimen (RS-3357, fig. 5) of stolzite [$\text{Pb}(\text{WO}_4)$] at the auction of a well-known mineral collector to add a Phoenixville stolzite to my collection. Stolzite has been reported from the Phoenixville mines (Sloto, 2009, p. 152). Unfortunately, SEM-EDS analysis (fig. 6) showed my stolzite to be vanadinite.



Figure 3. Vanadinite from the southwest Chester County mine (RS-2721).

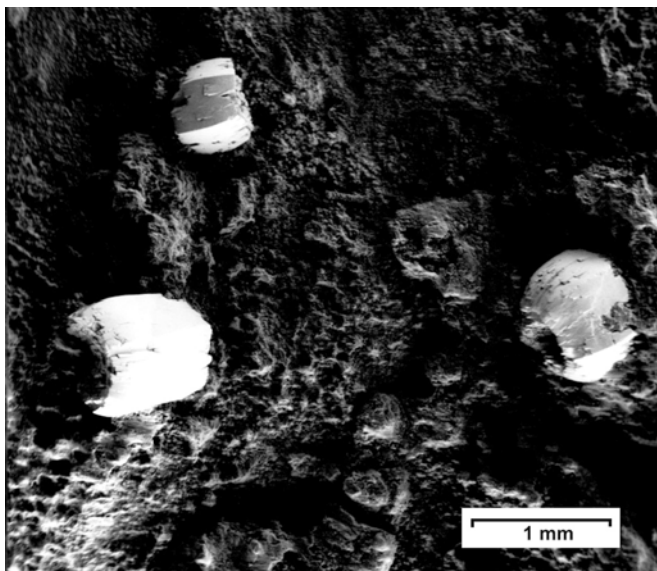


Figure 4. Scanning electron microscope image of vanadinite from the southwest Chester County mine (RS-1301).

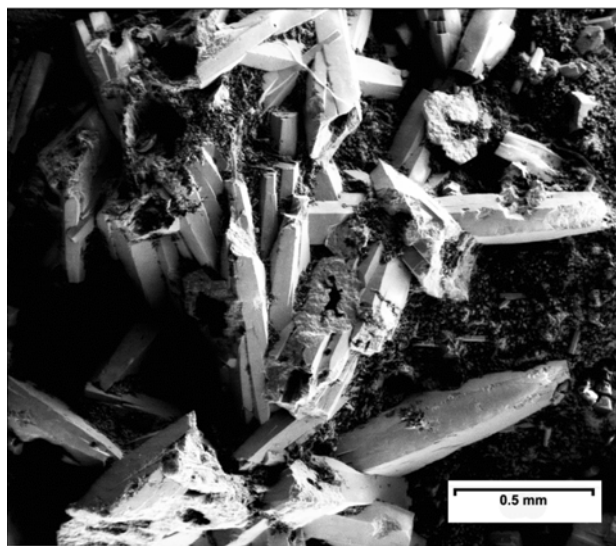


Figure 6. Scanning electron microscope image of vanadinite from the southwest Chester County mine (RS-3357).



Figure 5. Vanadinite from the southwest Chester County mine. It was labeled as stolzite when I purchased it (RS-3357).

Anglesite and Cerussite

Anglesite and cerussite form clear to white transparent to opaque crystals at the Phoenixville mines. Both fluoresce yellow under shortwave ultraviolet light; therefore, fluorescence is not a good diagnostic.

Cerussite, lead carbonate (PbCO_3), is more common and generally more easily identifiable than anglesite, a lead sulfate (PbSO_4). Anglesite typically forms blocky crystals in cavities in galena (figs. 7 and 8). Cerussite may be associated with galena (fig. 9), or it may be found on matrix without galena (fig. 10). Eight specimens in my collection were labeled anglesite. After analysis, I now have four anglesites in my collection; the other four were cerussite.

I collected the cerussite in figure 10 from the Brookdale mine dump in 1984, and originally labeled it

anglesite. It was collected at the time the Thompson farm, where the Brookdale mine is located, was being converted into a golf course. In the January 1992 issue of the Lapidary Journal (the one with the Phoenixville pyromorphite on the cover), there is a true story on page 73 about some mineral collectors (who shall remain nameless) that bribed a heavy equipment operator with beer to dig a deep trench through the middle of the Brookdale mine dump. I was one of those collectors, and this specimen came out of the bottom of that trench!



Figure 7. Anglesite from the Wheatley mine (RS-805).



Figure 8. Anglesite from the Wheatley mine (RS-1673).



Figure 9. Cerussite from the Wheatley mine (RS-1052).



Figure 10. Unusual dark gray cerussite from the Brookdale mine. Self-collected in 1984 (RS-329).

Descloizite

Descloizite is a lead zinc vanadinite hydroxide [$\text{PbZn}(\text{VO}_4)(\text{OH})$]. It is found at the Phoenixville mines as a dark brown crust (Sloto, 2009, p. 147). My collection included two specimens labeled descloizite, both from the Chester County mine. One was actually descloizite (RS-3942, figs. 11 and 12), and one was vanadinite (RS-3706, figs. 13 and 14).



Figure 11. Descloizite and pyromorphite from the Chester County mine (RS-3942).

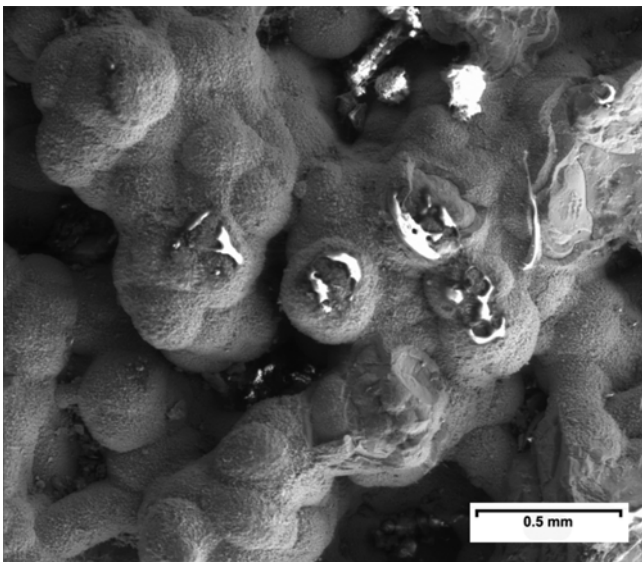


Figure 12. Scanning electron microscope image of descloizite from the Chester County mine (RS-3942).

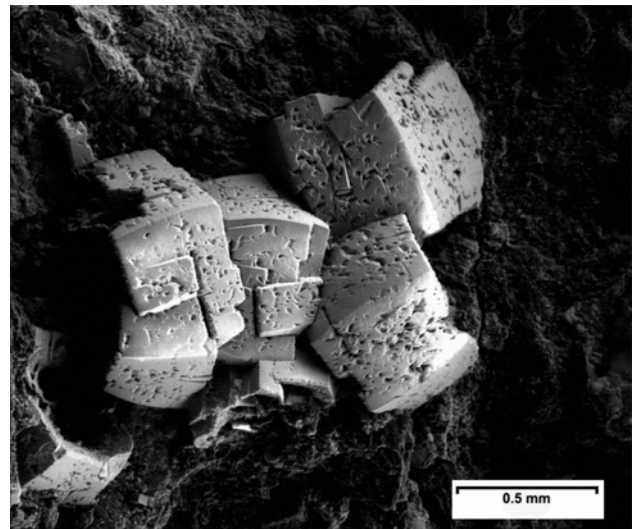


Figure 14. Scanning electron microscope image of vanadinite from the Chester County mine (RS-3706).



Figure 13. Vanadinite from the Chester County mine (RS-3706).

Azurite and Linarite

Azurite and linarite are blue minerals that are often confused, especially when massive. Azurite is a copper carbonate hydroxide [$\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$], and linarite is a lead copper sulfate hydroxide [$\text{PbCu}(\text{SO}_4)(\text{OH})_2$]. Both can form blue crystals that look similar. The presence of lead and sulfur in an analysis of a blue mineral is a good indicator of linarite. At the Phoenixville mines, azurite is usually associated with malachite (fig. 15), and linarite is often associated with galena (fig. 16) or chrysocolla (fig. 17).

Other Minerals

I checked a few other Phoenixville minerals in my collection and found them to be accurately labeled. A whitish crust on galena from the Wheatley mine was accurately labeled as serpierite (fig. 18). A yellowish crust on galena from the Wheatley mine was accurately labeled as native sulfur (fig. 19). A massive blue mineral from the Morris copper mine in Phoenixville was accurately labeled as chrysocolla (fig. 20).

Reference

Sloto, R.A., 2009, The Mines and Minerals of Chester County, Pennsylvania: available from Amazon.com, 469 p.



Figure 15. Azurite and malachite from the Charlestown mine (RS-3128).



Figure 16. Linarite and galena from the Wheatley mine (RS-3146).



Figure 17. Linarite and chrysocolla from the Chester County mine (RS-3136).



Figure 18. Serpierite on galena from the Wheatley mine (RS-3361).



Figure 19. Native sulfur on galena from the Wheatley mine (RS-3146).



Figure 20. Chrysocolla from the Morris copper mine in Phoenixville Borough (RS-3362).

Bucks County Minerals Book Published by Ron Sloto

THE MINES AND MINERALS OF BUCKS COUNTY, PENNSYLVANIA



RONALD A. SLOTO

The Mines and Minerals of Bucks County, Pennsylvania, a recently published book by FM member Ron Sloto, provides a comprehensive description of the mining history and mineralogy of the county. It pulls together over 300 years of mining and mineral history under one cover. It is richly illustrated with 400 figures - old and new photographs, old maps, mine plans, and photographs of minerals from museum, university, and private collections. Many of the old photographs have never been published before. This book describes nearly 175 mines and mineral localities. It includes the known history of each mine and locality and a list of reported minerals. The locations are shown on a set of USGS topographic maps. Because many of the mines had several names over the course of their history, a comprehensive cross-index is provided. An extensive bibliography also is included.

Ninety-one different mineral species have been reported from Bucks County. Extensive coverage is provided for the two most prolific mineral localities in the county-the New Galena lead mines in New Britain Township and Vanartsdalen's quarry in Lower Southampton Township. Many of the past mineral industries in Bucks County, such as lime burning and production of paving blocks, are described.

The new book is available from Amazon.com [search Ronald Sloto] in paperback and hardcover. The "Look Inside" feature shows the Table of Contents and several pages typical of the illustrated content. Earlier books in this series are also available. See <https://www.amazon.com/s?k=ronald+sloto>

Pennsylvania Geology Magazine First Issue of 2022 available

The new issue (Vol. 52, no. 1, Spring 2022) of Pennsylvania Geology Magazine, from the Pennsylvania Bureau of Geological Survey, includes the article, **Historical Perspectives on Iron-Ore Mining in Kishacoquillas Valley, Mifflin County, Pennsylvania.** It was written by Paul T. Fagley, now-retired Environmental Education Specialist at Greenwood Furnace State Park, who researched local mineral resources and fossils and presented popular interpretive programs for many years. The comprehensive article covers the history, geography, and geology of the area, then examines the iron ores and their formation in detail, with photographs of the various types, and reviews the mining history of the various "ore banks." This is not only of academic interest, but of historical importance: "In the first half of the nineteenth century, iron from the Juniata Valley of south-central Pennsylvania carried a reputation as among the finest in the world. More than hyperbole, Juniata Iron's reputation was well deserved... The expanding railroad industry especially favored Juniata Iron prior to the introduction of modern steel... At [the peak of production around 1828], the Juniata Iron District was producing almost half of the iron in Pennsylvania, which equaled about 20 percent of the national output."

Active Volcanoes . . . In Pennsylvania? by Adam J. Ianno of the Survey, in the same issue, is not about the Precambrian, but "ice volcanoes" along the shore of Lake Erie during February, 2022. At the Lake Erie shore, "Ice volcanoes form when waves break against fast ice, gradually building up a large levee that is tallest near the water and slopes gradually away. The irregular scalloped shape of this ice levee causes waves to focus energy on the recessed surfaces of the levee that are more inland. Here, the water, slush, beach sand, and ice blocks crash against the funneled surface, resulting in some of this material being deposited on top of the ice levee and frozen into place, and the remainder draining through a lake-facing vent. Even one wave can add several centimeters of new material to a volcano. With enough time and sustained wind, a large ice volcano of up to 5–10 meters can form."

UPCOMING EVENTS

**Some events are still being rescheduled.
Confirm details of events before attending.**

July 16-17, 2022: Annual show, by Gem City Rock & Mineral Society. Zem Zem Shrine Temple, 2525 W. 38th Street, Erie PA; Sat. 10-6, Sun. 10-5.
<https://www.facebook.com/301824213169516/>

Sep. 23-25, 2022: EFMLS Annual Convention and Central PA R&M Club Show. Harrisburg Consistory, 2701 N. 3rd Street (next to Zembo), Harrisburg, PA 17110 <https://rockandmineral.org/annual-show/>

Oct. 1, 2022: Fall Mineralfest, by PESA. Macungie Memorial Park, Macungie, PA 18062. Sat. only, 8:30 a.m. to 3:00 p.m. <http://www.mineralfest.com/>

Nov. 5-6, 2022: Gemarama, by Tuscarora Lapidary Society. Theme: A Rainbow of Possibilities. HALL D at the Greater Philadelphia EXPO Center, 100 Station Avenue, Oaks, PA 19456. Sat 10-6, Sun. 10-5.
<https://www.lapidary.org/gemarama/>

Nov. 12-13, 2022: FM-PA Symposium, Lancaster, PA (12th) and Field Trip (13th) See p. 1-3.

From the Editor

David Glick

THANK YOU to everyone who has been providing material for the Newsletter! Everyone else - join the fun! Feel free to contact me at xidg@verizon.net, or 814-810-2116 days and evenings. Mail can be sent to 425 Armagast Rd., Bellefonte PA 16823. Materials for the Fall issue should be submitted by September 15.

Materials related to Pennsylvania mineralogy, collecting or collectors are invited for this newsletter: articles, long or short; announcements from FM-PA committees; photographs of specimens, field localities, collections, etc.; reports on publications about PA minerals or by PA authors, or actual book reviews; or other items within the mineralogy and mineral collecting areas of interest. Photographs should be of good resolution (at least 1000 pixels across) without much JPEG compression, so that they will look good in print. Please provide captions including photographers' names.

We are producing four issues each year; your material is needed! If you know people who have interesting material, please encourage them to submit it.

DONATIONS WELCOMED

The FM-PA Chapter is a 501(c)(3) nonprofit organization; donations are gratefully accepted and should qualify for deduction from your federal income tax. Donations of any size help to offset the general operating costs of the Society, helping to keep dues low.

FM on the WWW

Please explore the FM-PA Chapter web site at
www.rasloto.com/FM/

**Can you help with a new Facebook site?
Please contact Bill Stephens**

National News

The Bulletin of Friends of Mineralogy, links to other chapters, and much more can be found on their web site:

www.friendsofmineralogy.org

Friends of Mineralogy - Pennsylvania Chapter Administrative Directory

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Vice President	Dianne Soccio
Treasurer	Ron Sloto
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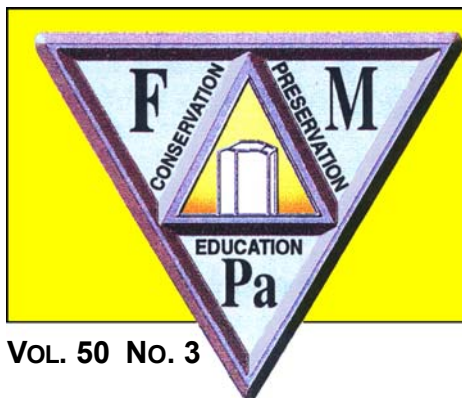
Members can find Board contact information in the Newsletter which they receive directly.

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Field Trip Chair	Ross Elliott
Web Manager	Ron Sloto
Newsletter Editor	David Glick

xidg@verizon.net (814) 810-2116

Friends of Mineralogy Pennsylvania Chapter Web Site: <http://www.rasloto.com/FM>



FRIENDS OF MINERALOGY Pennsylvania Chapter NEWSLETTER

VOL. 50 No. 3

FALL 2022

President's Message for 2022

by Bill Stephens, PG
FM-PA Chapter President
EFMLS President,
Webmaster and Region 4 VP



First, please join us at the symposium, you'll have a rockin' good time!

As President of the Friends of Mineralogy Pennsylvania Chapter (FM-PA), I am pleased to report that we have had a busy and productive year this fiscal year 2022-2023 and we look forward to an exciting year for fiscal 2022-2023. Since last year's symposium and annual field trip, where we revisited the old Brookdale and SW Chester County Mines in the Phoenixville Lead-Zinc District of Chester County PA, a lot has happened, and we have accomplished a lot. Here are some highlights.

- In February, I attended the FM-National Annual Meeting as your representative, perhaps the first time at least in recent decades anyone from FM-PA had attended, and I presented our Symposium talk on Pyromorphite from the famous Phoenixville Mines at the FM-National Symposium at the Tucson Gem & Mineral Show. It was great to meet members of National and other Chapters, and to see the Show for the first time since 1984. It's been a long standing bucket list wish of mine to return to Tucson for the show, and I learned a lot. I will say I was particularly impressed with and learned much about FM-National, and the current administration headed by President Mark Jacobson.
- In mid-March through the first week of April, I and my digging cohort Ryan Klockner of Geology 365 and of the New Jersey FM Chapter executed a successful machine dig at the west pit of the wavellite occurrence at Mount Pleasant Mills. Many specimens were retrieved along with some very useful geological information. I flew/mapped the quarry with my drone, took a lot of oblique photos

continued on page 2

SYMPOSIUM ON PENNSYLVANIA MINING AND MINERALOGY

Symposium Sat. Nov. 12, 2022
Bright Side Opportunities Center, 515 Hershey Ave.,
Lancaster, PA 17603

Field Trip Sun. Nov. 13
for Symposium registrants only

JOIN US! - Register in person, on site - see p. 2
(Paper form only, cash or check only)

IN PERSON and ONLINE

Our Chapter's exciting 2022 Symposium and field trip are set for November 12 and 13. On SATURDAY, as always, we will have informative talks by knowledgeable speakers on minerals, geology and mining in Pennsylvania and beyond. Online attendance is also being planned. The Symposium will be held at Bright Side Opportunities Center in Lancaster, the same venue as last year (see above). Doors open for checking in at 8:30 a.m., with the day's events scheduled for 9:00 a.m. - 4:15 p.m. All interested mineral collectors are invited to register and attend. As usual, a few invited mineral dealers will be present, and there will be a silent auction, give-away table, refreshments, and plenty of opportunities for visiting with fellow enthusiasts. Lunch is available at restaurants within short driving distance, and there is adequate parking.

Speakers scheduled for SATURDAY, November 12, are:
William Kochanov, PG, Penna. Geological Survey, Retired:
Reconnaissance of mineral collecting sites in
Southeastern Pennsylvania

Ronald A. Sloto, PG, West Chester University:
Classic Mineral Localities of Bucks County,
Pennsylvania

Stephen R. Lindberg, University of Pittsburgh at
Johnstown:

Geology of the New Paris Limestone Quarry, Napier
Township, Bedford County, Pennsylvania

C. Lee McIlvaine, IV, Professional Geologist:
Journey to Greenland Ilimaussaq Alkaline Complex,
Kujalleq, South-west Greenland

Bill Stephens, PG, Stephens Environmental:
Geology & Mineralogy of the Mount Pleasant Mills
Quarry & The Now Famous Wavellite Occurrence

continued on page 2

President's Message *continued from page 1*

and conducted some structural geology work at the quarry. That work will be presented at the symposium.

- I have given presentations to many clubs over the year, including zoom presentations on Mount Pleasant Mills, the Hogg Mine, and Herkimer Diamonds from Mohawk Valley Mineral Mining and Area 52. The speaking activities were largely to clubs that are members of the Eastern Federation of Mineralogical and Lapidary Societies (EFMLS), of which I was 1st VP, Region IV RVP, and webmaster. I took over the EFMLS website in October of last year when it was up for renewals and supervised the complete overhaul and enhancement of the site with the assistance of the EFMLS's new host, Madhouse Graphics.
- Our Treasurer Ron Sloto had his article on the minerals of Lime Ridge (Mount Pleasant Mills) published in the Mineralogical Record this past issue. Cheers to Ron for another successful article in such a prestigious journal. [Phosphate Minerals from Lime Ridge, Snyder County, Pennsylvania, The Mineralogical Record, volume 53, September-October, 2022].
- Ron also published another book in 2022, The Mines and Minerals of Bucks County, Pennsylvania, by Ronald A. Sloto, which is available along with most of his other books from Amazon.com.
- When I learned that this coming 2023 FM-National Symposium theme was on quartz, and, having seen so many fantastic specimens being found at new Herkimer district mines, I decided to do some research and submit an abstract for the Symposium. That abstract has been accepted and it looks like I'll be heading to Tucson again next February. Stay tuned.
- As part of the mission I agreed to take on, I first investigated and then confirmed that the States that have Geology Boards that license Professional Geologists (PGs) and that have requirements for continuing education (includes PA, NC and DE), all seem to have FM pre-approved for continuing education credits (CEU's or CEC's). Our symposium is worth 5 credits, 6 to the speakers in some states such as Delaware. I have been promoting that idea all year. Cheapest CEUs anywhere. Spread the word.

Symposium *continued from page 1*

On SUNDAY, November 13, a field trip for those registered for the symposium will provide an opportunity for mineral collecting at National Limestone Quarry's Mount Pleasant Mills, PA, location. The field trip is open only to those who registered for the symposium (see below). Safety equipment will be required. See Bill Stephens' article about wavellite on the ridge <<https://efmls.org/news/>>; calcite, celestine, strontianite, and more may be available in the main quarry pit.

REGISTRATION ON SITE:

Advance registration has passed; you may register in person on site on Saturday, but only with paper form, and cash or check payment.

\$25/person for non-members (or join for 2023 and get the member rate),

\$15/person for current FM-Pa members;

Free for college students; free for younger students.

Parents must provide supervision of minors.

Professional Geologists: Five Professional Development Hour credits available for full lecture attendance.

Web Site: <https://rasloto.com/FM/whats-new/> has updates, details, and the registration form.

Contact: e-mail: <bstephens@stephensenv.com> ✱

50th Year of FM-PA!

Note the volume number of this Newsletter - we are in the Chapter's 50th year (including the earlier incarnation of the Chapter, "FM-Region 3"). Our webmaster Ron Sloto has 50 years of this newsletter available on the chapter web site, <<http://www.rasloto.com/FM>>.

Any reminiscences or stories from our 50-year history would be welcomed for publication in this Newsletter; see 'From the Editor' on page 12. Our next issue, the final one for 2022, would be a great place to include them!

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continued from page 2

- I have also been working with Ryan Klockner of Geology 365 to develop a way for clubs to search for and request presentations from speakers on any number of topics of interest. Ryan is the coder and has done the coding work. Looks like I'll be the guinea pig when time permits but we expect to have it beta tested and operational by the time of the FM National annual meeting. This mission also came out of the 2022 annual meeting.
- As noted above, I have an abstract accepted for a presentation on Herkimer at the forthcoming 2023 FM-National Symposium at Tucson. To facilitate obtaining new information on new mines, I got a referral to the owner of a private property known only as "Area 52" I met the owner, did some digging, found some cool crystals and mapped his site with the drone. Fantastic skeletal crystals have been coming from that site this summer-fall. I also hooked up with Scott Hunt and the team at Mohawk Valley Mineral Mining (MVMM) and started mapping their much larger site, a members-only collecting locale, and also did some mining. The video, mapping, and pictorial data I have from these sites will form the backbone of my presentation. The size and habits of crystals coming from these two sites is amazing. I was asked to give a preliminary field trip report on these mines at the EFMLS Convention and it was a hit - a constant string of live videos showing pockets being opened and crystals coming out.
- Some of you may be aware I am now also President of the EFMLS. Now that this organization is back on its feet and moving forward in the right direction, I encouraged my Board to have FM-PA join the EFMLS, which provides us access to a much larger audience through their website and social media, and I am optimistic that we will increase our membership, symposium attendance, and field trip opportunities through our membership in his organization. It certainly simplifies things for me and eliminates any ambiguity insofar as which organization gets my attention. The growing number of member clubs (87 currently) will learn much more about us, and we can expand our influence and mission through our relationships built within this larger service organization.
- I have given many presentations this year to individual clubs and as speaker at the awards banquets of both EFMLS and AFMS conventions in Harrisburg and New Orleans, respectively.
- It should be noted that we have had quite a few zoom Board Meetings this year, all of which have been productive. Our Secretary David Glick religiously gets out the meeting minutes well ahead of the next meeting, and we always have the previous meeting's minutes ready for approval at the start of each meeting. Our Secretary has published our newsletter on time each time and we applaud him for all his effective efforts.
- Bill Kochanov has been investigating G-33 collecting sites on his own over the course of the year and will be presenting his findings on several sites as speaker at our symposium.
- I have begun talks with our sister chapters NJFM and FMVA about future collaborative endeavors. I and the other Presidents hope to meet before the end of the year to discuss ways we can help each other. We know our strengths, but we can learn from others and help others with our experiences.
- Kudos to all our Board members for all their work and support. The best Board ever, so easy to work with, knowledgeable and team oriented. I could not ask for a better Board. Everyone brings their A game to the table.

I remain vigilant and hopeful for the coming year and with our Board I am certain we will be successful in our endeavors. My primary mission for the coming year is to expand our influence and increase awareness of FM-PA amongst the larger community of mineral enthusiasts, lending our expertise as warranted, and ultimately increasing/revitalizing our membership. I expect that can be accomplished through our own outreach and by leveraging our new relationship with EFMLS and its resources. Our leadership and that of our sister chapters will continue to participate at FM-National, and I fully expect at least one more publication from our group this coming year.

Thank you all for your support!

Sincerely,
Bill Stephens, PG, President FM-PA

A Visit to the Mignone Halls of Gems and Minerals at the American Museum of Natural History

Ronald A. Sloto, P.G
West Chester University

I finally got a chance to visit the new Allison and Roberto Mignone Halls of Gems and Minerals at the American Museum of Natural History in New York City. The old mineral exhibit closed in 2017, and the opening of the new exhibit was delayed until 2021 due to the pandemic. It is spectacular and well worth the trip to New York City to see this new exhibit. Highly recommended!

As you enter, you are greeted by a pair of amethysts geodes from the Bolsa Mine in Artigas, Uruguay. One is 12 feet high (fig. 1), and the other is 9 feet high and weighs 9,000 pounds (fig. 2). The 11,000-square-foot galleries (fig. 3) feature more than 5,000 specimens - more than half of which were not previously displayed - from 98 countries, including more than 2,000 gems, carvings, and jewelry pieces in the hall of gems. State-of-the-art lighting highlights mineral colors,



Figure 2. Nine-foot-tall amethyst geode from the Bolsa Mine in Artigas, Uruguay.



Figure 1. Twelve-foot-tall amethyst geode from the Bolsa Mine in Artigas, Uruguay.



Figure 3. Minerals Hall in the Mignone Halls of Gems and Minerals at the American Museum of Natural History.

crystal habitats, and sculptural forms, optimized to highlight color variation and refraction (figs. 4 and 5).

The three main divisions of the museum are the Gem Hall, the Mineral Hall, and the Melissa and Keith Meister Gallery for temporary exhibitions. The Gem Hall features a display of nearly 2,500 objects from the museum's collection, including precious stones, carvings, and amazing jewelry from around the world.



Figure 4. Display of pegmatite minerals in the Mignone Halls of Gems and Minerals.

Spectacular specimens on display include the DeLong Star Ruby, a 100.3-carat ruby discovered in Myanmar in the 1930s; the Brazilian Princess Topaz, a 221-facet, 9.5-pound pale blue topaz, which was once the largest cut gem in the world; the Patricia Emerald, a 12-sided, 632-carat emerald found in Colombia in 1920, unique because it was never faceted; the Star of India, a 563-carat star sapphire, the largest of its kind in the world; and a carving of the Buddhist deity Guan Yin in lavender jadeite, carved in China during the late Qing Dynasty.

The Minerals Hall features four different sections. Mineral-Forming Environments includes a set of cases devoted to the environments and processes involved in mineral formation. Minerals Fundamentals explores the evolution and diversification of minerals. Systematic Classification contains 659 species representing the chemical classification system used to organize minerals.



Figure 5. Large crystal display in the Mignone Halls of Gems and Minerals.

Minerals and Light examines the optical properties of minerals, which involves their interactions with light. This section includes the Sterling Hill Slab-19 feet long and 9 feet high, weighing nearly 10 tons-from the Sterling Hill Mine in Ogdensburg, New Jersey, which is viewed in alternating natural and ultraviolet light (fig. 6). In each glass case, minerals are displayed with the help of custom handmade mounts - a specialty of the museum - so that each specimen appears to be floating (fig. 7).

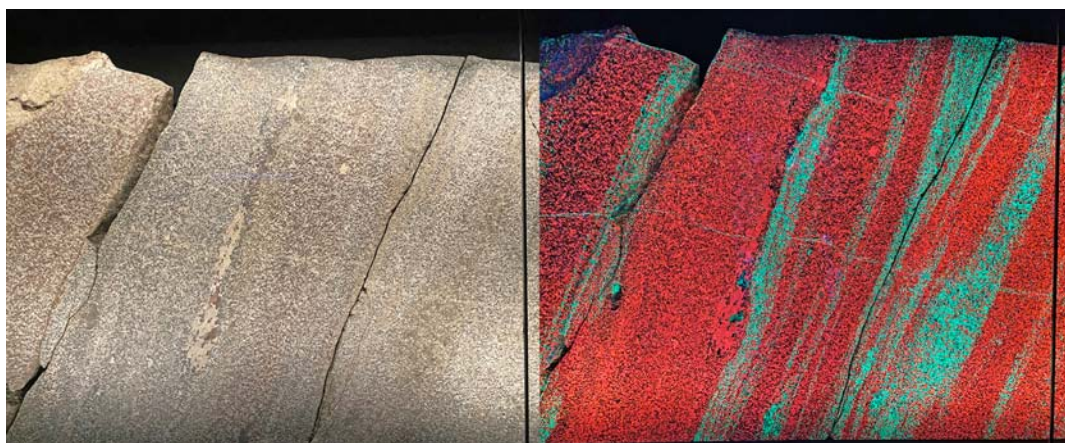


Figure 6. The 19-foot-long Sterling Hill Slab from the Sterling Hill Mine in Ogdensburg, New Jersey, under normal light (left) and ultraviolet light (right).

Among the spectacular huge minerals on display is the largest-known specimen of elbaite tourmaline-"Tarugo," a 3-foot-tall cluster of cranberry-colored crystals from Brazil (fig. 8); a 5-foot beryl crystal section from the Bumpus Quarry in Maine (fig. 9); a 7 ft-tall, 3,000-pound iridescent column of labradorite; one of the world's largest stibnite specimens, which weighs almost half a ton, from the



Figure 7. Colorful minerals on display in the Mignone Halls of Gems and Minerals.

Wuling Mine, in Wuhling, China (fig. 10); and the Singing Stone, a massive block of vibrant blue azurite and green malachite that was first exhibited at the 1893 World's Columbian Exposition in Chicago.

Many of the museum's old favorite specimens were on display. One of them is the Subway Garnet, which was discovered during sewer excavation under Manhattan's 35th Street in 1885. The Subway Garnet, the most famous mineral specimen discovered in Manhattan, is a 9-pound

almandine garnet measuring almost six inches in diameter.

Pennsylvania was represented by several displayed specimens from old, classic sites - pyromorphite from Phoenixville and muscovite from Pennsbury in Chester County; almandine from Crum Lynne and Avondale (fig. 11), amethyst from Upper Providence (fig. 12), amethyst from Chester, andalusite, anthophyllite, microcline from Crum Lynne



Figure 8. "Tarugo," a 3-foot-tall cluster of cranberry-colored elbaite crystals from Brazil.



Figure 9. Giant beryl crystals on display in the Mignone Halls of Gems and Minerals.



Figure 11. Almandine crystal from Avondale, Delaware County, Pennsylvania.



Figure 12. Amethyst crystals from Upper Providence, Delaware County, Pennsylvania.



Figure 10. Stibnite crystal cluster weighing almost half a ton from the Wuling Mine, in Wuhling, China.

and Leiper's (fig. 13), and spessartine from Leiper's quarry in Avondale (fig. 14) in Delaware County; antigorite, brucite, deweylite, and zaraitite from the Wood mine and lepidocrocite from West Hempfield Township in Lancaster County.



Figure 13. Microcline crystal from Leiper's quarry in Leiper's, Delaware County, Pennsylvania.



Figure 14. Spessartine from Leiper's quarry in Avondale, Delaware County, Pennsylvania.

Pennsylvania Geology Magazine

Second Issue of 2022 available

Many of us remember Hurricane / Tropical Storm Agnes and its effects on Pennsylvania in June, 1972, fifty years ago this summer. In particular, the Pennsylvania Geological Survey was hit very hard by flooding of the Susquehanna River. The new issue (Vol. 52, no. 2, Summer 2022) of Pennsylvania Geology Magazine, from the Pennsylvania Bureau of Geological Survey, includes personal recollections by John H. Barnes, now retired, who worked at the Survey at that time.

A featured article discusses "The streets of Pittsburgh are paved with Loyalhanna Limestone." A century ago, dimensioned "Belgian blocks" quarried to the south and east of Pittsburgh were used as long-wearing street pavers. Some such streets still exist, and are illustrated. The article discusses the geology and fossils of the Loyalhanna.

Finally, "New Analytical Geochemistry Instrumentation at the Pennsylvania Geological Survey—The Hitachi SU3900 Scanning Electron Microscope" and the many capabilities of its four detectors are described and illustrated.

Pennsylvania Geology magazine is available online from the Survey, most easily found via the 'Links' section of the FM-PA web site, <<https://rasloto.com/FM/links/>>. -Editor

From the Editor

David Glick

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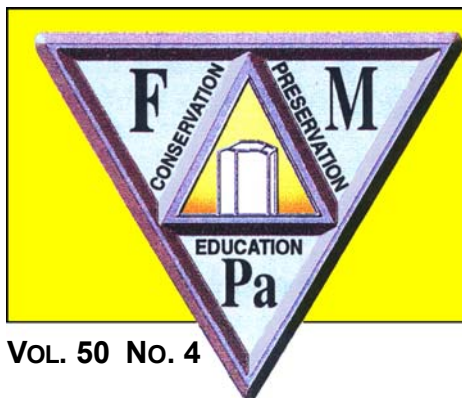
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FRIENDS OF MINERALOGY Pennsylvania Chapter NEWSLETTER

VOL. 50 No. 4

WINTER 2022

Annual Report 2022

by Bill Stephens, PG

FM-PA Chapter President

EFMLS President,
Webmaster and Region 4 VP



I trust everyone has had a wonderful Thanksgiving holiday and I wish all a happy and safe holiday season as we close out 2022. FM-PA has had a very busy and productive year, and as we look forward to 2023, I expect we will continue to grow our membership and expand our activities and influence with our new relationships, membership in EFMLS and our new social media director Andrew Eppig on our new Facebook page. I have included herein below the Annual Report for 2022 which summarizes our activities for the year. Please visit our new Facebook page (search criteria below) and join up, feel free to submit posts for review and inclusion on the site including field trip pics, and also articles and the like for the webpage and newsletter. Our Symposium and field trip were a huge success with 20 field trip attendees and 46 symposium attendees both in person and remote. Next year we may have a new venue, reaching a little outside our normal range. Be sure to put the Tucson National Symposium on your calendar and log in free. Happy Holidays and I look forward to seeing everyone again soon.

The Board of Directors met via Zoom approximately every month from April to the October. Several meetings included guests from the leadership of neighboring FM chapters and representatives of major corporations in the aggregates industry. Discussions with our quarry guests included ways we could assist the quarries with issues that arise and with public outreach.

Newsletters were prepared and mailed on a quarterly schedule, with the fall edition delayed allowing inclusion of final Symposium details.

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PRESIDENT'S OPEN HOUSE Sunday December 18

Hello:

I wanted to let you all know I'm having an open house at my home Sunday December 18, from 9:30 am to 3pm. Address for driving directions will be provided to interested club members who RSVP my email below. I will have much of the same material I have had at the last two open houses, but I will also have some new material and some collection releases as well as some wholesale flats for dealers with tax IDs. Preregistration via email to [<bstephens@stephensenv.com>](mailto:bstephens@stephensenv.com) is **required**. Look forward to seeing my loyal and any new customers. Sales help support the presentations, work like the machine dig in March and my travel costs to Tucson for the Annual FM Symposium where I will be giving a presentation on Herkimer Diamond mining.

RSVP

Sincerely,
Bill Stephens PG, President
Stephens Environmental Consulting, Inc.

(302) 286-0406 Work (302) 540-3453 Mobile
bstephens@stephensenv.com

Tucson Mineral Symposium February 11, 2023

In conjunction with the Mineralogical Society of America and the Tucson Gem & Mineral Society, Friends of Mineralogy is pleased to announce the annual Tucson Mineral Symposium for its 41st year.

Theme: Silica Minerals – quartz, agate, opal, tridymite, and cristobalite

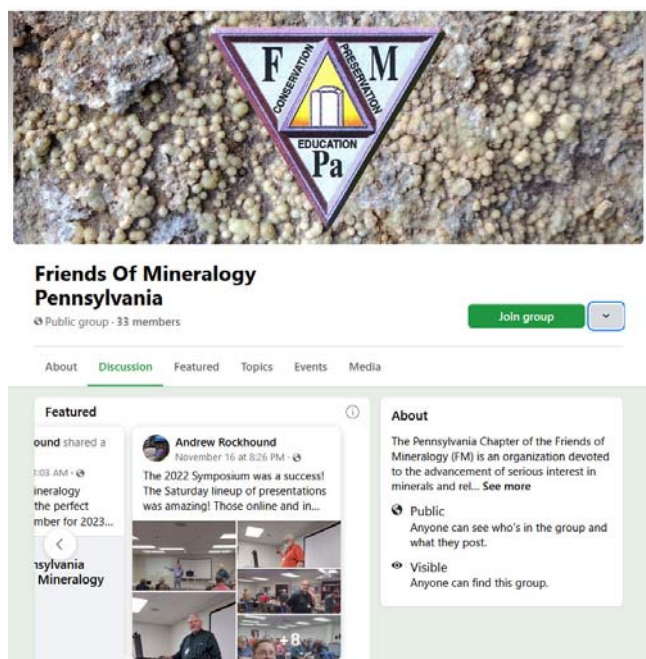
The forty-first Tucson Mineral Symposium, held in conjunction with the Tucson Gem and Mineral Show®, will take place on Saturday, February 11, 2023. This symposium is co-sponsored by the Tucson Gem and Mineral Society, the Friends of Mineralogy, and the Mineralogical Society of America. As a tie in with the show, the symposium theme is almost the same as the show theme: "Silica minerals – quartz, agate, opal, tridymite, and cristobalite." The Symposium is planned to be available free via Zoom. See <https://www.friendsofmineralogy.org/call-for-papers/>

Annual Report

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Less than 2 weeks prior to the November 12-13 Symposium, following a motion by President Bill Stephens, the Board of Directors of FM-PA voted unanimously to join the Eastern Federation of Mineralogical and Lapidary Societies, Inc. This decision was implemented in part for FM-PA to take advantage of the benefits offered by the EFMLS (newly restructured and reinvigorated by efforts of 1st VP and now President Bill Stephens, and others on that Board), as well as connections through EFMLS, but also as an opportunity to expand our outreach to a larger community of mineral enthusiasts and stakeholders. So far so Good. FM-PA now has a profile and map pin with a link to our website on the EFMLS website and we can post articles, events, and links to other important activities/information on the EFMLS website. The EFMLS has approximately 87 clubs with nearly 7,000 members from Palm Beach to northern Maine, and their website is professionally maintained and public facing.

FM-PA has been able to start a new Facebook page and began pushing content out on the page as well as our website after joining EFMLS. FM-PA shares our new social media manager with EFMLS, Andrew “Dirt man” Eppig, and he brings expertise to both organizations that benefit our collective membership. Check out our new Facebook page online. It is linked from our web site and the EFMLS web site, or search in Facebook on Friends of Mineralogy and it should pop right up. To find the correct EFMLS events page (with recent posts), search for EFMLS Mineral Shows and Events.



Our new Facebook page

Our Chapter members have participated in many field trips, many at the invitation of other clubs, through Field Trip Chair Ross Elliott:

2/12 Wilmington Blue Rock (DMS)
 2/20 C&D Canal (DMS)
 2/26 Brandywine Springs sillimanite, garnets (DMS)
 3/12 Beltzville PA Mahantango Formation (DVPS)
 4/02 Spring Run cauliflower chert, Boiling Springs goethite (PESA)
 4/16 Odessa DE petrified wood (Calvert Marine Museum)
 4/23 Quarryville amethyst, etc. (FM-PA, DMS)
 6/11 New Hampshire (NoJMS, FM-NJ)
 6/12 Plainview MA Manganese mine (NoJMS, FM-NJ)
 9/24 H&K Birdsboro (Berks)
 9/24 Dillwyn VA kyanite (GMS of Lynchburg VA)
 10/02 Haddam CT Hewitt Gem Mine (NoJMS, FM-NJ)
 10/29 H&K Penn/MD (DVPS)
 10/29 Middleburg, Mt Pleasant Mills (NoJMS, FM-NJ)
 11/13 Mt Pleasant Mills (our Symposium trip)

President Bill Stephens, with assistance from Ryan Klockner (FM-NJ, Geology 365), conducted a machine dig at the now famous wavellite locality at the National Limestone Quarry at Mount Pleasant Mills, Snyder County, PA during mid-March through the first week in April 2022. The location had become inaccessible by vehicle and following some machine excavation and backfilling with 5 feet of rubble, the wavellite had become inaccessible to clubs. The overburden was completely removed, and the pit was excavated to a depth of 12 feet or more and extended eastward approximately 20 feet. Hundreds of specimens were recovered, and some geologic knowledge was acquired. Bill flew the entire quarry with his drone and collected survey quality strike and dip data on inaccessible structures/bedding as well as features in the pit using a robotic total station. Bill published an article on the EFMLS website and provided a poster with the drone based orthoimagery and instructional photographs to the quarry owner and presented that at the first club dig. The clubs have had great success according to quarry owner Eric Stahl and club leadership. Research is ongoing.

President Bill Stephens held two Open Houses (a third is planned for December 18th) in Maryland to get people together and to raise some funds for his trip(s) to the FM-National Symposium in Tucson. He traveled there in February and gave a presentation on Pyromorphite from the world-famous Phoenixville District lead mines, Chester County, Pennsylvania. He plans to attend the FM-National

2023 Symposium and present a paper on New Mines and Quartz Crystal Habits in the Herkimer Area, New York. Bill completed high accuracy drone mapping of the private “Area 52” mine in Canajoharie and has begun mapping the Mohawk Valley Mineral Mining property in Sprakers New York. As part of that process, Bill has obtained extensive photographic and video documentation of pocket reveals as well as survey accuracy structural/stratigraphic data on the pocket bearing layers at both mines.

President Bill Stephens took on two missions at the 2022 FM-National annual meeting: (1) determine how many state boards of geology accept or have FM listed as a pre-approved continuing education provider for Professional Geologists, and (2) together with Ryan Klockner of Geology 365, develop a speaker database software application that would allow speakers to complete a profile and catalogue of presentations that would be searchable by prospective club officers for in person or zoom programs. Bill is pleased to report that the state boards of geology that have pre-approved education providers lists or otherwise have continuing education requirements for professional geologists, have pre-approved or would otherwise accept CEUs from FM and its chapters. FM-PA is pre-approved and has been offering, but until this year had not been advertising this benefit of membership. We provide 5 CEUs certificates to PGs attending our symposium and recommend National advertise for their symposium as well. We noted additional symposium attendance by PGs this year, and most attended the field trip as well.

Ryan Klockner (anticipated next President of FM-NJ) has completed coding for the Speaker database as part of Geology 365 and it is ready for beta testing. We are calling for volunteers. Beta testing is expected to be well under way with President Bill Stephens’ catalogue as “guinea pig” by the time of the National Symposium.

Treasurer Ron Sloto published a paper in Mineralogical Record (v. 53, Sept-Oct 2022) on Phosphate Minerals from Lime Ridge, Snyder County, Pennsylvania. The timing of publication of this article fit nicely with our symposium as it was the featured presentation and the location for our successful field trip. His book on The Mines and Minerals of Bucks County, Pennsylvania, was also published and he covered some key localities in his symposium presentation.

Ron has also been keeping the web site up to date.

Membership numbers have increased this year with 13 new members in 2022, we now have 74 members, including 2 that joined at the symposium. Several members are licensed Professional Geologists.

Finances are good, with the balance on 23 October being \$8,642.84.

Our annual Symposium had five presentations on Saturday and a field trip on Sunday. We had 32 in-person and 14 logged in via zoom. The following presentations were offered:

- William Kochanov, PG (PA Geological Survey, Retired) Reconnaissance of Mineral Collecting Sites in Southeastern Pennsylvania.
- Ronald A. Sloto, West Chester University, Classic Mineral Localities of Bucks County, PA
- Stephen R. Lindberg, U. of Pittsburgh at Johnstown, Geology of the New Paris Limestone Quarry, Napier Township, Bedford County, Pennsylvania.
- C. Lee McIlvaine, IV, PG, Consulting Geologist, Journey to Greenland, Ilímaussaq Alkaline Complex, Kujalleq, South-west Greenland.
- Bill Stephens, PG, Stephens Environmental, EFMLS President, Geology & Mineralogy of the Mount Pleasant Mills Quarry & the Now Famous Wavellite Occurrence.

Our members received great positive feedback on the symposium. The Symposium included the Annual Meeting of the members; there were no candidates for election to the Board of Directors.



Symposium speaker Steve Lindberg in the sales room.
Andrew “Dirtman” Rockhound photo.



Selfie by our new social media director Andrew "Dirtman" Rockhound, with the Symposium audience.

FM-PA has an offer from the University of Pittsburgh Johnstown Campus (UPJ) to host our symposium for 2023. A seriously tempting offer to which the Board will give serious consideration. The field trip would be to the New

Paris Quarry, famous for fluorite and fossils. This quarry is an educational resource for UPJ and both Steve Lindberg and President Bill Stephens have conducted recent investigations at the quarry.



Wavellite coming out of the pit. Andrew "Dirtman" Rockhound photo.



Collecting in the wavellite pit on National Limestone Quarry #2 property, Mount Pleasant Mills, PA.

Andrew "Dirtman" Rockhound photo.

The Symposium field trip was held on November 13th at the Mount Pleasant Mills quarry and was attended by 20 symposium attendees, including 5-6 Professional Geologists. Calcite and UV reactive strontianite and a few pieces with celestite were recovered from the main quarry floor area. The wavellite beds remained exposed near the surface in the east wall of the adit despite months of heavy digging and everyone who worked the beds recovered nice specimens. Great success!



Cross-section of wavellite.

Andrew "Dirtman" Rockhound photo

47th Annual MICROMOUNT SYMPOSIUM

Sponsored By: *Leidy Microscopical Society*

****Same New Location as last time****



Advent Lutheran Church



45 Worthington Mill Rd

Richboro, Pa. 18954



>>>>Two Days<<<<<<

Friday March 10, 2023 - noon to 6pm

& Saturday March 11, 2023 — 9am to 6pm

(Lunch provided on Saturday)



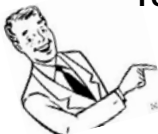
Two Speakers:

Friday- Brittany A. Cymes, Ph.D

TOPIC: Microscopy of Solar Wind Particles Trapped in Lunar Surface Minerals

Saturday - Robert A. Carlton, Ph.D

Topic: Mineral Analysis for the Micro-Mineral Collector



Don't MISS OUT ON THESE TWO GREAT SPEAKER TOPICS!!

TABLE SPACE (for two days):

\$25.00 & \$40.00 (full table, 6ft)

Visitor's Fee (no table):

\$5.00 Friday & \$10.00 Saturday (includes lunch)



Silent Auctions Give-Away Tables Speakers



Reservations/ Admission: Make checks payable to;

Don McAlarnen, 916 Senator Rd, East Norriton, PA 19403 (610) 584-1364

Questions: Email: donmcarnen@outlook.com

UPCOMING EVENTS

**Some events are still being rescheduled.
Confirm details of events before attending.**

March 4-5 2023: 59th Annual Earth Science Gem and Mineral Show, by Delaware Mineralogical Society. Double Tree by Hilton, 4727 Concord Pike (Rt. 202), Wilmington, DE 19803, Saturday 10:00 a.m. – 5:00 p.m., Sunday 11:00 a.m. – 5:00 p.m.

March 10-11, 2023: 47th Annual Micromount Symposium, by Leidy Microscopical Society. Advent Lutheran Church, 45 Worthington Mill Rd., Richboro PA 18954. See page 5 for details and fees.

March 25-26, 2023: 53rd Annual Show, by Che-Hanna Rock and Mineral Club. Wysox Vol. Fire Hall, 111 Lake Rd., Wysox, PA 18854. Sat. 9:00-5:00, Sun. 10:00-4:00.

March 25-26, 2023: 43rd Annual Show, by Franklin County Rock and Mineral Club. New Location: Eugene C. Clarke Jr Community Center, 235 S Third St., Chambersburg PA 17201. Sat. 10:00-5:00, Sun. 10:00-4:00. <https://www.facebook.com/100064564847768/>

May 15-21, 2023: Wildacres 2023 session, North Carolina.

July 7-9, 2023: EFMLS Annual Convention in Syracuse, NY hosted by the Gem & Mineral Society of Syracuse, NY.

From the Editor

David Glick

THANK YOU to everyone who has been providing material for the Newsletter! Everyone else - join the fun! Feel free to contact me at xidg@verizon.net, or 814-810-2116 days and evenings. Mail can be sent to 425 Armagast Rd., Bellefonte PA 16823. Materials for the Spring issue should be submitted by **March 1**.

Materials related to Pennsylvania mineralogy, collecting or collectors are invited for this newsletter: articles, long or short; announcements from FM-PA committees; photographs of specimens, field localities, collections, etc.; reports on publications about PA minerals or by PA authors, or actual book reviews; or other items within the mineralogy and mineral collecting areas of interest. Photographs should be of good resolution (at least 1000 pixels across) without much JPEG compression, so that they will look good in print. Please provide captions including photographers' names.

We are producing four issues each year; your material is needed! If you know people who have interesting material, please encourage them to submit it.

DONATIONS WELCOMED

The FM-PA Chapter is a 501(c)(3) nonprofit organization; donations are gratefully accepted and should qualify for deduction from your federal income tax. Donations of any size help to offset the general operating costs of the Society, helping to keep dues low.

FM on the WWW

Please explore the FM-PA Chapter web site at www.rasloto.com/FM/

And the new Facebook page
(linked from the site above)

<https://www.facebook.com/groups/1099795867347595/>

National News

The Bulletin of Friends of Mineralogy, links to other chapters, and much more can be found on their web site:

www.friendsofmineralogy.org

We are now a member club of EFMLS:
<https://efmls.org/>

Friends of Mineralogy - Pennsylvania Chapter Administrative Directory

OFFICERS and BOARD OF DIRECTORS members

President	Bill Stephens
Vice President	Dianne Soccio
Treasurer	Ron Sloto
Secretary	David Glick
	Mike Dunton
	William Kochanov

COMMITTEE CHAIRS

Membership Chair	Ron Sloto
Field Trip Chair	Ross Elliott
Web Manager	Ron Sloto
Newsletter Editor	David Glick

Members can find contact information
in the Newsletter edition which
they receive directly.

xidg@verizon.net

(814) 810-2116

Friends of Mineralogy Pennsylvania Chapter Web Site: <http://www.rasloto.com/FM>