

The Conglomerate

Newsletter of the Baltimore Mineral Society

www.baltimoremineralsociety.org

Volume 13, No. 5

May, 2018

May Meeting: Show and Tell Sharing



The program for the May 23rd meeting will be a chance to show off your favorite specimen or talk about your favorite part of our hobby. Bring a specimen or two that you would like to show to club members. Explain why you find it interesting or ask the club members for help in identifying it. Please limit your presentation to no more than 5 specimens and no more than 5 minutes to give everyone a chance.

Or take 5 minutes to talk about your favorite part of our Earth-Science hobby. Do you like digging or do you like visiting shows? Do you find certain minerals especially interesting? Do you like caves or do you hike forest trails?

We'll start the meeting at the Natural History Society of Maryland at 7:30. Please be sure that you put your name on the table with your specimens to help us identify ownership and as always, do not pick up specimens without the permission of the owner.

The meeting will be hosted by Chris Lazier.

Club Picnic

In lieu of our regular meeting in June, we'll be having our annual picnic. It will be held on **Saturday, June 23** from 4-8 PM at the home of Al Pribula and Linda Watts. Mark your calendars now to hold the date. As always, the Society will provide the meats, and attendees will be bringing the sides and desserts. Plan on attending this always-fun event. More information and directions to their home will be distributed next month. Directions are on the "Members Only" page of our website.



Lyle Peterson and Herb Close, Jr. take advantage of the break to talk about rocks. Photo: M. Seeds

Baltimore Mineral Society

The BMS was established in order to allow its members the opportunity to promote the study of mineralogy and to act as a source of information and inspiration for the mineral collector. We are members of the Eastern Federation of Mineralogical Societies and affiliated with the American Federation of Mineralogical Societies.

Meetings are held the 4th Wednesday of each month (except November, December, June & August) at the Natural History Society of Maryland beginning at 7:30 p.m. Visit the club website <www.baltimoremineralsociety.com> for directions.

Yearly dues are \$10 for individual members and \$15 for family memberships. Send payment along with your name, list of family members, if applicable, address, phone and e-mail to: BMS, PO Box 302; Glyndon, MD 21071-0302.

Officers:

President Al Pribula
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<cscrystals2@gmail.com>

Directors:

Bernie Emery Al Pribula
Brad Grant Steve Weinberger

Conference Chair Mike Seeds

Editor Mike Seeds
<mseeds@fandm.edu>

Write for "The Conglomerate"!

Send news, announcements, comments, observations, or articles to <mseeds@fandm.edu>. No e-mail? Hand in your submission at a meeting.

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President's Message

From Al Pribula



Thanks to Carolyn and Steve Weinberger for their presentation on the Yale University mineral museum at our April meeting. It's always nice to hear about opportunities to view minerals in other parts of the world, especially when they're not terribly far away. For those of us who attend the Springfield, Massachusetts mineral show in August, a side trip to New Haven would be an easy addition to the trip. Have you visited an interesting mineral-related site recently? Other members of the BMS would probably like to hear about it at a future meeting. Did you take some pictures while you were there? Send some to Mike Seeds for inclusion in a future newsletter.

March and April have come and gone with their many mineral events, but May always brings a big local one: the annual show put on by the Chesapeake Gem and Mineral Society. Depending on when you're reading this, it is either upcoming on May 19 or has already taken place. It's always a great event, with lots of good dealers, silent auctions all day, activities for kids, and lots of mineral/jewelry/fossil folks to talk with. **Don't forget that the venue has been changed** from the originally-announced Ruhl Armory in Towson **to the National Guard Armory on Putty Hill Avenue in Parkville**. Information and directions can be found at their website: www.chesapeakegemandmineral.org.

On that same date is (or was, depending on when you're reading this) the first annual Spring Gala of the Natural History Society of Maryland, also scheduled for May 19 from 6-10 PM. If it's not too late, plan to attend this event. It will feature the many changes which have been made to the building in recent months (including the installation of many display cases formerly housing the collection of the late Larry Krause and donated to the Society by Alice Cherbonnier) and displaying many items from the Society's collection not previously on public display. If you were at the April meeting, you saw some of these changes, but many more have been made since then. Light refreshments will be served, and there will be the opportunity to tour the collections area of the building, normally off-limits to the public. The theme is "A Cabinet of Victorian Curiosities," so wear your best Victorian clothes and be prepared to be amazed and amused. More information can be found and tickets purchased at the Society's website: www.marylandnature.org.

What have you added to your mineral collection recently? Been on any successful collecting trips lately? Added any specimens by mail order? What new acquisitions were made at recent shows (Delaware, Gaithersburg, CGMS)? While we all get a chance each month to share parts of our collections as the Mineral of the Month, we don't always get to display our collections at other times. Well, this month is your chance. At our May meeting, we'll do our own version of "What's New in Minerals," so bring in two or three specimens that you have recently added to your collection (by trade, field collection, or via the "silver pick" method) and be prepared to share a bit about them (how they were acquired, why you think they're interesting, etc.).

And, to end the column as Neal Yedlin always ended his: "Buy and read a good mineral book."

April Meeting Minutes

by Jake Slagle

President Al Pribula called the meeting to order at



7:40p.m. Minutes of the previous meeting were approved by consensus. Treasurer Carolyn Weinberger reported that the Society was solvent and encouraged those among a larger than usual contingent of guests to sign up to join the Society.

Field Trips: As noted in the April Conglomerate,

a field trip has been arranged for May 5 to visit the National Limestone Quarries at Middleburg, PA, meeting at its offices at 9:00a.m. From there, plans are to drive to the other National Limestone Quarry at Mt. Pleasant Mills for further collecting later in the day.

Unfinished Business: None

New Business: Carolyn Weinberger expressed that a date and place needed to be arranged for the Society's June picnic. President Al mentioned that he would discuss that possibility with his partner.

Announcements:

- President Al noted that the recent Rochester Mineralogical Symposium was a success that was greatly enjoyed by all who attended.

- Al also encouraged attendance at the Chesapeake Gem and Mineral Show, now to be held on May 19 from 10-4 at the Parkville National Guard Armory.

- Al noted that on that same evening of May 19, a gala being billed as "An Evening of Victorian Curiosities" would take place at NHSM headquarters to begin at 6 p.m. Most of the activity is planned to take place in the recently renovated room next to where the Society meets. Therein will be some new cabinets featuring mineral specimens owned by NHSM that previously had not been displayed.

- Al also noted that some Maryland-collected minerals had been added to the cabinet in the room where we were meeting including numerous mostly worldwide specimens that had not previously been on display.

- Mike Seeds encouraged everyone to take photos on field trips and other events pertinent to the Society to transmit to him for possible publication in the Conglomerate.



29th Annual

Chesapeake Gem, Mineral, Jewelry & Fossil Show

Saturday, May 19, 2018 10 AM – 4 PM

Parkville Armory - Parkville, MD
FREE ADMISSION

**Top Mineral Dealers, Original Jewelry, Fossils,
Cutting Materials, Silent Auctions, Door Prizes**

Directions: Take I-695 (Baltimore Beltway)
to exit 32 North-Belair Road . Rt. 1)
Proceed 2 lights to Rossville Blvd. Turn left at Putty Hill Rd.
Parkville Armory is on the left.

Mineral of the Month:

The Mineral of the Month was anatase. Al Pribula and Steve Weinberger both had specimens, mostly thumbnails and micromounts to show. Their commentary on the visual recognition and morphology of these crystals was particularly interesting.

The break began at about 8 p.m. Shortly thereafter, Carolyn Weinberger gave a presentation that featured Yale University's Peabody Museum, especially the remarkable minerals on display at its David Friend Mineral Hall.

The meeting adjourned at about 9 p.m.

Respectfully submitted,
Jake Slagle: Secretary.

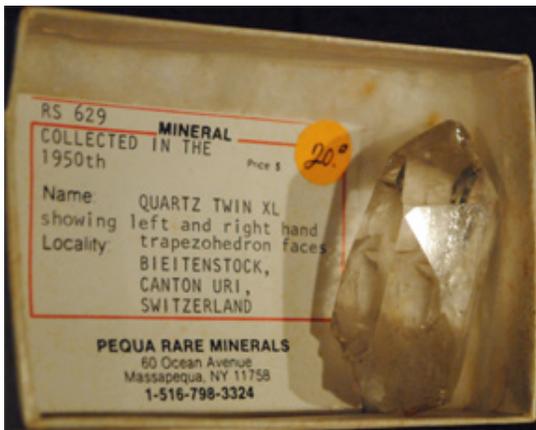
Special Specimens from a Special Dealer

text and photos ©2018 by John Vanko

How many of you remember Josef Vajdak of Pequa Rare Minerals?

Josef, a Ph.D. Mineralogist, would sell rare and exotic specimens at the Montgomery County mineral show in Gaithersburg. He was wonderful to talk to, a native of the Czech Republic, and always had a story to tell. As I recall, he worked as a sea captain for about six months of the year on commercial ocean-going vessels, and the rest of the year he traveled to the Czech Republic, purchased specimens from the Příbram museum, and would sell them in America.

He provided many rare and interesting specimens to amateur mineral collectors over many years. Here's a wonderful Quartz Crystal I purchased from him years ago.



This Quartz Crystal will be featured in another article on collecting crystal faces, when we get to the Hexagonal System - Quartz deserves its own special section.



Here is another intriguing specimen, with its label in German.

Specimen number 2550, it came from the Mining Academy in Příbram (K. k. Bergakademie Příbram), and was part of the Mineralogical and Geological Collection (Mineralog. u. geolog. Sammlung).*

It is Quartz from Cínovec, Bohemia (Quarz - Zinnwald, Böhmen in German), with just a little bit of attached Fluorite (not visible in this photo). It is a plain, rather unattractive Quartz crystal except for one thing - its label.

The hand-written "Prof. F. K. Vrba 1899" refers to the Czech Republic's most famous Mineralogist, Vrba (1845-1922), for whom Vrbaite was named in 1912. Was this his handwriting? Did he collect this specimen personally, and enter into the Collection himself? I certainly hoped so.

That was my belief, at first. Further research indicated he was born Carolus Berem Vrba (in the Latin of the Roman Catholic Church) - I discovered his birth entry in the Church books of Klatovy. He was Karel Berem Vrba in Czech, and that is how you will find his name on other known mineral labels: K. B. Vrba, not F. K. Vrba. How could this be? Was there another Vrba in mining and mineralogy in Bohemia?

I found Vrba was first appointed the position of Professor in 1876, subsequently moving to Prague to become a Professor at Charles University in 1881. He would be addressed "Professor" for the rest of his life. He was elected Rector of Charles University in Prague 1895-1896, the head of that prestigious institution, and died in Prague in 1922.

He was certainly addressed "Professor" in 1899, but he was almost just as certainly not a professor at the Mining Academy in Příbram.

The telling word is "Acquisition:" - the same in English as in German - that and the incorrect initials. Karel Vrba's father was Franz Vrba. I believe Karel Berem Vrba sent this specimen of Quartz to the Mining Academy, and whomever entered it into the collection mistook his name to be "Franz Karl Vrba" (in German), or "František Karel Vrba" in Bohemian, thus "Prof. F. K. Vrba 1899" instead of the correct "K. B. Vrba 1899".

Alas, my hopes were dashed for a hand-written label by Vrba himself, a specimen he personally entered into the Mining Academy Collection. But, this Quartz crystal was sent by Vrba from Prague to Příbram, of that there can be no doubt, and so I will treasure it forever.

*-In Czech it would have been "c. k. báňská akademie Příbram". The abbreviation "c. k." for "císařsko-královský" means "imperial-royal" mining academy Příbram, and in German "k. k." means "Kaiserlich-königlich" - used for significance in titles of an administrative authority in the Austrian part of Austria-Hungary (in the years 1804-67 it was used for the entire lands of the Habsburg Imperium).

Recap: April Mineral of the Month

by Mike Seeds

Since we are having "Show and Tell" for our May program, there will be no Mineral of the Month for the meeting.

The mineral of the month for April was anatase, a tin oxide that typically forms elongated octahedra. Cuprite forms regular octahedral, but anatase forms octahedra that are stretched along the c axis. In fact the name anatase is derived from the Greek word anatis which means elongation. Many anatase crystals are truncated producing compact crystals.

Al Pribula brought 8 micromounts which is not surprising given that many of the best formed anatase crystals are small. One specimen had been mounted by the late Neal Yedlin, BMS member and Hall of Fame member (1977). Yedlin labeled the specimen not "anatase" but rather "octahedrite". Octahedrite is an old name for anatase and recognizes the octahedral shape of anatase crystals. One of Al's specimens came from Jones Mill and another, a 1 cm sharp crystal, came from Hardangervidda in Norway, a site well known to anatase collectors. An especially nicely mounted anatase was made by the late Randy Roshschild, also a BMS member and Hall of Fame member (2016).

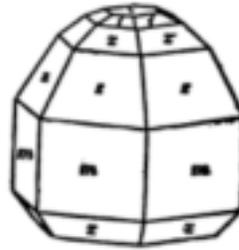
Al also brought a copy of The Mineralogical Record for July-August 2001 which carries a dramatic color photo of an anatase crystal on its cover.

Steve Weinberger brought 6 thumbnails including a perfectly formed crystal of anatase from the well-known site in Hardangervidda in Norway. Two crystals on matrix came from Pakistan, and others, including a nice cluster came from Minas Gerais in Brazil. Some anatase crystals grow interesting extensions that deform the octahedron, and one of Steve's Brazil specimens displayed this interesting deformation. In fact, the crystal is so extreme Steve referred to it as an inverted scepter.

Greenockite: An Elusive Gem

By Bill Prince with comments from Ralph Thomas
From Rock Chatter Vol. 52, No. 5

The yellow-orange hexagonal crystals of Greenockite (CdS), Cadmium Sulfide, are known for their smallness and extreme rarity of crystals which are almost unobtainable and a prize worth seeking by Micromounters.



A greenockite crystal

This specimen came to me by way of Ralph Thomas. In October of 1987, Ralph was passing out little brown envelopes to members of the Leidy Microscopical Society, and he said "to look through this, and you might find something", the envelope only said Summit Quarry, and had lots of little crumbs in it. After washing and cleaning the crumbs in a "Tea strainer" and very carefully checking out the crumbs under my microscope, I found what you see below.

This crystal is from the Summit Quarry (Houdaille Quarry), Union County, New Jersey. It is a gem crystal under 1mm across, showing a nice hexagonal form, and is yellow/orange in color.

There are only a handful of localities in the world for fine crystallized Greenockite specimens, to my knowledge the Summit Quarry has the best crystals in the United States.



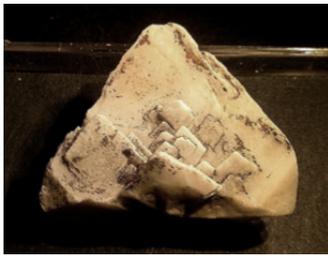
A rare crystal of greenockite.
Photo by Bill Prince

Greenockite is the only ore mineral of the element Cadmium. Most Cadmium is actually produced as a by-product of lead and zinc ores.

References:

Mineralogy- by John Sinkankas
www.mindat.org

Part of the adventure of micromounting is reaching into your shoebox and pulling something out to study and mount. You never know what you will find. Sometimes you pull out random unrelated specimens, but sometimes you find fascinating relationships. Three specimens came out of my shoebox recently and I knew they were related. They are cousins no more than once removed. But I'm not quite sure how they are connected.



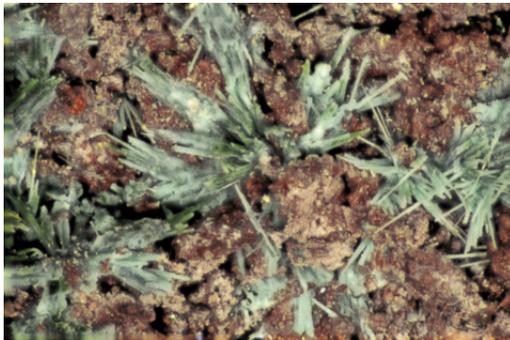
*Glauberite, Bertran Siding
Salton Sea, California.
The crystal is 24 mm across.*

Glauberite is $\text{NaCa}(\text{SO}_4)_2$ and comes from the Salton Sea. I found it in a dealer stock and was so struck by it I ignored the fact that it was too big to fit into a standard micro box. I could never have brought myself to trim it, so I mounted it on the lid of a double wide box. That makes it easy to include in the collection, and you can pull the box off

of the lid and inspect the mineral from all angles.

The fascinating thing about the glauberite specimen is that all of the individual prisms line up with each other like a distant mountain range. Each atom knew when its crystal formed where the crystal axis was, and, moreover, the atoms in one prism knew where the atoms in the other prisms were. It looks like a Japanese woodcut, but it testifies that crystals are made of atoms that obey the rigid rules of tiny spaces.

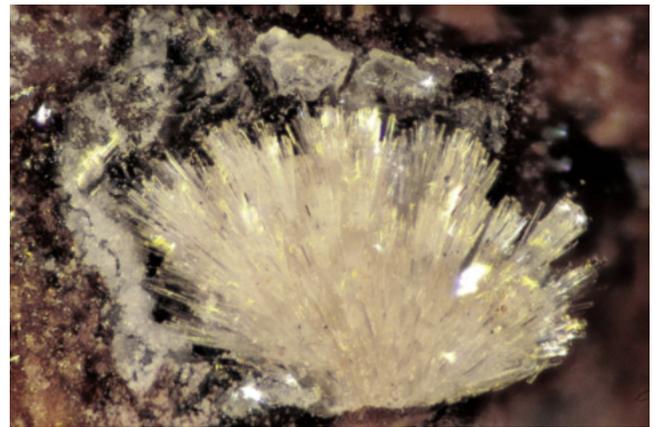
Another mineral out of the box is cyanochroite ($\text{K}_2\text{Cu}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$) from Kamchatka. The crystals have a lovely pale green color that could have been stolen from Michelangelo's ceiling. Unlike the rigid pattern of the glauberite mountains, the needles and blades of the cyanochroite are not



*Cyanochroite, 2nd Scoria Cone
Northern Breakthrough
Tolbachik Volcano, Kamchatka, Russia.
Field of View 5 mm.*

linked in a widespread pattern. Yet the randomness seems to reveal an overall pattern of scattered blossoms.

How can randomness reveal a pattern? I thought of Duchamp's painting, *Nude Descending a Staircase*. It is not an enticing painting because it isn't a picture of a nude; it's a picture of the motion of someone descending a flight of stairs. The random shapes in the painting combine to show the pattern in the motion. In the mineral, the random scatter of crystal blossoms suggests underlying rules that guide the drifting atoms to their rest.



*Topaz, Wannenköpfe, Ochtendung, Eifel, Germany.
Field of View 3.5 mm*

That same evening, a topaz ($\text{Al}_2(\text{SiO}_4)(\text{F},\text{OH})_2$) specimen came out of my shoebox. Topaz crystals from Utah are nice chunky prisms, but topaz from Wannenkopf in Germany takes the form of slender needles. Unlike many topaz crystals from Wannenköpfe, this one was not a single needle but a lovely spray only a couple millimeters across. It is hard to believe it is topaz given the faceted topaz stones sold in expensive rings, but under the highest magnification you can see that the needles are terminated in sharp chisel points. That's a telltale clue that the mineral is topaz.

These three specimens belong together -- to catch a phrase from *Sesame Street*. Perhaps it is because their overall shape suggests the regularity of quantum mechanics and the hand-holding electrons that make up crystals. The unimaginably tiny world of atoms is made clearly visible in our larger and clunkier world. Of course, that could be true for almost any crystal specimen, and that's just one reason mineral collecting at any scale is so fascinating.

Spear Phishing Targets Roc and Mineral Clubs

by Mark Nelson from AFMS Newsletter, April 2018

We know that "phishing" is an attempt by criminals to use means, such as the Internet and emails, to obtain money. Using emails, there are two ways you can send phishing campaigns: the first is 'spray-and-pray' which is a shotgun approach. Get as many email addresses from the organization you can, and send them all an email that they might click on. The second approach is decide what data you are after, then figure out who has access to that data, and specifically target those people. That is the spear phishing approach. There are thieves out there who believe that they need the treasury of rock and mineral clubs more than do the members of those clubs! Spear phishing attempts are not typically initiated by random hackers, but are more likely to be conducted by perpetrators targeting specific people or groups for financial gain. This was first brought to my attention in 2015 and it is still affecting rock and mineral clubs throughout North America. Knowledge is the best armor against becoming a victim of these criminals!

Spear Phishing is an email targeted at a specific individual or department within an organization that appears to be from a trusted source. It's actually cybercriminals attempting to steal confidential information or to convince a person to send them money. These criminals know that those in our hobby are staffed by volunteers untrained in cyber security. In our hobby we have web sites that serve to share our hobby with our members and prospective members. We post past issues of newsletters for reference and so that prospective hobbyists can see the enjoyment that we bring to those who will participate in it with us.

In a spear phishing attack, threat actors use their acquired knowledge of the potential victims to target them, and that approach allows them to tailor the attack. These emails are more convincing and harder to detect than regular phishing emails. The attacker knows exactly who and what they're targeting. These cyber criminals use a technique called "Water-Holing". This technique takes advantage of our hobby websites that people regularly visit and trust. The attacker will gather information about a targeted group of individuals to find out who to target at those websites. Often there are emails listed for key people and they know that. They mine our websites for terms such as "president" and "treasurer", and they read more to get the emails of the individuals that they will be targeting from those groups – particularly for the club's treasurer. Cybercriminals create bogus profiles to try to trick

the person with the information or money that they want. They will impersonate a celebrity or one of your friends or colleagues. These profiles look very much like the real thing, and it's easy to get tricked. They try to impersonate a person that the bad guys already know you like and trust. They will then send fake emails to attempt to steal money or information.

These criminals are targeting institutions, businesses and individuals. The examples and defenses can take a lot of explaining, but this is typical of how it works in our hobby:

1. The cyber criminals (we'll call them the Red Box group) have identified the Ace Mineral Club as one that is active and that has a lot of members and activities. They know that activities need money and that members equal money. They know that most of these groups have vendors from which they buy supplies, equipment parts and such. The criminals also know that our clubs may have annual shows and at these shows are people we call vendors or dealers.

2. The Red Box criminals have identified Melinda Stone as the president and Alice Agate as the treasurer of this group.

3. With email providers such as AOL, Gmail, Hotmail and such, there is a simple way to have your outgoing emails read your name instead of your email address. This gives you the option to have your outgoing emails sent with a degree of personalization. Red Box changes the name on his email to Melinda Stone.

4. Alice Agate, the club's treasurer, receives an email from Melinda Stone. It reads something like this:

Alice, What's the status of the payment to the vendor? Has it been processed yet? Please send \$2,715.43 to Able Arnold, P.O. Box 243 in Random City as quickly as possible! I'm tied up in a project at work, please reply by email when this is done. ----- Melinda.

5. Alice has never been advised by Melinda to do anything that wasn't in the interest of the Ace Mineral Club and she trusts her. What Alice does next will determine the fate of those club funds.

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Spear Phishing

continued from page 7

I know for a fact that these sorts of spear phishing activities have resulted in club monies being sent to the bad guys in response to fake requests. These criminals are not trying to take over your computer to try to get data. They are going after YOU instead. They know that they don't need as many technical skills to find one person who might be willing, in a moment of weakness, to open up an attachment that contains malicious content." This means it does not matter if your workstation is a PC or a Mac, a tower, laptop or workpad – the last line of defense is... you guessed it: YOU!

What can we do to prevent this kind of theft? First - if the email request is unexpected, look at the email of the sender and hover your cursor over the name this may expose the true sender. You may also be able to right-click on the name to expose the actual sender. Many times the attacker will employ a slight-of-hand (like magicians do) so you think you are reading an email address correctly but they've actually switched out, added or replaced characters (commonly known as substitution and transposition). It's common to see legitimate email addresses with an "m" replaced with an "r n", a lower case "L" switched out with the number "1" or a .com email reading as .co instead. Even the slightest change in an email address means the email is going somewhere else. In the case of our president's email of melindastone, the "r n" substitution would make it look real – rnelindastone.

Second - make sure that the members of your society or club's board of directors are aware of these rock-and-mineral-hobby attacks and that it has policies in place to prevent checks from being issued to the criminals. These policies should include:

1. All checks are kept with the Treasurer.
2. No signed or blank checks are given to anyone else in the club "just in case".
3. No checks are created without prior board approval that specifically lists the payee, expense category and the exact approved amount.

Third - forward all fraudulent phishing emails to the U.S. Department of Homeland Security Computer Emergency Readiness Team's Anti-Phishing Working Group: phishing-report@us-cert.gov

I hope that this will help your club, society or federation. If you are targeted by these cyber criminals please forward the email to me so I can update my own knowledge.

Scrambles

by Mike Seeds

Unscramble the following to spell the names of six minerals.

Nice Lama	_____
Achy Colors	_____
Brain Can	_____
No Mu Curd	_____
Evenly	_____
Any Hue	_____

Finally, what do all these minerals have in common? Answers below.

Photos and Stories Wanted

Want to see your minerals in The Conglomerate? Whether you dig them yourself or buy them from a dealer, whether they are micromounts or boulders, whether they are rare or common, readers would enjoy seeing your mineral photographs and hearing about your adventures. Have you visited a mineral museum lately, gone collecting, driven through promising geology? Got some selfies in a rock shop or a mineral show? Submit your photos and stories so everyone can enjoy them. Send photos to mseeds@fandm.edu

Scrambles: Answers

the names end in "ite".

What do all these minerals have in common? None of

Any Hue	Hauyne
Evenly	Gallite
No Mu Curd	Colundrum
Brain Can	Crinoid
Achy Colors	Chrysocolla
Nice Lama	Amazilite

The Conglomerate

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Events Near & Far

May

19: Chesapeake Gem & Mineral Show 10 am – 4 pm, Parkville Armory, Parkville, MD Free Admission. Info and Directions: www.chesapeakegemandmineral.org

19-20: Berks Mineralogical Society Show, Leesport Farmer's Market Leesport, PA

24-27 Roanoke Valley Mineral and Gem Society Show, Salem Civic Center, Salem, VA

June

2: Pennsylvania Earth Sciences Association, Macungie Memorial Park, Macungie, PA

15-16: Lancaster County Fossil and Mineral Club, Solanco Fairgrounds, Quarryville, PA

August

10-12: East Coast Gem, Mineral, & Fossil Show, Better Living Center, West Springfield, MA

September:

3-9: EFMLS Workshop at Wildacres. Speaker-in-Residence, Alfredo Petrov, noted mineralogist and dealer. Info and registration: efmls-wildacres.org

22-23: Atlantic Coast Gem, Mineral, Jewelry & Fossil Show, Howard County Firgrounds, West Friendship, MD.

29-30: Franklin-Sterling Gem & Mineral Show, Littell Community Center, Franklin, NJ

October:

13-14: South Jersey Gem, Jewelry, Mineral & Fossil Show, Jewish Fed. Of Southern NJ Annex Bldg, Cherry Hill, NJ