

MNCA Website www.dcmicrominerals.org

The Mineral Mite



Vol. 56 – No. 9 Washington D.C. – A Journal for Micromineralogists Nov 2023

November 29 3-5:30p Kings Park Library of Burke, VA

Program: Rutherford #2 Pegmatite, Scott Duresky

by Jeff Guerber, Vice President

We'll be having a very special presentation: Scott Duresky will be joining us to share the results of his 11 years of research into the minerals of the historic Rutherford #2 pegmatite. This will be a meeting not to be missed! Scott's biography is on page 3.

(The MNCA November meeting will be on Wed, Nov 29, 3:00 - 5:30 pm in the Kings Park Library large meeting room.)



President's Message:

by David Fryauff

This month is our annual calendric reminder to give thanks for all that we have but more importantly, to give from our wealth and riches to those who are in need. There has never been a greater need across our entire world. The threats are not to us alone but to every living creature of this miraculous world. Let us all be moved to give deep thought, and prayer, and our best actions.



Mystery Micro Mineral of the Month



This month is also our opportunity to join with the Northern Virginia Mineral Club as micromineral and microscopy demonstrators at the NOVA annual show on 17, 18, & 19 of November at Dewberry Hall in the Johnson Building at GMU in Fairfax, VA. Both David Maclean and I have volunteered to run our MNCA demonstration table but we will gladly accept helpers. We are fortunate to have abundant giveaway minerals from the recent Desautel's Symposium and thank Tom Tucker for all the work he has put into preparing the small gems from Sugar Grove.

We are also blessed to join with the Northern Virginia Mineral Club in the annual holiday party which has not yet established a date for this event, but we feel quite certain that it will be held in the Dunn Loring Fire Station at 2148 Gallows Road, Dunn Loring, VA.

continued on page 3

Mystery Micro Mineral Clue: divergent white acicular spray on pink Hodgkinsonite with red zincite and colorless barite. Type locality Franklin Mine FOV=5mm. by Aloha **Peter Chin**, Honolulu, Hawaii


Micromineralogists of the National Capital Area, Inc.

Peterchinite

A valid IMA mineral species

This page kindly sponsored by Kathy Hrechka

Photos of Peterchinite (2) Discuss Peterchinite Add to my favourites



Peterchinite
Franklin Mine, Franklin, Sussex County, New Jersey, USA

Peterchinite
Franklin Mine, Franklin, Sussex County, New Jersey, USA

Hide all sections Show all sections

About Peterchinite

Formula: $Zn_3Zn_2(OH)_6As[O_3(OH)_3]$


Crystal System: Monoclinic

Member of: Chlorophoenicite Group

Type Locality: [Peterchinite type locality, Franklin Mine, Franklin, Sussex County, New Jersey, USA](#)

Isostructural with: Chlorophoenicite

The Zn (or rather Zn3) analogue of chlorophoenicite and magnesiochlorophoenicite.



Mystery Micro Mineral of the Month

by Aloha Peter Chin, Honolulu, Hawaii

Answer: **Peterchinite**, divergent white acicular spray with gray splotches of a yet to be identified mineral on pink hodgkinsonite with red zincite and colorless barite. Type locality: Franklin Mine, Franklin, Sussex Co., New Jersey FOV=5mm.

Congratulations Aloha Peter Chin! He recently got a congratulatory email from his friend, Roy Kristiansen from Norway. Mineralogist, Travis Olds accepted and declared a new mineral: IMA No. 2023-050

Peterchinite $Zn_3Zn_2(OH)_6As[O_3(OH)_3]$

Pcn, Franklin mine, Franklin Mining District, Sussex Co., New Jersey, USA (41°06'56" N, 74°35'15" W)

Travis A. Olds*, Anthony R. Kampf and Radek Skoda

*E-mail: oldst@carnegiemnh.org

Isostructural with chlorophoenicite Monoclinic: C2/m
a = 22.95(1), b = 3.21(1), c = 7.28(1) Å, $\beta = 106.43(1)^\circ$
6.88(46), 3.704(55), 3.085(38), 2.939(27), 2.593(100),
1.816(22), 1.744(40), 1.473(34)

Photo above: Gas Pocket Peter taking a breather in a gas pocket in Koko Crater (volcano)????

Type material is deposited in the collections of the Carnegie Museum of Natural History, Forbes Avenue, Pittsburgh, PA 15213, USA, catalogue number 34559, and the Natural History Museum of Los Angeles

County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue number 76286.

How to cite: Olds, T.A., Kampf, A.R. and Skoda, R. (2023) **Peterchinite**, IMA 2023-050. CNMNC Newsletter 75; Mineralogical Magazine, 87, <https://doi.org/10.1180/mgm.2023.76>

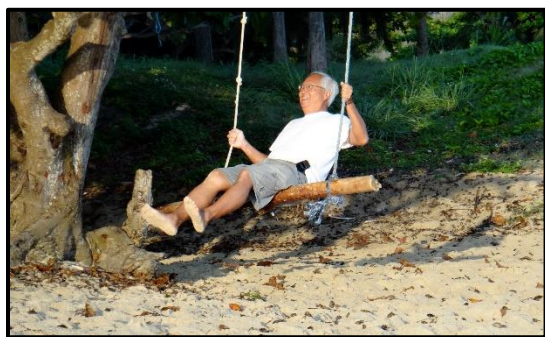
There is a fluorescent white platy UK associated with the new mineral shown in one of the photos, which remains to be properly identified. EDS shows that it is probably either a Zn carbonate or Hydroxide and there is no match in Raman to any known mineral. A SXRD would be helpful but the size of the crystals are problematic again. Photos of both minerals appear on p. 1345 in Das Book.

The Mineral Mite November 2023

Congratulations Peter Chin!

by Kathy Hrechka, editor

Peter Chin resided and worked in the Washington DC metropolitan area years ago. I recall when he served as president of the Northern Virginia Mineral Club and was an avid mineral collector in our area. He retired one day and moved back to his homeland in Hawaii.



Peter is getting into the swing of things! Kaiona Beach, Waimanalo, Oahu. Retirement suits him well.

President's Message continued

We have had many great holiday parties over the years with the NOVA Mineral Club, but our last gathering was several years ago.

Our recent end of October MNCA meeting was a real hit, with a bonanza of giveaway minerals to work through, thanks largely to our Canadian cousins, Quintin, Willow, and Claude.

Mineral-wise, I could hardly believe my good luck! I picked up a nondescript mineral specimen from the giveaway tables at the Baltimore-based Desautels Symposium in October and only this week discovered that it was a beautiful combination specimen from the legendary Thomaston Dam occurrence in Litchfield County, Connecticut. That flood control & railroad project back in the 1960's cut through several different geologic strata, and rewarded collectors with some truly beautiful mineral specimens. The Thomaston Dam miniature I found on the giveaway tables had pyrite, heulandite, calcite, and quartz in crystalized forms that must have made this specimen someone's special treasure. And what makes that little treasure even more valuable was that it was given away. Let me too, learn to give more freely and often, and with only thoughts for the pleasure another might take in such a gift.

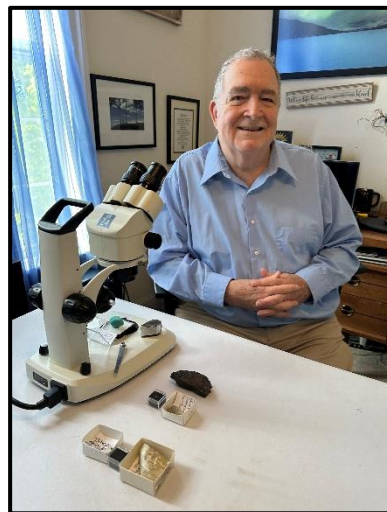
Scott Duresky biography, Rutherford

With the generous assistance of long-time collectors Pete McCrery of Richmond, Robert LeNeave of Amelia, David Wilson of North Chesterfield and Steve Arthur of Chesterfield, Scott Duresky, a member of the Richmond Gem and Mineral Society for many years, has completed his 11 years of research into the minerals of the historic Rutherford #2 Pegmatite in Amelia Courthouse, Virginia.

Scott's presentation represents the most comprehensive study of the minerals of the Rutherford Mine since the late 1990's, and using modern analytical techniques, has confirmed the presence of three new members of the Microlite Group and species not previously reported from the pegmatite, along with some unexpected conclusions that can be drawn from the research.

Although some of the presentation is rather technical in nature, it includes many new and aesthetic photos of the rarer species and should be enjoyable for anyone who has collected there or who is familiar with its history.

Finally, although the research has been completed, with the assistance of club member Rudy Bland, the collection has been donated in its entirety to the State of Virginia's Division of Energy, Department of Geological and Mineral Resources, so that it may be preserved and made accessible to future generations of collectors and researchers.



Scott Duresky researching Rutherford #2.

Micromineralogists of the National Capital Area, Inc.

Previous Meeting Minutes 10.23.2023

by Bob Cooke, secretary

The Micromineralogists of the National Capital Area (MNCA) met on October 30, 2023, at the Fairfax County Kings Park Library in Burke, Virginia. Members present were Bob Cooke, Dennis Coskren, David Fryauff, Jeff Guerber, Dave Hennessey, John Kress, Dave MacLean, Michael & Karen Pabst, and Tom Tucker.



President Dave Fryauff called the meeting to order at 4:25 PM. Dave MacLean and Tom Tucker were recognized for their service as past presidents.

With one correction, the minutes of the September meeting were approved as published in the Mineral Mite. The draft minutes should have mentioned that the remaining thumbnail minerals from the Barry Remer collection would be sold at the Northern Virginia Mineral Club auction.

Dave Hennessey gave \$10 to the club treasury as proceeds from the auction of Barry Remer's thumbnails.

Members confirmed that MNCA will sponsor a micromount demonstration table at the George Mason/NVMC Mineral Show on November 18-19. Dave Fryauff is the point-of-contact.

The November MNCA meeting will feature a presentation by Scott Duresky on Rutherford Mines of Amelia, Virginia.

The meeting adjourned at 5:00 PM and was followed by Dave Fryauff's presentation on "Recent Findings at My Favorite Quarry: the Haines-Kibblehouse Penn-MD Serpentinite Quarry."

Previous Program Reviewed 10.23.2023

by Bob Cooke, secretary

Dave Fryauff's Recent Collecting & Micro Study: Dave Fryauff presented two groups of minerals which he had acquired during the Desautels Micromount Symposium. Quintin Wight had donated pieces of breccia from Mont Saint Hilaire. Another collector had offered a group of perky-mounted minerals for trade. Any MNCA member wanting one of these "perkies" could take it provided they offered another in trade.

Dave reported that the 10 participants in the GLMS-MC field trip to Hunting Hill Quarry enjoyed the event. Both rodingite and coalingite samples were found. This event was the first time in 15 years that quarry management had allowed collecting at the site. Since everyone strictly adhered to the rules of conduct and there were no safety incidents, it is hoped that management might consider future events.



**Double Iron Phosphates:
Rockbridgeite, Barbosalite,
Whitmoreite, Ferrostrunzite**

by Michael Pabst PhD, Treasurer



As we mentioned in an earlier article, oxidized Vivianite contains some Fe^{3+} as well as Fe^{2+} . The amount of Fe^{3+} depends on the extent of exposure to light. But there are stable minerals that come with both ferrous and ferric iron in fixed stoichiometric amounts. Here is a short incomplete list that we will look at:

Rockbridgeite: $\text{Fe}^{2+}\text{Fe}^{3+}_4(\text{PO}_4)_3(\text{OH})_5$

Orthorhombic

Barbosalite: $\text{Fe}^{2+}\text{Fe}^{3+}_2(\text{PO}_4)_2(\text{OH})_2$

Monoclinic

Lipscombite: $\text{Fe}^{2+}\text{Fe}^{3+}_2(\text{PO}_4)_2(\text{OH})_2$

Tetragonal

Whitmoreite: $\text{Fe}^{2+}\text{Fe}^{3+}_2(\text{PO}_4)_2(\text{OH})_2 \cdot 4\text{H}_2\text{O}$

Monoclinic

Ferrostrunzite: $\text{Fe}^{2+}\text{Fe}^{3+}_2(\text{PO}_4)_2(\text{OH})_2 \cdot 6\text{H}_2\text{O}$

Triclinic

Ferroberaunite: $\text{Fe}^{2+}\text{Fe}^{3+}_5(\text{PO}_4)_4(\text{OH})_5 \cdot 6\text{H}_2\text{O}$

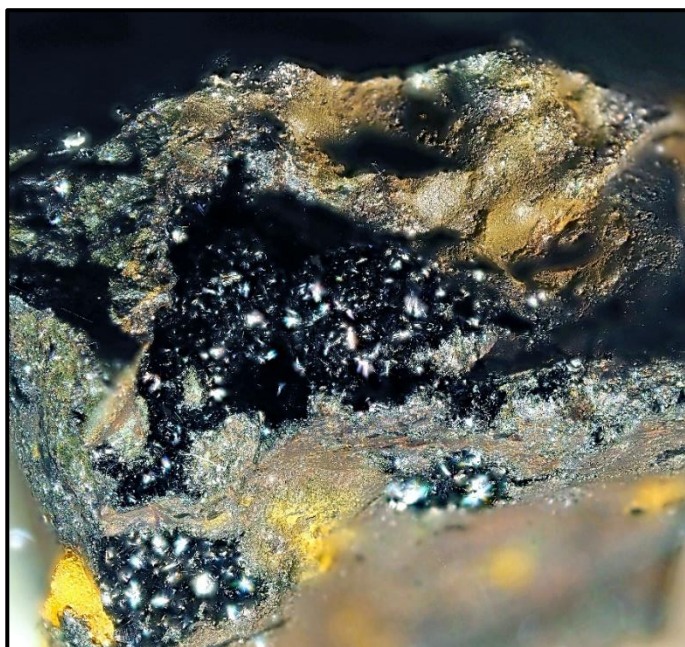
Monoclinic

Rockbridgeite. Rockbridgeite $\text{Fe}^{2+}\text{Fe}^{3+}_4(\text{PO}_4)_3(\text{OH})_5$ was named by Clifford Frondel in 1947 for Rockbridge County in Virginia. (The manganese analog is Frondelite.) The type locality is Midvale Mine, South Mountain, Midvale, Rockbridge County, VA. Midvale is about 7 miles south of the town of Vesuvius along the railroad line. Rockbridgeite is orthorhombic *mmm* – dipyramidal. It can be dark green to black. Hardness is $3\frac{1}{2}$ - $4\frac{1}{2}$. Sometimes the crystals are so small that they look like black velvet.

Rockbridgeite from the Dixie Mine is hard to photograph because it is black and shiny, and usually occurs as a tumble of randomly oriented crystals, so there are always annoying reflections. So, here I provided photos of the same specimen taken with the stereo microscope and with the macro lens setup. See if you can visualize, in three dimensions, several mounds of black crystals.



Rockbridgeite from Dixie Mine, Virginia. FOV 5 mm. Photo by Michael Pabst, using stereo microscope, stacking 9 images.

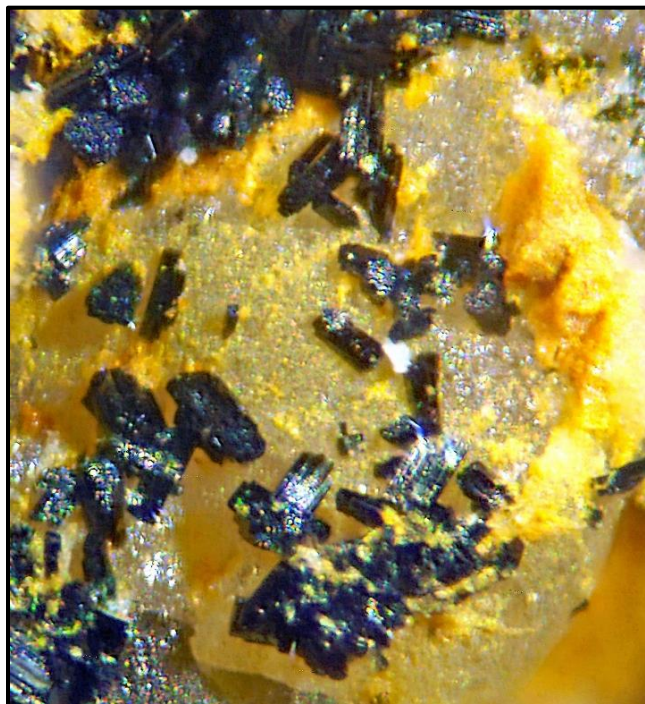


Rockbridgeite from Dixie Mine, Virginia. FOV 10 mm. Photo by Michael Pabst, using macro lens, stacking 85 images.

Now some Rockbridgeite from other localities.

continued next page

Double Iron Phosphates continued



Rockbridgeite from Hagendorf, Bavaria, Germany. FOV 1.5 mm. Photo by Michael Pabst using stereo microscope, stacking 5 images. Specimen from Betsy Martin MNCA collection.



Rockbridgeite with pink **Leucophosphite** $KFe^{3+}_2(PO_4)_2(OH) \cdot 2H_2O$? from Tip Top Mine, Custer County, South Dakota. FOV 5 mm. Photo by Michael Pabst using stereo microscope, stacking 27 images. Specimen from Betsy Martin MNCA collection.

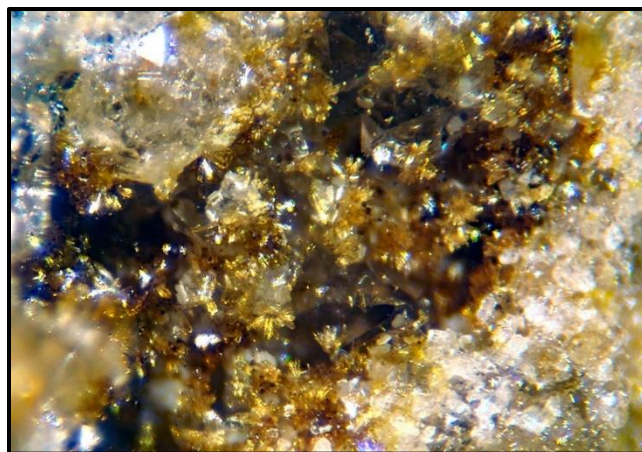
Barbosalite. Barbosalite $Fe^{2+}Fe^{3+}_2(PO_4)_2(OH)_2$ was named for Carlos Barbosa, a professor of geology from Brazil. Barbosalite is monoclinic $2/m$ – pyramidal, $\beta = 120.15^\circ$. It's related to Lipscombite $Fe^{2+}Fe^{3+}_2(PO_4)_2(OH)_2$, which is tetragonal. It is similar to Rockbridgeite, which is orthorhombic.

I don't have a photogenic specimen of Barbosalite in my collection, so here is a rare attractive photo from Mindat, taken by Jason B. Smith:

<https://www.mindat.org/photo-1223789.html>. This photo shows Barbosalite, Rockbridgeite, Hureaulite, and Leucophosphite from the Tip Top Mine, Fourmile, Custer Mining District, Custer County, South Dakota.

Whitmoreite. Whitmoreite

$Fe^{2+}Fe^{3+}_2(PO_4)_2(OH)_2 \cdot 4H_2O$ was first found at the Palermo No. 1 Mine, Groton, Grafton County, New Hampshire. Whitmoreite is yellow-brown to green-brown. It is monoclinic $2/m$ – prismatic, $\beta = 93.8^\circ$. Here is a photo of Whitmoreite from a specimen in my collection from a pegmatite in South Dakota. This specimen of Whitmoreite shows that if dark iron phosphate crystals are small enough, they can be yellow instead of black. That's why micro crystals are often better!



Whitmoreite (yellow crystals) from the Big Chief Pegmatite, Pennington County, South Dakota. FOV 0.5 mm. Photo by Michael Pabst, using stereo microscope, stacking 19 images.

continued next page

Double Iron Phosphates continued

Ferrostrunzite. Ferrostrunzite

$\text{Fe}^{2+}\text{Fe}^{3+}_2(\text{PO}_4)_2(\text{OH})_2 \cdot 6\text{H}_2\text{O}$ is an all-iron analog of Strunzite $\text{Mn}^{2+}\text{Fe}^{3+}_2(\text{PO}_4)_2(\text{OH})_2 \cdot 6\text{H}_2\text{O}$ that contains Fe^{2+} instead of Mn^{2+} . There is also a Ferristrunzite $\text{Fe}^{3+}\text{Fe}^{3+}_2(\text{PO}_4)_2(\text{OH})_3 \cdot 5\text{H}_2\text{O}$ with all Fe^{3+} . All three are triclinic. These three Strunzite cousins are visually similar. The photograph below shows a specimen labeled as Beraunite $\text{Fe}^{3+}_6(\text{PO}_4)_4\text{O}(\text{OH})_4 \cdot 6\text{H}_2\text{O}$, which is normally red or brown. But perhaps the black needles are Ferroberaunite $\text{Fe}^{2+}\text{Fe}^{3+}_5(\text{PO}_4)_4(\text{OH})_5 \cdot 6\text{H}_2\text{O}$, which is green, dark green, or black. Ferroberaunite is monoclinic $2/m$ – prismatic, $\beta = 93.32^\circ$. The tan straws appear to be some type of Strunzite, but they have not been analyzed. Other samples from this locality mentioned on Mindat have been shown to be Ferristrunzite. Strunzite Mn^{2+} has not been found at this locality. So, for the purpose of this article we will assume that we are looking at Ferrostrunzite or Ferristrunzite and Ferroberaunite, on a background of brown Beraunite (maybe).



Ferrostrunzite (tan) and Ferroberaunite (black) on Beraunite (brown), from Mont-des-Groseillers, Blaton, Hainaut, Wallonia, Belgium. FOV 4 mm. Photo by Michael Pabst, using stereo microscope, stacking 13 images.

The next article will be about iron phosphates that contain other metal ions in addition to iron, of which there are many colorful examples. We will start with some iron and aluminum phosphates.

“Peterchinite” Where in the world is Aloha Peter Chin?



Gas Pocket Peter taking a breather in a gas pocket in Koko Crater (volcano)???? Photo credit Peter Chin

Friends of Mineralogy – Pennsylvania Chapter Symposium Nov 10-12, 2023

<https://www.raslotto.com/FM/>

Friends of Mineralogy – Pennsylvania Chapter
SYMPOSIUM ON PENNSYLVANIA
MINERALOGY AND GEOLOGY and FIRST
ANNUAL MINERAL, GEM, AND FOSSIL SHOW
IN PERSON and ONLINE
Symposium and Show November 11, 2023
Field Trip November 12 U of PA – Johnstown, PA

Speakers scheduled for Saturday, November 11:

William Kochanov, PG - Gypsum Occurrence in the Vanport Limestone, Lawrence County, Pennsylvania

Dr. Andrew Sicree - Minerals from Centre County: From the bottom of the quarry to the top of the Sky

Dr. Robert Altamura - A Model for the Cause of Iridescence in Plagioclase Feldspar and the Effect of Superimposed Polysynthetic Twinning

Chris Howard, Aleya Schreckengost, and Dr. Ryan Kerrigan - The Geochemistry and Petrology of the Bald Hill Bentonites in Southwestern Pennsylvania

Aleya Schreckengost - Examining Mineral Fluid Inclusions to Assess the Economic Potential of Allegheny Hydrothermal Systems

William Stephens, PG, and Stephen R. Lindberg - Minerals and Geological Investigations at the New Paris Quarry, Pennsylvania

Micromineralogists of the National Capital Area, Inc.



American Federation of Mineralogical Societies

(AFMS)
www.amfed.org

Please read the AFMS bulletin attached in original monthly email to MNCA members.

2023 Purpose of the AFMS: To promote popular interest and education in the various Earth Sciences, and in particular the subjects of Geology, Mineralogy, Paleontology, Lapidary, and related subjects, and to sponsor and provide ways to coordinate the work and efforts of all interested persons and groups; to sponsor and encourage the formation and international development of Societies and Regional Federations and thereby to strive toward greater international good will and fellowship.



Celebrating 50 years!

The Rock & Gem magazine is recognized as the official magazine of the AFMS.

Free archived downloads

[Rock & Gem Magazine Archive : Free Download, Borrow, and Streaming : Internet Archive](#)



Eastern Federation of Mineralogical and Lapidary Societies

(EFMLS)
<https://efmls.org>

Communication and Involvement
Are the Keys to Our Success!

Please read the EFMLS bulletin attached in original monthly email to MNCA members.

November 2023 Local Geology Club Meetings

1: Mineralogical Society of the District of Columbia MSDC 7:30pm Zoom
www.mineralogicalsocietyofdc.org

6: Northern VA Mineral Club NVMC 7:30pm.
www.novamineralclub.org

13: The Gem, Lapidary and Mineral Society of Montgomery County, Maryland - GLMSMC Meeting 7:30 pm www.glmsmc.com

??: The Gem, Lapidary and Mineral Society of Washington, DC - GLMS-DC meeting 7 p.m.
Chevy Chase Community Center, 5601 Connecticut Ave; Washington, DC. www.glmsdc.org

15: Baltimore Mineral Society BMS meeting
www.baltimoremineralsociety.org

29: Micromineralogists of the NCA, Inc. MNCA 3-5:30pm Kings Park Library, Burke
www.dcmicrominerals.org

Where in the world is aloha Peter Chin?
Getting into the swing of things! Kaiona Beach,
Waimanalo, Oahu.



The Mineral Mite November 2023

Micromineralogists of the National Capital Area, Inc.



GeoWord of the Day and its definition

cyclic crystallization A process of recurring crystallization of some mineral phases during magmatic settling that produces *rhythmic layering*. See also: *rhythmic crystallization*.

raspite (rasp'-ite) A yellow, brown, or gray monoclinic mineral: $PbWO_4$. It is dimorphous with stolzite.

takedaite A grayish-white rhombohedral mineral: $Ca_3B_2O_6$.

zippeite (zip'-pe-ite) (a) A yellow, orange, red, or reddish-brown monoclinic mineral: $K_3(UO_2)_4(SO_4)_2O_3(OH) \cdot 3H_2O$. (b) A group name for monoclinic or orthorhombic minerals with the analogous composition, but with K replace by Na, Mg, Co, Ni, or Zn.

All terms and definitions come from the [Glossary of Geology, 5th Edition Revised](#).

GeoWord of the Day is brought to you by: EnviroTech! envirotechonline.com.

Barry Remer update. Please visit him.

by Kathy Hrechka

We learned that Barry is now bedridden, and happy to converse with us. We so love Barry and remain his family within our geology community. Please visit him or send a card to brighten his day. Sincerely, Kathy

Barry Remer
Potomac Place
3236 Locker Street
Falls Church, VA 22042
Potomac Place phone
571-378-0295



Newsletter inputs:

- * David Fryauff
- * Jeff Guerber
- * Michael Pabst
- * Bob Cooke
- * "Pete Chinite"
- * Scott Duresky



Micromineralogists of the National Capital Area
www.dcmicrominerals.org

We are temporarily meeting at Kings Park Library in Burke, 3-5:30pm (forth Monday) until we locate a permanent meeting place.

MNCA Purpose: To promote, educate and encourage interest in geology, mineralogy, and related sciences.

President: David Fryauff

Vice President: Jeff Guerber

Secretary: Bob Cooke

Treasurer: Michael Pabst

Editor/Historian: Kathy Hrechka

Website: Kathy Hrechka

AMC Conference: open

The society is a member of:

* Eastern Federation of Mineralogical and

Lapidary Societies (EFMLS) www.efmls.org

* American Federation of Mineralogical Societies (AFMS) www.amfed.org affiliation

Dues: MNCA Membership Dues 2023

\$15 (single) or \$20 (family) donations

MNCA - Michael Pabst, Treasurer

270 Rachel Drive

Penn Laird, VA 22846

Editor's Note: By Kathy Hrechka

Send your articles and photos to your editor.

Club Article Deadline is the 1st of each month.

The Mineral Mite will be emailed by the 5th.

No newsletter July/August

Inducted into Editor's Hall of Fame – 2018

EFMLS Trophy 2021 Small bulletins