

# The Mineral Minutes

## Zoom Meetings Continue

Please connect to our November program at our usual time and date: **7:30PM Eastern Time** on **November 4th, 2020**. You should have receive a link in an email from the MSDC Treasurer, John Weidner. If you have not, please email John (jfwidner42 at gmail dot com) and he will forward the link to you.

## November 4th, 2020 Program: “The History and Evolution of the James Madison University Mineral Museum” by Drs. Lance and Cindy Kearns

Our presenters in November will be a husband-and-wife team of two great mineralogical researchers who need little introduction to our members. Many of us visited Drs. Lance and Cindy Kearns for the annual “open house” at their James Madison University’s (JMU) laboratory, usually accompanied by the visit to the JMU Mineral Museum. Recently, the museum grew and moved to a new expanded location. Unfortunately, the re-opening is now delayed due to the pandemic. Since we cannot come to the museum, the museum will come to us! Lance and Cindy will give us a look at the historic events that built a new Mineral Museum. The presentation will include entertaining stories about the many ways of mineral acquisition. Follow the details of bringing home and displaying the amazing Peter L. Via collection. There will be many photos of world class specimens for you to enjoy.

To accommodate broad interest in the JMU Mineral Museum, the invitation to attend the MSDC November meeting was sent to three other clubs in this area. Don’t be surprised to see many new faces on the Zoom call this month!

## Sharing Time

by Dave Hennessey, MSDC President

The old JMU Mineral Museum had several cases devoted to “Virginia Minerals” and I presume the new JMU Mineral Museum will as well. For sharing time this month, I recommend we focus on Virginia minerals. Feel free also to share anything else you think will interest the group. Whatever pleases or interests you is going to please and interest the rest of us as well. Please remember that really bright lighting is critical to successfully sharing your mineral specimen on Zoom.

## MSDC Needs You To Volunteer And Serve On The Board Of Directors

Imagine how many persons have contributed their talents and served to support our MSDC club over our past almost 80 years together. What a beautiful heritage of sharing the wealth of mineral knowledge. Today, for example, each of us has been

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## Prez Says...

by Dave Hennessey, MSDC President



Both Halloween and the Presidential election will be behind us when we have our next meeting, November 4th. I’m not sure which one will be scarier but I sincerely hope it is Halloween. I have dutifully bought two bags of KitKats (my favorite) for any trick-or-treaters who come by. Of course, no trick-or-treaters have actually come by in the last five years (I live at the end of the road in a remote rural cul-de-sac) and I doubt that any will come by this year either,

*(Cont. on p. 2)*

*(MSDC Needs you... continued)*

benefitting from the generosity and the dedication of all our monthly program presenters who now number over 700.

Some of us, however, are already working as hard as we know how and so do not have spare time to take on any new jobs. We appreciate that reality and treasure your continued participation.

Yet, if our club is going to carry forward our marvelous heritage, we need help, especially from our younger members, who can share their insights and energy to keep our club firing on all its cylinders.

Traditionally our Board of Directors (BOD) consists of four executive positions (President, V.P. for Programs, Treasurer and Secretary who serve one-year terms. Our BOD also has three directors who serve a three-year term, staggered, with no specific duties except to advise and support the needs of the club as they arise. Directors, however, listen and learn about the club's activities and needs, and often graduate into one of the above four executive positions. Importantly, we need an editor for our newsletter. Yury, along with generating our monthly programs, has been doing a great job as editor and would welcome someone stepping up and taking on this position of editing our Mineral Minutes newsletter.

At our December 2nd monthly virtual meeting, we will vote and elect our BOD members and editor for 2021. At present, those who serve in one of the four executive positions are willing to step down and be replaced by another person(s) who willing and able to throw their hat into the ring and run for possibly elected for those positions.

If no one steps forward and volunteers to replace them, each of the current four persons serving in the slots of President, VP, Treasurer, Secretary and editor, is willing to continue serving in their respective positions. But they are keenly aware that our club needs new eyes and younger energy to carry forward our wonderful MSDC heritage.

So please consider our request for your greater involvement in the club. Think about your talents and ways you may be willing to serve your fellow MSDC members. Volunteer and we will see how together we can provide for and nurture our future generation of mineral enthusiasts.

President Dave Hennessey has asked three of us to serve as the Nominating Committee for putting together a proposed slate of people running for the above MSDC BOD officers positions.

To volunteer to stand for election for one of the above positions or to ask any question you may have, send your email to one of us.

Andy: Thompson01 at starpower.net  
John: jfweidner42 at gmail.com  
David: dnanney at cox.net

Of course, President Dave is also available for fielding any questions you may have:

Davidhennessey at comcast.net

Thank you for considering our request for your help.

*(Prez Says... continued)*

especially with the spiking COVID 2nd wave keeping smart folks at home. I may have to eat all the KitKats myself. Again.

Our Zoom meetings have been going well and we have a great presentation from Drs. Lance and Cindy Kearns lined up for November. We should have lots of visitors since we are inviting three other local clubs for this presentation - The Northern Virginia Mineral Club (NVMC), The Micromounters of the National Capital Area (MNCA), and The Gem, Lapidary, and Mineral Society of Montgomery County (GLMSMC). MSDC and these other clubs used to make a yearly February trek to James Madison University (JMU) to get minerals identified, visit the JMU Mineral Museum, and acquire some minerals and minerals books/magazines donated by individuals and dealers to support these mineral community outings. The invitation to NVMC, MNCA, and GLMSMC to join MSDC for this November presentation is aimed at reaching the same clubs that used to make these yearly treks. As it happens, I am also a member of these other three clubs. My premise is you can't belong to too many mineral clubs. More clubs, more opportunities to learn, and more field trip opportunities!

JMU in Harrisonburg, Virginia, where Drs. Lance and Cindy Kearns hail from, is several hours away from Washington, DC, and making an in-person presentation and then driving home after is really too much to ask. So, in previous years when either Lance or Cindy have made presentations to our club, I have had the honor of hosting them at my home overnight after their presentation. That has been a real treat, and gave us the opportunity to talk minerals late into the night (we're all night owls) over a bottle of Cabernet. I am really looking forward to this month's presentation but will miss the extra time I had with Lance and Cindy in past years.

## October 2020 Business Meeting

by Andy Thompson, MSDC Secretary

President Dave Hennessey welcomed attendees to MSDC's second-ever Zoom monthly meeting, and thanked three of the club's past presidents for their service. One attendee, Barbara, lives in Australia and participated in the October meeting while visiting in the U.S. That brought home the possibility that in our future Zoom meetings we could be welcoming mineral collectors from around the world.

John provided the Treasurer's report which indicated that the club continues to be solvent although paid memberships declined from thirty in 2019 to twenty-seven in 2020. Membership checks (\$20 for individuals and \$25 for families) should be sent to John's address found in the Board of Directors as listed below in this newsletter.

**Old Business:** Members raised no carry-over business needing discussion.

*(Cont. on p. 3)*

*(Bus. Mtg... continued)*

**New Business:** Dave called attention to the upcoming MSDC November 4th meeting, which will be a virtual tour of the James Madison University's newly relocated and expanded mineral museum, to be conducted by Drs. Lance and Cindy Kearns. Over the years, the Drs. Kearns have given many presentations to MSDC at our monthly meetings. Additionally, annually, Lance invited many local area clubs to an open house at the JMU's museum including participants sharing lunch together on or off campus. Recently, the generosity of Peter L. Via continued through donations to the collection of significant mineral specimens which recently required the collection to have a larger home on campus. Due to Covid-19, the reopening of the new Museum has been delayed. Accordingly, the November 4th MSDC program will be a warmly welcomed virtual experience which MSDC will host for its own members and those of several other local mineral clubs.

MSDC members discussed additional news of recent limited mineral shows that took place at the Franklin outdoor fluorescent mining site and drew more than 700 collectors. There was also an invitation to and discussion of the Montgomery County club's upcoming October program. MSDC members offered their congrats to Ken on the occasion of his birthday.

**Geology in the News:** Brief mention was made of the Sotheby sale of a 102-carat diamond, purchased anonymously by phone, for \$15.7 million dollars. No one participating in the MSDC October Zoom meeting admitted to be the purchaser, so the successful bidder's identity remains a secret.

With no further news mentioned, Dave called for and received a unanimous vote to close the meeting which was then turned over to Yury to introduce the evening's presenter.

## A Story of One Magazine Collection

by Angelo Cicolani, Past MSDC President

I recently donated my 50 year collection of the Mineralogical Record (MR) to Lafayette College. The story of that donation has many links to MSDC. John White, a curator in the Mineral Sciences Department of the Smithsonian Institution, established the MR in 1970. Many of John's predecessors and colleagues had been active members, speakers and officers of the MSDC since its founding in 1942. John established the MR to bridge the gap between hobby publications devoted to rock hounds that had little scientific content and professional geology/mineral journals that were heavily scientific and filled with lab data. That is, for serious collectors that also had a scientific and historic interest beyond admiring the beauty of each specimen.

In 1970, I had recently moved to Washington, DC and joined MSDC. Its members were eager to sign up for this new magazine, in part because the Mineral Sciences Department had been so supportive of MSDC and we wanted the publication to succeed. I forgot what the cost of a life time subscription was in 1970, but it was not prohibitive and I signed up for one. That was one of the greatest investments I've ever made in both science and enjoyment. For the first year there were four issues and from 1971 on, there were six issues a year. The quality of the photographs steadily improved and MR quickly became the premiere magazine for the serious collector. What most folks do not know, and where this story is headed, is that behind the scene was a wonderful mineralogist, collector and dealer, Professor of Geology and philanthropist, Arthur (Art) Montgomery. In 1931, Art was awarded his A.B. degree in Geology from Princeton University. From then through the end of WWII, he was active in collecting, selling, mining and teaching about minerals and geology. After WWII, he went to Harvard where in 1951 he was awarded his Ph.D. in Geology. Art spent the rest of his career teaching at Lafayette College. Aside from his many publications and awards, Art supplied the early financing for the MR. Art was also instrumental in establishing the Friends of Mineralogy, a group devoted to helping mineral collectors and curators. To read more about Arthur Montgomery and his contributions to MR and the mineral collecting world, go online and search the Biographical Archive of the MR and also the Memorial to Arthur Montgomery, 1909-1999 in *American Mineralogist*, 89.

Fast forward to 2020: the many years of MR have piled up and I needed to find a home for them. I had read every one of them, but all that wonderful information was fading from memory. John Higgins, a member of MSDC in the 1970s, and with whom I spent many a Saturday morning beating up on triassic diabase rocks at the local quarries, received his Ph.D. in Geology in 1980. Together with his friend Carl Francis they launched careers in mineralogy; John in the corporate world and Carl as curator of the Harvard Mineral collection. A few years ago, I checked with MR to see if they would like the collection back and at that time they were eager to have them. But, in 2020 they were not – everything is getting digitized. This is a serious problem for folks that have hard copies of publications that they think will be received with open arms when gifted. Reaching out to John Higgins with a plea, he put me in touch with Carl Francis who came out of retirement to curate the new Maine Mineral & Gem Museum in Bethel, Maine (look it up). After some searching, Carl told me that Brian Lejeune, curator of the Art Montgomery Mineral Museum at Lafayette College, would take them. And so the circle closed – friends of friends, made many years ago through MSDC, helped to find a home at the very location where Art Montgomery thrived and from which he helped launch the Mineralogical Record.



# October 2020 Program: “Chimney Rock Quarry” by Dan Teich

Synopsis by Andy Thompson, MSDC Secretary

Imagine growing up having a curiosity for rocks and living relatively near a mining region known for its rich diversity of mineral deposits and Triassic Period basalt outcrops. Collector Dan Teich benefitted from such a heritage. During his October presentation he shared with his fellow MSDC members his love of NJ mineral specimens and the geological features that made this place his favorite quarry.

His presentation focused on the Chimney Rock Quarry in Bound Brook, New Jersey. It is located at the southern-most part of the Watchung Mountain range, in the valley carved by the brook which runs between the first and second of three segments of that mountain chain. “It’s like taking a walk through the Triassic era,” he said, while explaining the early formative processes that produced the quarry’s prominent basalt outcrops.

## Geologic Processes That Formed the Quarry

Dan began by explaining that over millions of years, the mountainous region where the quarry now exists formed from successive molten lava flows and cooled solidifications. Fissures in the aging basalt rock occurred and became the avenues for fluid, rich in minerals, rising from the depths and depositing numerous veins of minerals, some close to the surface.

The images on the right were not part of Dan’s presentation but represent a broad overview of the geologic formations of the NY/NJ region about which he spoke. Each region is shown with its distinctive color-coded time frame. The second illustration is a red square provided to indicate the color highlighting Dan’s explanation that the two main Watchung Mountain ranges date from the Triassic Period. They are shown in the third illustration as the two red, fortress-like, crescent shapes, created from successive lava flows. Chimney Rock Quarry is at the bottom of the lower of the two crescents.

With that geological background in mind, Dan then fast forward to our modern era, when miners began discovering the site’s commercially valuable minerals. Copper deposits captured the attention of the original colonial era miners in the late 1700s, while later generations of quarry owners found it profitable to excavate the basalt rock itself. Today, the mine is private property and access for mineral collectors is extremely limited. So, specimens available today originated primarily from much earlier field trips. But neighboring public collecting sites toward the Watchung mountain’s north-east extension, near Paterson, NJ, are part of the same geologic formation and exhibit a rich diversity of zeolites, prehnite, natrolite, analcime, chabazite, stilbite and other minerals.

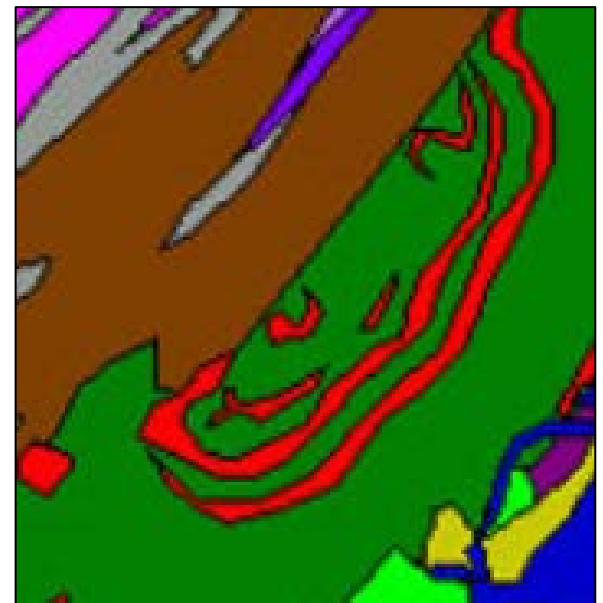
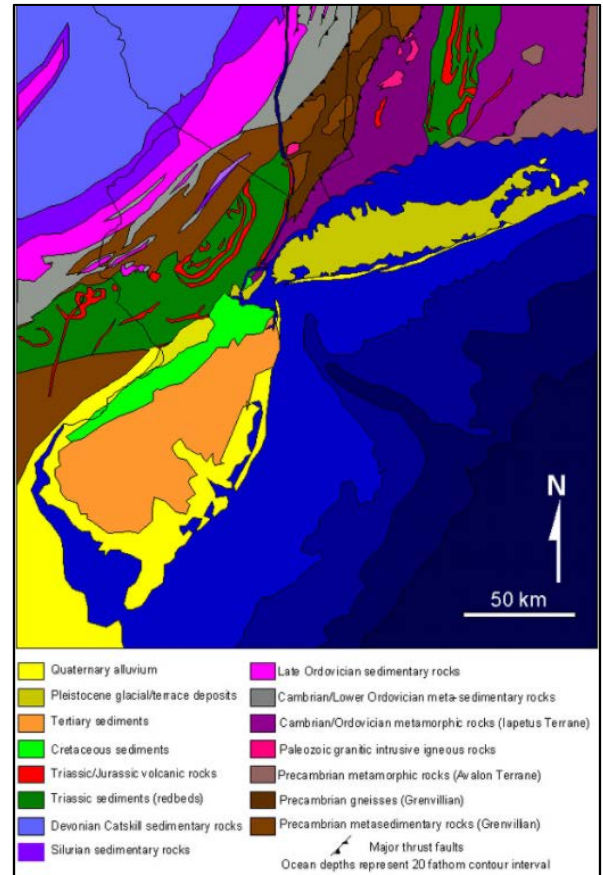
Dan noted that the Chimney Rock Quarry is named for a prominent chimney-like vertical outcrop located on the other side of the gorge across from today’s 400-acre quarry. Still actively mined today, the quarry primarily yields road-rock, asphalt and gravel for building roads. Also, its rock-crushing equipment is used to break up and recycle salvaged concrete for road construction.

For the earliest generation of miners, Dan said, the quarry was appreciated primarily for its copper, which, legend has it, supported the revolutionary war effort against the British. In the decades after the revolution, the mining of copper ceased to be commercially successful. So, since 1887, the focus has been on supplying road-building rocks and materials which priority persists to this day.

## Geological Processes Which Formed the Quarry

Dan emphasized that what makes this quarry particularly interesting is that it provides clear evidence of the multiple lava flows

(Cont. on p. 5)



*(Chimney Rock Quarry... continued)*

which occurred over the millions of years and which gradually built up the Watchung mountains. Other quarries due to having been formed differently and having their formations obscured by the mining excavations, do not provide such clear evidence. Today, the shape, coloration and chemistry of the different basalt outcrops give evidence of those processes. As one example, Dan showed slides of the quarry's classic pillow lava except the formation was atypical in that it did not flow directly into water and so did not retain a smooth surface and thinner layers. A second type of lava deposition is evident in the columnar basalt which, due to its thick layers and hardness, today continues to be an abundant source of rock for road building.

One tell-tale slide showed two chemically different lava flows, a later flow atop an earlier one, illustrating how the mountain chains built up over time. Another slide showed how an older lava flow, part of the Passaic formation, has red coloration due to its oxidized iron content, which layer is capped by a later-arriving black lava flow, showing no oxidation of iron, and which is sitting on top.

### **What Makes This Quarry So Amazing: Its Mineral Specimens**

Beyond the evidence of the ancient lava flows and mountain building processes, Dan gave further evidence of "what makes this place so amazing." Amygdules! These are extraordinary, diversely shaped mineral specimens which are the result of bubbles flowing upward from the lower levels of the Passaic formation's basalt lava. A photo of amygdule specimens (white circular shapes) is on the right (credit: National Park Service).

The gas bubbles sometimes became trapped in the solidifying lava, forming vertical, tube-like columns. Other shapes appear in rock cross-sections and seem to be circular, white or colored dots. They happen because after the basalt hardens around the bubbles, the process leaves behind vugs having various shapes in the basalt. Later, mineral-rich fluids fill in the vugs

and that results in crystal structures named amygdules which are made of minerals such as goethite, hematite, calcite, quartz and chalcedony and jasper. It is the diversity and beauty of these mineral specimens that intrigues many collectors, Dan included.

Having presented a geologic and historic overview of the mountain-forming processes, Dan then provided a review of some additional minerals which, over the years, collectors had gathered from the Chimney Rock Quarry. Dan started by showing images which constituted an extraordinary "tour de Calcite" including pictures of various shaped, interlocking calcite crystals. Some crystals were the size of footballs. Others were calcite on stilbite cubes and calcite on datolite. There was also brown stilbite which, Dan said, had dissolved out of the calcite.

One 22-inch-long natrolite specimen on calcite, a unique combination, presented a puzzle as to how it was formed. Dan also showed examples of white opal, banded opal and brown opal in a very hard matrix.

Many of the chalcocite specimens Dan showed came, he said, from the "Great Red Wall" of oxidized iron mentioned earlier in his presentation when he discussed subsequent lava flows. The best chalcocite specimens were found in veins in the heavily sheared outer margins of the sediment mass that had originally been trapped in the basalt. "What made this special," Dan said, "was that the copper mineralization was above the basalt layer."

The number of beautiful specimens was extraordinary, and for many Dan provided the background for how they were formed and what made the mineral formations of the Chimney Rock Quarry unique in all the world.

At the conclusion of the presentation, President Dave Hennessey and Yury thanked Dan for his excellent presentation. After he responded to several questions, MSDC members showed by applauding their appreciation for Dan's taking the group for a "walk through the Chimney Rock quarry's Triassic formation."



## MSDC Club Information

**Due to COVID-19, our meetings will be virtual over Zoom. No in-person meetings are planned until further notice.** In non-COVID times, 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](http://www.facebook.com/Mineralogical-SocietyOfTheDistrictOfColumbia)

## 2020 Officers and Directors

**President** - Dave Hennessey | davidhennessey@comcast.net

**Vice President** - Yury Kalish | yury.kalish@gmail.com

**Secretary** - Andy Thompson | thompson01@starpower.net

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

**(Due to COVID-19, our meetings will be virtual over Zoom. No in-person meetings are planned until further notice.** Normally, the MSDC meetings take place at the National Museum of Natural History, Smithsonian Institution, 10th Street and Constitution Ave, Washington D.C. We usually gather at the Constitution Avenue entrance at 7:30 PM to meet our guard who escorts us to the Cathy Kerby Room.)