The Minutes

"Pegmatites" Presented by Dr. Michael Wise

by Yuri Kalish, MSDC Vice President



ur March presenter is Dr. Michael Wise, a geologist at the Mineral Sciences Department of the National Museum of Natural History. Mike is a long time member and friend of the club. He made presentations at the club meetings before, including most recently on amethysts in 2017. This time, Mike will discuss a topic close to his research interests at the Smithsonian – pegmatite. He co-authored scientific articles on a wide range of

investigations and discoveries related to pegmatite, from columbite-group minerals in granitic pegmatites of Maine, to occurrence and composition of gahnite in pegmatite-aplite dikes of California.

ost of us know that pegmatites are igneous rocks that form during the final stage of magma's crystallization. During the presentation, we will learn about crystal chemistry and crystal structures of pegmatite minerals, petrology and geochemistry of pegmatites, and evolution of granite-pegmatite systems. Mike



will explain what makes pegmatites so fascinating, describe important pegmatite districts, and review examples of some specific pegmatites and minerals found in them.

Please join us in taking Mike to dinner on March 6th at 6:00 pm at the Elephant and Castle at 1201 Pennsylvania

Avenue, NW. If you cannot make it to dinner, please go directly to the lobby of the Natural History museum (Constitution Avenue entrance) at 7:30 pm. We will head upstairs to the meeting room at 7:45 pm.



Volume 77-03 March 2019

In this Issue:

March Presentation: "Pegmatites" by Dr. Michael	
Wise	1
Prez Says	1-2
MSDC February Business Meeting Report with Show & Tell	2-3
February Program Report: "Goodyear meets the Mad Hatter"	3-5
The Tucson experience 2019 by Dave Nanney	6-10
Club Information	9
Mineralogical Society of America Centennial Symposium	10
Atlantic Micromounters Conference Announcements	11-14
Useful Mineral Links	15
AFMS Code of Ethics	16
Club Membership Form	17



Prez Says..
by Dave Hennessey
MSDC Club President

ur March meeting closely follows the annual Tucson Mineral Show. It has been many years since I last attended this Show of Shows. I used to make yearly business trips to Tempe, Arizona to Boeing's Longbow Apache (helicopter)

MSDC's February 6th Business Meeting Report

by Andy Thompson, MSDC Secretary

lub members were able to return to and use the Cathy Kerby Room after the prior month's government shutdown. President Dave Hennessey welcomed everyone, including several guests and new members. The first order of business was approval of the prior month's Business Meeting synopsis, which members unanimously accepted without any corrections.

The members offered announcements of upcoming local clubs' events, including the Montgomery County Lapidary and Mineral Club's annual event on the 16th and 17th of March at the County Fairgrounds. For more information, see: https://www.glmsmc.com/show.shtml.

The Delaware Mineralogical Society holds its annual show on 3-4 March. For details, see: http://www.delminsociety.net/marchshow/marchshow.htm.

The Atlantic Micromounters' Conference takes place in Alexandria, VA and features speakers Dr. Robert J Lauf on April 5 and Dr. Michael Pabst on April 6th. For additional information visit demicrominerals.org

Lastly, the Mineralogical Society of America, headquartered in the Washington, DC area, is celebrating its one hundredth anniversary For information on their Hybe 20-21 centennial celebration, go to http://www.minsocam.org/

For "Geology in the News", one member expressed her hopes for a pole reversal as the earth's magnetic fields have been fluctuating of late beyond their normal range. Additionally, Tim Rose, MSDC's sponsor and the Smithsonian Mineral Department geologist and manager of the Analytical Laboratories, shared several photos he recently took of unusually large and beautiful tourmaline and quartz mineral specimens found at the Mount Mica mine (and quarry) in Maine. With no further new or announcements,

Dave called for and received a motion and second to close the

plant. I I was able to time these trips to coincide with the Tucson Mineral Show and drive down (about a 2 hour drive) on the weekend. The last year I went was 2008, the year that the Main Show theme was American Mineral Treasures and many of the greatest specimens ever found in America were on display. I remember seeing the Alma Queen, incredible, gemmy, deep cherry red, rhombic crystals of rhodochrosite from the Sweet Home Mine in Alma, Colorado, and the largest emerald crystal (19.3 cm) ever found in the USA, from near Hiddenite, North Carolina. All in all, the exhibits were just incredible and there were plenty of opportunities to acquire nice specimens as well if you brought lots of \$\$\$. I'm sure the exhibits and acquisition opportunities are wonderful every year and I know several of our members went to Tucson this year. I am hopeful they will submit newsletter articles and share their experiences with us.

There are usually new and exciting mineral finds that make their first appearances at the Tucson show and dealers nationwide are able to acquire them and bring them to local shows around the country. There are two shows in our area coming up in March that will likely include new finds that dealers have just acquired in Tucson. The first is the Delaware Mineralogical Society show in Wilmington, Delaware, on March 2nd and 3rd. The second is on March 16th and 17th at the Montgomery County Fairgrounds. This show is sponsored by the Gem Lapidary and Mineral Society of Montgomery County (GLMSMC). GLMSMC members fill a large number of showcases with the best from their collections, but the most outstanding showcase is always the "New Acquisitions" showcase that the Smithsonian Institution fills with truly great mineral specimens that they have just acquired in Tucson. Be sure to catch one or both of these shows if you can.

business meeting. Having received a unanimous affirmative vote, Dave turned the meeting over to Yury, MSDC's V.P. for Programs, to introduce the evening's presenter.

SHOW & TELL

ave invited members who had brought mineral samples to share their personal stories of exploring and collecting. Ken brought several specimens, one being a bit of a mystery which he invited members to identify. Some thought the fist-sized specimen topped by large and small butterscotch-colored cubes was wulfenite. Others, noting the specimen's heavy nature, thought it was galena. But when flipped over to its opposite side, flat and without cube crystals, its grey-white middle suggested it might have a core made of an unidentified metal and so was a complex composite rock, not a single mineral.

February Program Report

Synopsis by Andy Thompson, MSDC Secretary

Goodyear meets the Mad Hatter:

Innovative composite saxophone mouthpieces of the 1920s and their effect on the growth of jazz.

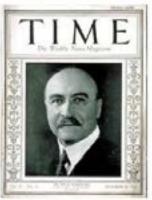


History
Invention
Waterloo
Murder
Elephants
Materials Science
Mineralogy
Goofy Math
Poison
Humor?
Theatrics













March 2019 - Mineral Minutes

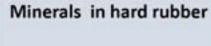
March 2019 - Mineral Minutes

im Rose, the Smithsonian Department of Mineral Sciences Analytical Laboratories Manager, began his presentation by noting that minerals have always made a significant contribution to culture and to human progress.

"New materials," he said, "have changed the world." So after Belgian musician and maker of musical instruments, Antoine Joseph Sax, improved the tone of the bass clarinet, he focused his attention on a new instrument with a conical shape and made from brass. Around 1840 he invented the saxophone which military and marching

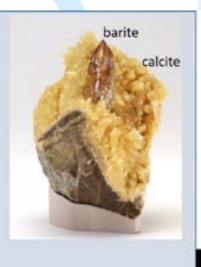
areas, he said, the prevalence of sax sounds had to have been overwhelming. This gave birth to numerous jokes like "A gentleman is one who knows how to play the saxophone but declines to do so."

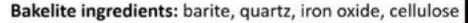
Tim pointed out that there are really two parts to the saxophone, the saxophone and the mouthpiece. Originally made from wood, the shape and composition of the mouthpiece has been a key feature determining the quality and evolution of the instrument's sound. Over the decades, it evolved to include portions of metal, wood, hard rubber, and later, bakelite.













bands readily incorporated into their ranks. Decades later, in the early 20th century, there was the great American saxophone craze. Musical groups around the world adopted the instrument. Some of the early acts in the US included the Schuster Sisters, the Musical Spillers and the Six Brown Brothers.

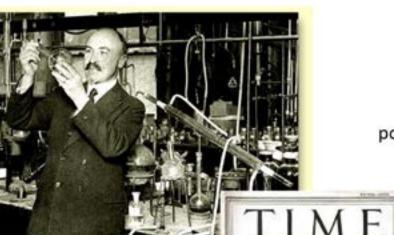
Tim estimated that by 1925, in the U.S. alone, half a million saxophones had been manufactured and an equal number were imported from Europe. In congested urban

By the late 1870s, hard rubber was being used for everything from the inner lining of raincoats (the MacIntosh), to dentures, combs and fountain pens. At the time, hard rubber had allowed for significant improvements in people's lifestyles. By the 1860s and 70s, Goodyear owned the patents on hard rubber which led to legal battles, especially with dentists who manufactured dentures for their clients.

The first synthetic plastic, Bakelite, was invented in 1907

by Leo "Doc" Baekeland (1862-1944) and that unleashed further new products familiar to older MSDC members, including Bakelite radio chassis, dishes, dentures and some sax parts, especially for mouthpieces. Throughout his presentation, Tim passed around various minerals and materials, including hard rubber and Bakelite objects which illustrated the content of his presentation.

in the 19th century by Dr. John Attfield claimed that the cinnabar introduced no health threats. But since Roman times, it was common knowledge that working in the cinnabar mines in Almaden, Spain, amounted to a death sentence. Nevertheless, the actual toxicity of cinnabar, which is on many lists of the top ten most toxic minerals, is questionable. Galena, for example, is quite



Leo "Doc" Baekeland, 1863-1944

1907 ol+ formal

phenol+ formaldehyde + heat and pressure



polyoxybenzylmethylenglycolanhydride phenol formaldehyde "Bakelite"

first synthetic plastic

Moldable, many colors, chemical resistance, commonly combined with fibrous stuff for added strength.

Wood saxophone mouthpieces were replaced by hard rubber and Bakelite mouthpieces that also incorporated metal. These composite mouthpieces fascinated Tim so much, he decided to start a collection and characterize their materials. Analysis of brick red and orange-colored mouthpieces revealed that they incorporated powdered cinnabar, also known as vermillion. Cinnabar is mercury sulfide which in retrospect introduced health concerns.

Other minerals incorporated in hard rubber and Bakelite include barite, calcite and quartz. The metal incorporated nickel, copper, zinc, silver and lead. A study of dentures

insoluble and even though it contains lead, likely would pass through the body quickly with no long-term toxic effects.

His study of the life-span of well-known, early 20th century saxophone musicians, revealed they lived to be an average of 64.

Dave Hennessey thanked Tim for his culturally rich presentation which combined two of his life-long passions, mineralogy and the saxophone instrument he played in earlier days. MSDC members gratefully applauded his interdisciplinary research and sharing.

The Tucson Experience 2019

by David Nanney, former MSDC President, with edits from Amanda Parker and additional photos from Casper Voogt

eslie and I have been traveling to Tucson since 2009.

My aunt and uncle celebrated their 60th anniversary back then and we just had to attend. They are celebrating their 70th in Alaska this year, and we were in Tucson staying with family. Wulfenite, one of our favorite minerals, was featured at this year's show. Ironically, we didn't bring any home with us.

We started on Saturday at the Fine Mineral Show at the Westward Look Resort. Many of the top dealers in the world show world class specimens that are beyond belief. Saturday also had a display in the lobby from the Natural History Museum in Los Angeles. The most notable specimen was a nice gem contained in a simple



ring setting. Evidently this Kyawthuite specimen contains 100% of this mineral that has ever been discovered on Earth. It had been collected under another name only to

later be identified as a new discovery. No others have been discovered to date so this ring is all there is. Pretty awesome piece, now that you think of it.

We enjoyed lunch (and wine) with our good friend and club webmaster, Casper Voogt. He is a serious collector and dealer. Some of his photos include a behind the scenes look at Tucosn, what it's like to be in the Tucson area during the show, including the photo below.



We also ran into Ken Rock, another friend of MSDC.



This show features seven buildings with six dealers each. The specimens are simply gorgeous with even better items available (for THEM to review) in the back room. Below is an example of that from Casper's photo collection.



I included a few photos as examples of what was available in every single case. These are almost as beautiful as the Fisher's collection. The cabinet display with the dioptase had Leslie looking at remortgaging our home.



The photo above contains some "nice" rhodochrosites. We moved to the Hotel Tucson City Center on Sunday to visit our five favorite dealers. Within two hours, we had invested "significantly" to the Tucson economy. A week later, we attended the main show at the Tucson Convention Center. It is a huge open area crammed with jewelry and mineral dealers. I have heard this is the



biggest show in the country, and by the end of the day, I would agree. We also ran into Mike and Vickie Wise as they were searching for treasures to bring home for the Smithsonian Institute. Note the guard in the background watching him carefully.



March 2019 - Mineral Minutes

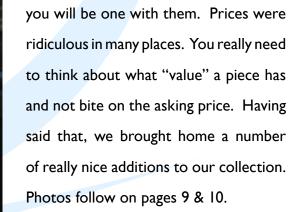
March 2019 - Mineral Minutes

We also ran into Holly Heighes posed in front of a top flight thumbnail collection. We also were delighted to meet Joyce and Pam Jayson who were enjoying their



first adventure in Tucson.

In summary, Tucson is a
"happening" which I would
encourage everyone to
attend at least once. You
will see some of the top
mineral pieces in the
world, many of the top
dealers in the world, and



MSDC Club Information

Meetings are the First Wednesday of the Month (Jan-Jun and Sep-Dec). We meet in the lobby of the Smithsonian National Museum of Natural History at 7:45pm.

Website http://mineralogicalsocietyofdc.org/

Facebook www.facebook.com/MineralogicalSocietyOfTheDistrictOfColumbia

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yury.kalish@gmail.com

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March 2019 - Mineral Minutes

March 2019 - Mineral Minutes



If planning on attending Tucson next year for the first time, be sure to remember a few things. Spend a full week in the area. The show is huge and it's impossible to see it all. There are hotels with vendors in every room and buildings with trunks full of minerals in the parking lot. It's a unique, massive show unlike any other. Book a 2020 room soon!

Mineralogical Society of America Centennial (1919-2019) Symposium

Mineralogical Society of America



1919 - Centennial - 2019

The Next 100 Years of Mineral Sciences June 20-21, 2019

SA will hold a celebratory Centennial Symposium on June 20-21, 2019 at the Carnegie Institution for Science Building, located at 1530 P St NW, Washing-ton, DC 20005. Fourteen theme colloquia will offer a vision for exciting new directions in mineralogy, ge-ochemistry, and petrology as MSA begins its second century. Each theme colloquium will include two 20-minute presentations by invited speakers followed by five minutes of moderated audience discussion.

Lunches will be included with your registration fee, and attendees are invited for a private evening reception in the Janet Annenberg Hooker Hall of Geology, Gems, and Minerals in the US National Museum of Natural History, Smithsonian Institution. We thank the Gemological Institute of America for sponsoring this evening reception. Please join us for this once-in-a-century event!

http://www.minsocam.org/MSA/Centennial/MSA_Cen-tennial_index.
html Submitted to Micromineralogists of the National
Capitol Area, Inc. Newsletter by Herwig Pelckmans





46th Annual

Atlantic Micromounters' Conference



Holiday Inn Express, Alexandria, VA

April 5-6, 2019

dcmicrominerals.org

The Micromineralogists of the National Capital Area, Inc.

The Micromineralogists of the National Capital Area, Inc. invite you to attend our annual Atlantic Micromounters' Conference on April 5 – 6, 2019 at the Holiday Inn, Alexandria.

6055 Richmond Hwy, Alexandria, VA 22303 Phone (571) 257-9555

Author Extraordinaire, Dr. Robert J. Lauf

Speaker, Robert J. Lauf holds a Ph.D. in Metallurgical Engineering from the University of Illinois. His scientific career included over twenty years at Oak Ridge National Laboratory, where he conducted research on topics ranging from nuclear fuel, coal by-products, materials synthesis, microwave processing, sensors, optical materials, and biomineralization. He has been granted fifty U.S.

Patents for his inventions, many of which have become successful industrial products. He is now a Registered Patent Agent and technology consultant. He has published numerous books on mineralogy. His topics include: 1. Electron Microscopy: The Final Frontier of Magnification 2. Mineralogy of Uranium and Thorium 3. Orthosilicates.

Dr. Lauf will present his first program 7pm on Friday evening. Conference attendees are also encouraged to share their mineral collecting stories.

Saturday evening Dr. Michael Pabst will present Rare Earth Minerals.

Special recognition, MNCA legacy member Erich Grundel

We will have a silent auction as well as our annual micromount auction on Saturday. There will be plenty of micro giveaways and dealers. Also, remember if you have a microscope, bring it.

Saturday lunch is included, consisting of deli sandwiches, side dishes, beverages, and dessert. Dinner will be on your own. Cost for 2-day conference \$30.

Friday 6 – 9:30pm Saturday 8:30am – 9pm

46th Atlantic Micromounters' Conference April 5-6, 2019

Registration

March 2019 - Mineral Minutes

dcmicrominerals.org

Make checks payable to: Atlantic Micromounters Conference
Registrants may pick up their packets and name tags on Friday evening.
Return registration to: Kathy Hrechka 7201 Ludwood Court Alexandria, VA 22306
Reserve your hotel room before March 22 to receive the \$135. conference rate. Call Holiday Inn, Alexandria, VA (571) 257-9555
cut here
Please print all information and return this portion to Kathy, along with your payment. 2019
Name
Address
City State Zip Code
TelephoneEmail
Pre-registration \$30. Number Total \$
Registration at the door will be \$35. Check the portions of the conference you will be attending.
Friday Reception 6 - 9:30pm Saturday Conference 8:30am-9pm

((12 13))

46th Annual

Atlantic Micromounters' Conference



March 2019 - Mineral Minutes

Holiday Inn Express, Richmond Hwy, Alexandria, VA

April 5 - 6, 2019

Micromineralogists of the National Capital Area, Inc.

Friday, April 5

6:00 pm Registration "Welcome Coffee & Tea Reception" with light appetizers. Dealers open. Introduction of club officers: President Dave MacLean, Vice—President David Fryauff, Secretary Robert Cooke, Treasurer Michael Pabst, Editor & Conference Chair Kathy Hrechka

7:00 pm Presentation: Dr. Robert J. Lauf – Electron Microscopy: The Final Frontier of Magnification. Followed by informal conference participant presentations

9:30 pm Conference closes for the day.

Saturday, April 6

8:30 am Continental breakfast, coffee & tea. Dealers & Freebie tables open.

8:30 – 11:30 am Silent Auction. Winning bidder receives micro & photograph.

9:55 am Opening Remarks Introduction of club officers. Special recognitions: MNCA legacy member, Erich Grundel

10:00 am Presentation: Mineralogy of Uranium and Thorium

Noon Lunch provided by MNCA. Micro swapping and Geo Socializing.

2:00 pm Micromount Auction - PowerPoint. Winning bidder receives micro & photograph. (Our "Club Table" opens for sales after auction – Carter Rich micros)

4:00 pm Presentation: Orthosilicates

5:00 pm Dinner will be on your own. (Conference room will remain open)

7:00 pm Presentation: Dr. Michael Pabst – Rare Earth Minerals

9:00 pm Conference Closes (be out of conference center by 10 pm).

Thank you for joining us this year. We value your geology friendship.

Author Extraordinaire, Dr. Robert J. Lauf Biography

Speaker, Robert J. Lauf holds a Ph.D. in Metallurgical Engineering from the University of Illinois. His scientific career included over twenty years at Oak Ridge National Laboratory, where he conducted research on topics ranging from nuclear fuel, coal by-products, materials synthesis, microwave processing, sensors, optical materials, and biomineralization. He has been granted fifty U.S. Patents for his inventions, many of which have become successful industrial products. He is now a Registered Patent Agent and technology consultant. He has published numerous books on mineralogy.

Presentations by Robert J. Lauf

- 1. Electron Microscopy: The Final Frontier of Magnification
- 2. Mineralogy of Uranium and Thorium
- 3. Orthosilicates

Dr. Michael Pabst Biography

Michael Pabst is a retired professor of biochemistry, who has collected minerals all his life. He is Treasurer of the Micromineralogists of the National Capital Area (MNCA), and President of the Shenandoah Valley Gem and Mineral Society (SVGMS). He writes a monthly column on microminerals for the *Mineral Mite* newsletter of MNCA. His mineral photography has gradually improved over the years, allowing the creation of PowerPoint talks with some pretty photos. He has a long-term interest in minerals containing rare-earth elements, like Cerium and Lanthanum, and their neighboring elements in the periodic table, including Scandium, Yttrium, and Uranium.

Presentation by Dr. Michael Pabst

Rare Earth Minerals

Location: Holiday Inn, Richmond Hwy, Alexandria, VA (same location as last year)

Details are posted on our club website www.dcmicrominerals.org

March 2019 - Mineral Minutes March 2019 - Mineral Minutes

Useful Mineral Links:





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



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)

year. One address.										
per year.										
he last months of the year, me	embership	will extend through	h the followir	ng year wit	th no addit	tional dues.				
ANNUAL DUES -	PLEASE	PAY YOUR DUE	S PROMPT	LY.						
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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 7:45 PM to meet our guard who will escort us to the Cathy Kirby Room.