

The Mineral Minutes

Announcement

There will be no regular club meetings in April, May, and June of 2020 due to coronavirus. Since the club typically has no meetings in July and August, the next in-person meeting is scheduled for September 2, 2020.

The Board is working on alternative means of staying connected, and all ideas and suggestions are welcome.

MSDC's March 2020 Business Meeting Report

by Andy Thompson, MSDC Secretary

President Dave Hennessey welcomed our honored guests Emma Belanger, Helena Blaisdell-Black and Dr. Richard Tollo from the George Washington University Geology Sciences Program who had a special purpose for attending the meeting, as explained below.

Dave called for approval of the February Business Meeting minutes as published in the March edition of the Mineral Minutes. With no recommended suggestion for changes, he received a motion for acceptance as well as a second. Those in attendance unanimously accepted the minutes as published.

John then gave the Treasurer's report which updated the number of paid and unpaid membership dues. He noted that it takes about 40 paid membership dues to cover the club's annual expenses, except for two annual donations the club has been making for furthering mineralogical research. The number of paid memberships has not yet reached the break-even point. Members wanting to pay their dues for 2020 can send a check made out to MSDC to John at the address indicated in the MSDC officers' listing, below.

(cont. on p. 2)

March Program Presented by Mike Haas: "The Silver Hill Mine"

by Andy Thompson, MSDC Secretary

As a professional mining engineer, Mike knows mines from the inside out. Trained at Penn State and the University of Minnesota, he worked in the commercial mining industry and also served in several capacities in the nation's government including as a Deputy Director of the Bureau of Mines within the U.S. Dept. of the Interior. While at the Bureau, Mike managed environmental research and also developed several important database systems including one indexing U.S. and foreign critical minerals supply information, from ore reserves through to their end uses.

(cont. on p. 3)



Volume 78-04

April 2020

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Prez Says...

by Dave Hennessey, MSDC President

As it is doing in every other aspect of our lives, the seriousness of the Coronavirus outbreak is forcing changes in how we pursue our hobby. With an abundance of caution and to the surprise of absolutely no one, our meeting for April is cancelled. Ditto for May and June. Since we do not meet in July and August, our next scheduled meeting is September. Hopefully during this multi-month hiatus the situation will improve enough that we can have that meeting. We will take a wait-and-see attitude and hope for the best. It also goes without saying that our behind-the-scenes visit at the Smithsonian will have to wait.

(cont. on p. 2)

(March Bus. Mtg. cont.)

Club members then discussed a proposal raised by Mary Bateman of the Eastern Federation, namely for each member of MSDC to receive on a monthly basis, a copy of the EFMLS newsletter. Because MSDC members expressed a positive interest in receiving it, Dave Hennessey said all members on our mailing list would receive that newsletter in the mail.

Several MSDC members then presented information on upcoming events, including the Montgomery County Gem, Mineralogical and Lapidary Society (GLMSMC show), the Delaware Mineral Society show, the Atlantic Micromounters Conference, and the Eastern Federation's Wildacres upcoming seminars in North Carolina. Information on all those events have been published in MSDC's earlier monthly Mineral Minutes newsletters. Details and directions can also be found on each organization's link and also can be found in the Eastern Federation's monthly newsletter which all MSDC members will be receiving monthly; the link to EFMLS website is provided in the Useful Mineral Links section of this newsletter. Members also discussed upcoming auctions and a Mindat.org international field trip.

For "Geology in the News" Dave Hennessey shared that the earth has captured a small asteroid which now orbits our planet.

Dave then moved into ceremonial mode for the presentation of the annual Foshag-Hronik-Dhyse Award to help support an undergraduate geology student's research.

This year's recipient is Helena Blaisdell-Black-whom Professor Tollo praised for her skill with consistently asking probing questions.

Helena will be examining the silica content of volcanic products in the Cascades with respect to their distance from the subduction zone. Since silica content is directly related to explosivity, if such a relationship exists, it could help in the hazard assessments of volcanoes throughout the region. Dave presented Helena a check to support her work and encouraged her to consider returning next year to share her findings (photo on the right).

Last year's recipient, Emma Belanger (photo on the next page), returned to provide to MSDC members an overview of her research which will continue in the months ahead as she analyzes the cross-sections that are currently being developed. She described her research as follows.

"The Katsuk-Talapus volcanic edifice is located in central Oregon along the Cascades subduction zone, and erupted along a North-Northwest-trending lineament. The edifice contains three main features: the Katsuk and Talapus scoria cones with a conical depression (Middle Crater) in between" (pictured below).

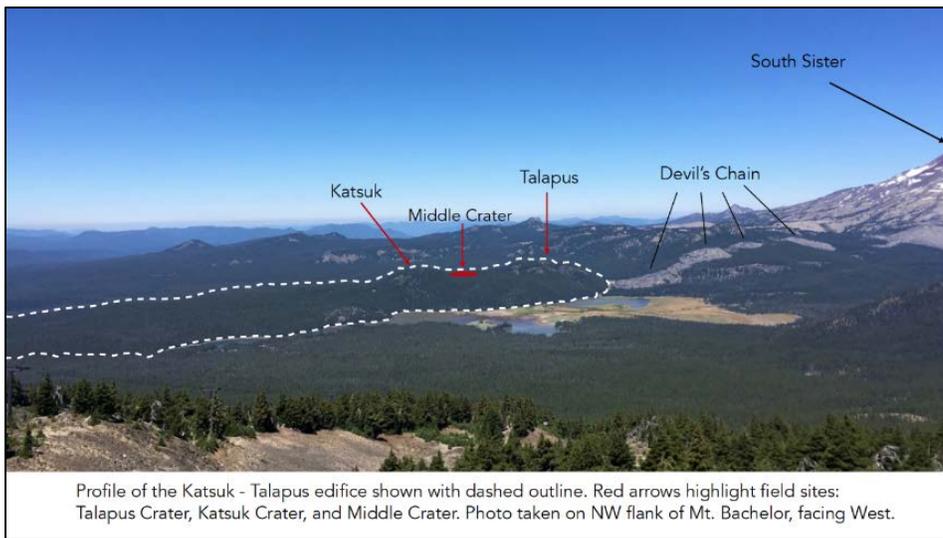
(Prez Says cont.)

In the interim, we are pursuing ways to stay connected at the same time we practice responsible social distancing. The officers and board of directors are currently looking into alternatives and will advise the membership when we have decided on the best avenue to stay in touch.

I see no need to offer any advice on what to do or not do in terms of taking action regarding the Coronavirus. I'm sure everyone is hearing plenty of that from better-informed sources than me. In regard to actions we can take mineralogically, the web has an astounding richness of options to pass the time as we self-quarantine. There are innumerable YouTube videos of virtual collecting and an abundance of sites (museums, educational institutions) that can meet our thirst for knowledge. Mindat has various forums discussing topics of interest. Commercial dealer sites and sites like Ebay and Etsy offer opportunities to acquire specimens – an alternative to the many mineral shows that have been cancelled. It is also a good time to break out those mineral books and magazines that we've been meaning to get around to and maybe at last to get to work on cataloging our collections.

I look forward to the day we can all get together again. In the meantime, please stay safe.



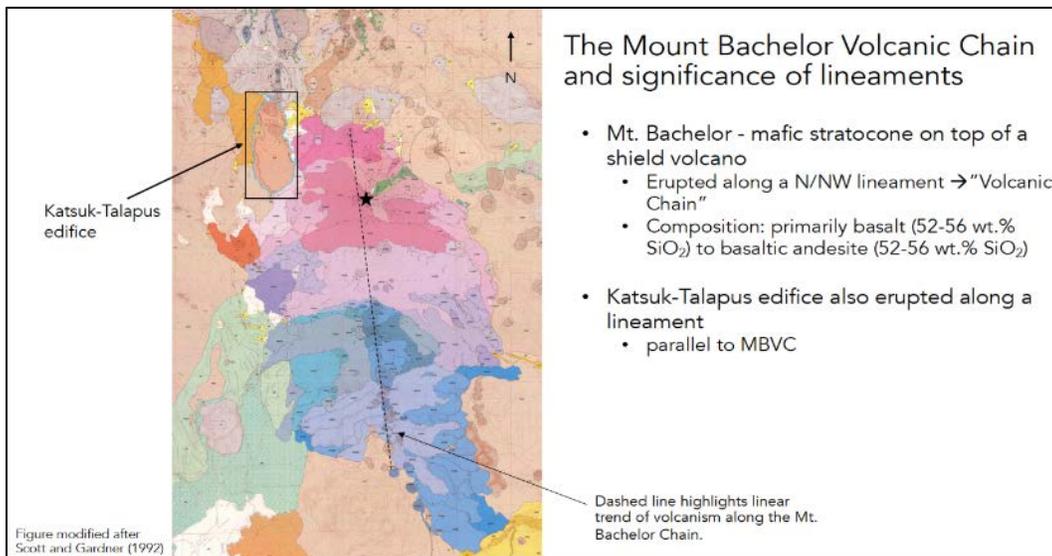
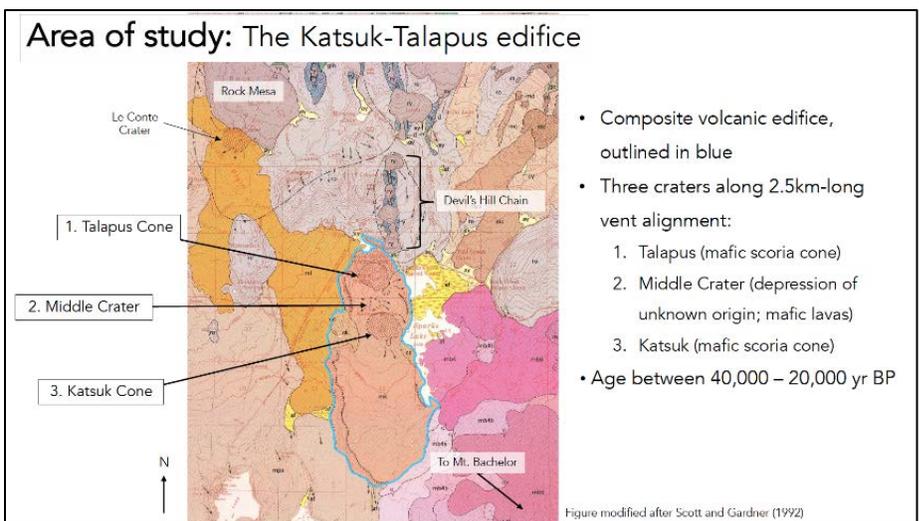


Profile of the Katsuk - Talapus edifice shown with dashed outline. Red arrows highlight field sites: Talapus Crater, Katsuk Crater, and Middle Crater. Photo taken on NW flank of Mt. Bachelor, facing West.



“Products include mafic scoria and bombs (explosive material) at the cones, with effusive mafic lava forming the plateau to the south and the Middle Crater depression. My classmate and I conducted field work this summer and will be doing petrography in the coming months. Our goal is to further understand eruption mechanisms and mineralogy of this volcanic complex in order to categorize its composition and eruption style within the context of the Cascades Arc.”

The area of Emma’s study is outlined in the picture on the right in blue and illustrates the composite volcanic area identified as the Katsuk-Talapus edifice. It includes the two mafic cones (Katsuk and Talapus) with a mafic crater in between.



The picture on the left shows how the Katsuk-Talapus edifice, identified as within the rectangle, is part of the larger Mt. Bachelor volcanic chain and the linear path of the volcanic events, identified by the black dashed line.

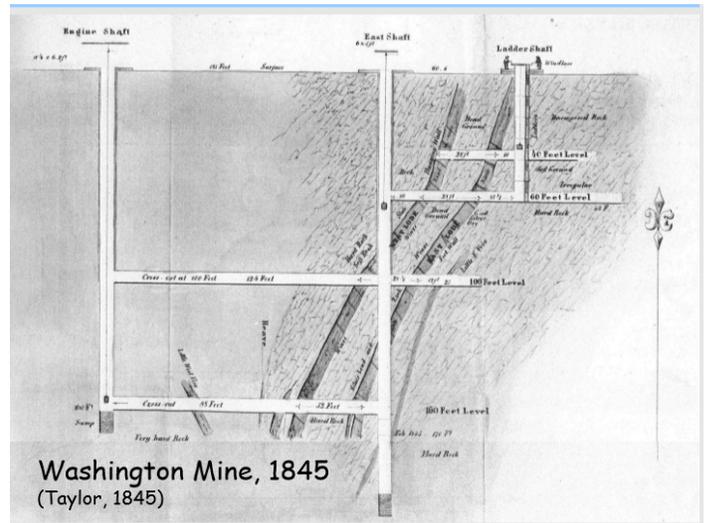
President Dave Hennessey thanked Helena and Emma for sharing their research interests, and Dr. Tollo for his coordinating efforts. MSDC attendees applauded the researchers for sharing their ongoing work.

With no further news or discussion of old or new business, Dave called for and received a motion to close the Business Meeting, after which Vice President for Programs Yury Kalish introduced the evening’s presenter, L. Michael Kaas, who spoke on The Silver Hill Mine in Georgia.

(Silver Hill Mine cont. from p. 1)

The Silver Hill Mine: America's First Silver Mine and Supplier of Lead to the Confederacy

L. Michael Kaas



Mike began his presentation about the first silver mine in the U.S. by noting that “the DC area has a lot of its own mining history,” including gold mining in several nearby locations. He dispelled the myth that serious mining was the exclusive realm of the western states such as the 1849 California gold rush. “But actually, the first gold rush in the United States took place in central North Carolina in the first decades of the 1800s,” just north of Charlotte as indicated on the above map. Later, other important metals including copper, lead, and zinc were mined in several Eastern sites, including in the Franklin, NJ region.

Washington/Silver Hill Mine Minerals

Native Silver (Right)
Pyromorphite (Below)



(Specimens Courtesy of the American Museum of Natural History, New York, NY)

Washington/Silver Hill Mine Minerals

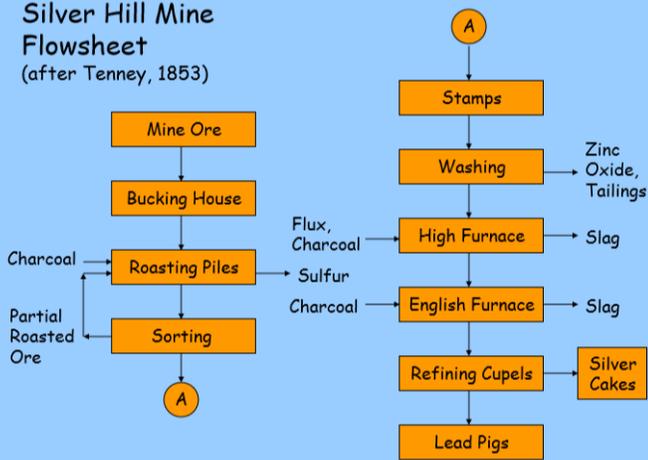
Galena with Sphalerite (right)
Cerussite (below left & center)
Pyromorphite (below right)



(Specimens Courtesy of the North Carolina State Museum of Natural Sciences, Raleigh, NC)

With his passion for history, Mike painted a portrait of early American mining efforts as initially characterized by high levels of enthusiasm. A large number of would-be gold miners flooded into North Carolina seeking the precious metal. Experiencing only minor success in the 1830s, they migrated north toward Lexington, NC and their interests expanded to include other ores such as lead and zinc. But most of these Americans were farmers so they had to learn about mining from imported expertise from Europe. Miners from Cornwall, England were in much demand for the know-how of digging safe mine shafts and for protecting the lives of the miners.

Silver Hill Mine Flowsheet (after Tenney, 1853)



The first silver mine in America, illustrated above, had several changes in ownership and by 1839 the Washington Mine was created, eventually to be renamed the Silver Hill mine, the focus for Mike’s presentation to MSDC members.

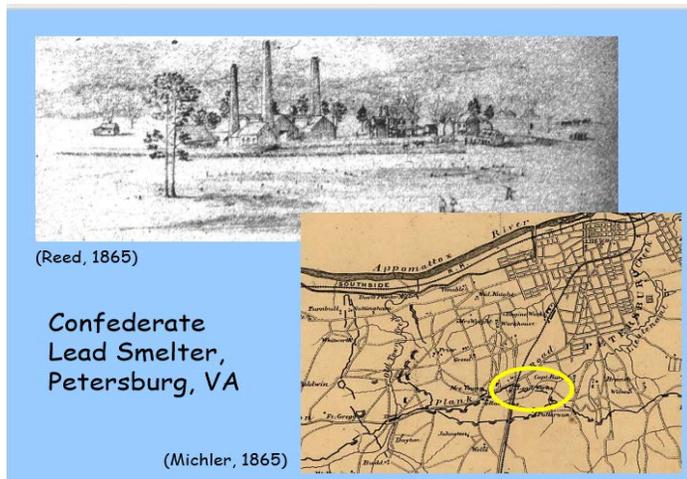
The silver ore was found close to the surface and diminished the deeper they sank their three shafts. But at the

lower levels, the miners found other valuable minerals, including several lead ores, which had important industrial uses, both in peace time as well as during the Civil War.

Mike provided illustrations of several of those minerals which included native (relatively pure) silver, cerussite (lead carbonate), pyromorphite (lead chlorophosphate), and galena (lead sulfide) with sphalerite (zinc sulfide, often with iron).

Once the raw lead and zinc ores were extracted from the mines, what to do with it was a new challenge. In the 1830s, there were no established professional ore processing plants in the United States, so they had to learn by trial and error. If they roasted the zinc at overly high temperatures, they discovered it evaporated. In the early 1840s, they used a relatively simple 7-step processing method which, a decade later, evolved into the 10-step process, shown below, for breaking down and turning out silver cakes and lead pigs.

In the late-1850s, the Silver Hill mine owners brought in Richard W. Pascoe of Friedensville, Pennsylvania, well-known for his mining expertise, to manage the expanded Silver Hill mine operation. With the outbreak of the Civil War, lead for bullets was much in demand by the Confederate army. After the war he was able to return north and resumed his mine management in Friedensville.



SILVER HILL TIMELINE

- LATE-1850s **RICHARD W. PASCOE** ARRIVES FROM FRIEDENSVILLE [PA], RECOGNIZES ZINC POTENTIAL
- 1861 CIVIL WAR BREAKS OUT
- SILVER HILL BACKS-UP AUSTINVILLE [VA] MINES FOR LEAD
- CSA NITER AND MINING BUREAU OPERATES MINES
- ORE SHIPPED TO PETERSBURG CSA SMELTER

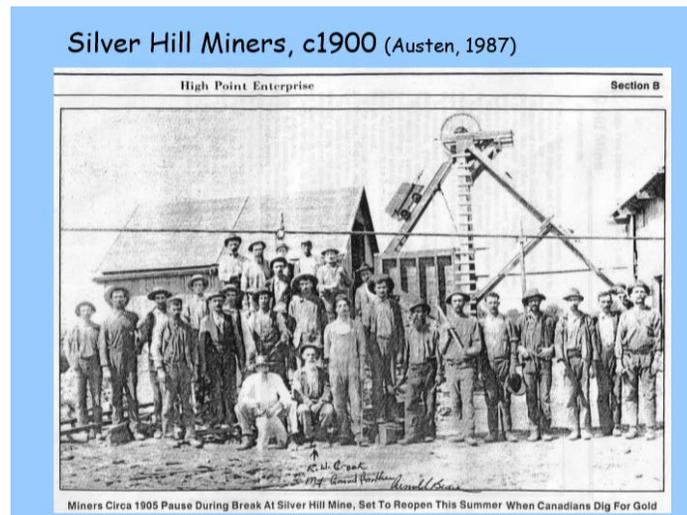
SILVER HILL TIMELINE

"OLD MINES NEVER DIE"

- 1898-1900 WEST PRUSSIAN MINING CO. REOPENS MINE, MAPS WORKINGS, SOME ORE PRODUCED
- 1908 MACHINERY SOLD/DISCARDED, BUILDINGS DILAPIDATED
- 1909-1911 T. A. M. STEVENSON MINES ORE ON UPPER LEVELS, SHIPS 700 TONS ZINC CONCENTRATE, 225 TONS LEAD-SILVER-GOLD CONCENTRATE
- 1940s R. L. STEVENSON RETIMBERS NORTH SHAFT. US BUREAU OF MINES/BERTHA MINERALS CO. DRILLING PROGRAM
- 1958-1960 TENNESSEE COPPER CO. EXPLORATION PROGRAM. INCLINE SHAFT DEEPENED TO 1300 FT. (1700 FT. INCLINE). 3000 TONS STOCKPILED.

At its peak, the Silver Hill Mine had constructed an extensive array of more than 70 support buildings on the site. During the war, it had spawned a lead ore smelter at Petersburg, VA, illustrated below, which was crucial for the Confederate cause. Toward the end of the Civil War, stories circulated among Northern soldiers that the Confederate soldiers were shooting with silver bullets. That was because the Petersburg plant did not separate the traces of silver from the main lead ore used for making the bullets.

For the past 180 years, the Silver Hill Mine, America's first silver mine, has experienced some productive periods mining lead and zinc, interrupted by closures and changes in ownership, as illustrated by the timelines below.

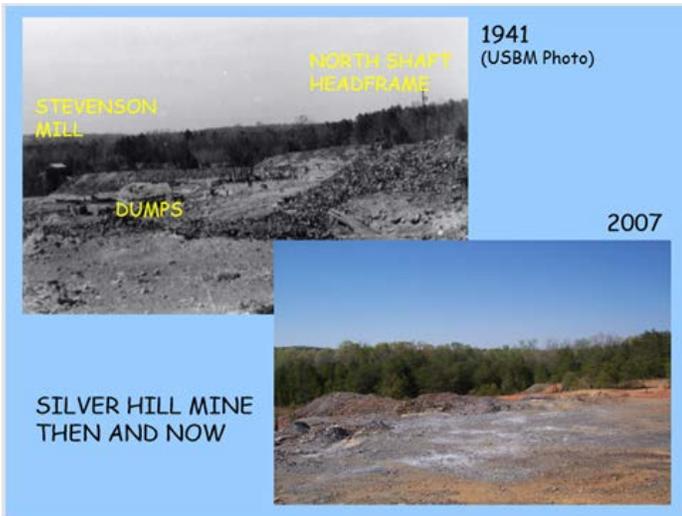


To the left is a photo from 1905 showing the mining crew which operated the Silver Hill mine during its on-again, off-again sporadic operations. But the mine did reopen and repurpose itself in the coming decades.

SILVER HILL TIMELINE

- OLD MINES STILL NEVER DIE
- 1961 NIAGARA CAPITAL CORP./SILVER HILL MINES, INC. REMOVES TENNESSEE COPPER STOCKPILE
- 2017-2018 NEW EXPLORATION FOR GOLD(?). TRENCH SAMPLING, OLD SHAFTS CLEANED
- HISTORICAL MILL LOCATED

The photos from 1941 and more recently present a rough terrain showing practically no signs of the more than 70 buildings that once graced the area.



In the last 5 years, new mineral exploration efforts using trench sampling have taken place at Silver Hill. These efforts have also unearthed a few metallic mechanical artifacts of interest to historians like Mike and, as shown below, part of the mill buildings' floors.

Mike concluded his presentation with three requests:

- For listeners to recognize that on the East coast, there has been significant industrial mining.
- Museums need support from the public and from mineral collectors to preserve this history.
- Specifically, museums need donations of mineral specimens collected from the early mining sites.

For readers who want to explore Mike's publications related to the history of American mines, see the following web sites, one of which focuses on the Silver Hill Mine he discussed during this talk. The three discuss the Silver Hill Mine in NC, the Friedensville, PA mine and Richard W. Pascoe, the Cornish miner who contributed so much to the development of the early American mining industry. Down the road, Mike hopes to finish and publish his current research on the Austinville, VA mine.

All three are available on line through the Mining History Association website, www.mininghistoryassociation.org and below are the specific links for each, as provided by the author.

"Richard W. Pascoe, Mine Superintendent," <https://www.mininghistoryassociation.org/Journal/MHJ-v21-2014-Kaas.pdf>

"The Silver Hill Mine: First Silver Mine in the United States and Supplier of Lead to the Confederacy," <https://www.mininghistoryassociation.org/Journal/MHJ-v16-2009-Kaas.pdf>

"The History of Zinc Mining in Friedensville, Pennsylvania," <https://www.mininghistoryassociation.org/Journal/MHJ-v23-2016-Kaas.pdf>

March 2020 Sharing Time: Show and Tell

by Andy Thompson, MSDC Secretary

Several MSDC members came to the March 4th meeting bringing mineral treasures they liberated from the Tucson mineral show and elsewhere. A big thanks to Alex, Dave N, Dave H, Don, and Kenny and anyone else not mentioned who displayed their many interesting discoveries. Below are photos of some of the minerals and fossils, without the names of the MSDC members who liberated the specimens from their prior settings.

Native silver from the Kelly Mine, Ontario, Canada



Cerussite wulfenite from the Hull Mine, Arizona



A doubly-terminated smoky quartz from Namibia



Amber with a large scorpion, perhaps from the Dominican Republic



Hematite from the Iron Hill District, New Mexico



Silver from Chihuahua, Mexico



The three specimens in the photo below include a multi-colored Bismuth grown in Germany, a purple charoite from Russia and a rhodochrosite.



Galena with sphalerite



Two fossils, an Archimedes Bryozan (Indiana) and an oyster (Madagascar)



Pink microcline from Catamarca Province, Argentina



What happens when mineral labels are lost?



This puzzling situation of mineral identification regularly happens and that is when the insights of fellow collectors are very much appreciated. Sometimes the discussion extends well beyond the evening and extends to friends and visiting geologists. Observations about the above stringy white specimen included that it appears to be a pseudomorph after laumontite, perhaps specifically gyrolite after laumontite with small white/clear apophyllite crystals scattered on the surface. The white/clear crystals could be quartz, but they are just a bit too small to actually examine without putting them under a microscope and see if they exhibit a clear cleavage plane. Your thoughts?

MSDC Club Information

Meetings are the First Wednesday of the Month (Jan-Jun and Sep-Dec). We meet in the Constitution Avenue lobby of the Smithsonian National Museum of Natural History at 7:30 pm.

Website <http://mineralogicalsocietyofdc.org/>

Facebook www.facebook.com/Mineralogical-SocietyOfTheDistrictOfColumbia

2020 Officers and Directors

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Secretary - Andy Thompson | thompson01@starpower.net

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THE MINERAL MINUTES

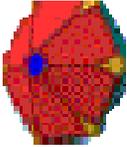


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NEWSLETTER OF THE MINERALOGICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Mineralogical Society of DC
Time Sensitive Dated Material
First-Class Mail

Useful Mineral Links

	<p>American Federation of Mineralogical Societies (AFMS)</p>	<p>www.amfed.org</p>
	<p>Eastern Federation of Mineralogical and Lapidary Societies (EFMLS)</p>	<p>www.efmls.org</p>
 <p>mindat.org</p>	<p>MINDAT</p>	<p>www.mindat.org</p>
	<p>Mineralogical Society of America (MSA)</p>	<p>www.minoscam.org</p>
	<p>Friends of Mineralogy</p>	<p>www.friendsofmineralogy.org</p>
	<p>WebMineral</p>	<p>webmineral.com</p>
 <p>THE GEOLOGICAL SOCIETY OF AMERICA</p>	<p>The Geological Society of America (GSA)</p>	<p>www.geosociety.org</p>
	<p>Jeff Scovil Mineral Photography (not advertising - just great photos)</p>	<p>scovilphotography.com</p>
	<p>United States Geological Survey (USGS)</p>	<p>www.usgs.gov</p>
	<p>The Geological Society of Washington (GSW)</p>	<p>www.gswweb.org</p>



AFMS Code of Ethics



- I will respect both private and public property and will do no collecting on privately owned land without the owner's permission.
- I will keep informed on all laws, regulations of rules governing collecting on public lands and will observe them.
- I will to the best of my ability, ascertain the boundary lines of property on which I plan to collect.
- I will use no firearms or blasting material in collecting areas.
- I will cause no willful damage to property of any kind – fences, signs, and buildings.
- I will leave all gates as found.
- I will build fires in designated or safe places only and will be certain they are completely extinguished before leaving the area.
- I will discard no burning material – matches, cigarettes, etc.
- I will fill all excavation holes which may be dangerous to livestock. [Editor's Note/Observation: I would also include wildlife as well as livestock.]
- I will not contaminate wells, creeks or other water supply.
- I will cause no willful damage to collecting material and will take home only what I can reasonably use.
- I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.
- I will support the rockhound project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.
- I will cooperate with field trip leaders and the se in designated authority in all collecting areas.
- I will report to my club or Federation officers, Bureau of Land management or other authorities, any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.
- I will appreciate and protect our heritage of natural resources.
- I will observe the "Golden Rule", will use "Good Outdoor Manners" and will at all times conduct myself in a manner which will add to the stature and Public "image" of rockhounds everywhere.

MEMBERSHIP APPLICATION OR RENEWAL
THE MINERALOGICAL SOCIETY OF THE DISTRICT OF COLUMBIA (MSDC)

(___) Family – \$25.00 per year. One address.

(___) Individual – \$20.00 per year.

(___) New * (___) Renewal Dues are for Year _____*

For new members who join in the last months of the year, membership will extend through the following year with no additional dues.

ANNUAL DUES – PLEASE PAY YOUR DUES PROMPTLY.

Pay at next meeting or mail to:

Mineralogical Society of DC
c/o John Weidner
7099 Game Lord Drive
Springfield, VA 22153-1312

Name(s) (First and Last) _____

Address _____

City _____ State _____ Zip: _____

Phone(s): Home/Work/Mobile _____

Email(s): _____

OK TO INCLUDE YOU ON CLUB MEMBERSHIP LIST?

() Yes – Include name, address, phone, email.

If you want any information omitted from the membership list, please note:

Omit my: () Email; () Home phone; () Work phone; () Mobile phone; () Address; () Name

SPECIAL CLUB-RELATED INTERESTS? _____

Meeting Dates, Time, and Location: The first Wednesday of each month. (No meeting in July and August.) The National Museum of Natural History, Smithsonian Institution, 10th Street and Constitution Ave, Washington D.C. We will gather at the Constitution Avenue entrance at 7:30 PM to meet our guard who will escort us to the Cathy Kerby Room.