



The Conglomerate

Newsletter of the Baltimore Mineral Society

www.baltimoremineralsociety.org

Volume 12, No. 1

January 2017

January Meeting: Garnets

Our January program will be a discussion of garnets presented by Al Pribula. Al promises to bring lots of garnets to display and discuss. He adds:



Almandine

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“January’s birthstone is garnet. “Garnet” isn’t a single mineral species, but rather a group of about thirty species of silicate minerals adopting isometric crystal structures. Garnets are found worldwide in a number of geological settings, and are often found as sharp crystals almost spherical in shape. The red and green varieties are frequently faceted and used as gemstones. The different varieties of garnets, their crystal forms, and the origins of their various colors will be discussed, illustrated with numerous specimens from around the world, taken from the presenter’s collection of his birthstone and also Maryland specimens from the Natural History Society’s collection.”

The will take place on January 25th at the Natural History Society of Maryland, 6908 Belair Road, Baltimore, Maryland 21206. If you need directions, visit the BMS website at baltimoremineralsociety.org/directions.html.

Don’t miss this special program.

The Kick-Off

by Steve Weinberger, Wildacres Committee Chair

January 1 marks the opening bell for registering for one or both of our upcoming EFMLS Workshops at Wildacres. Each week-long session is held in Little Switzerland, NC thanks to the auspices of Wildacres Foundation, a non-profit dedicated to the betterment of human relations.

Let me share some of the wonderful things about our EFMLS Workshops. Nestled on its own private mountaintop, the Wildacres Retreat is located just off the Blue Ridge Parkway about an hour north of Asheville, NC. The buildings are modern, yet blend in well with the rustic scenery of the mountains.



Bedrooms feature private baths, comfortable beds and generally accommodate two people. Meals are served family style in a lovely dining hall and the food is ample and good. A well stocked salad bar is available for most lunch and dinner meals and a variety of special diets can be accommodated by the kitchen staff with advance notice.

Wildacres is quiet! There are no radios or TV’s and while there is internet service, it’s limited and totally unavailable should there be heavy cloud cover or storms (satellite does that!). There are wide porches and a large patio complete with rocking chairs as well as a canteen (open in the evenings) for snacks, playing cards, ping-pong, or just talking.

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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:

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Brad Grant Steve Weinberger

Conference Chair Mike Seeds

EditorMike Seeds
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Write for "The Conglomerate"!

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

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President's Postings

by Jim Hooper, BMS President



Well despite my demands for a recount, I find myself re-elected to the post of president of the Society for the coming year. When the politicking and confetti tossing subsided at Al and Linda's in December there was one man left standing. That was me, and I'd only gotten up to get some more food goodies from the banquet table. It was a victory of a narrow margin, myself versus nobody. I should have gotten suspicious when I met a Russian visitor to the October BMS meeting. Well, what's done is done and so with humility and gratitude, sort of, I accept the mandate. The election of Society officers was announced at the holiday dinner party and should be reflected in the minutes in the newsletter. And now the good news. Anyone who wasn't elected to something can still offer their official support as coordinator or committee head of other necessary functions.

I will enumerate these positions at the January meeting. They will include such areas as Snacks coordinator to Presentations, Greeter, and some other stuff I'll have to look up again. They are here somewhere. So please bring yourself, a friend if you like, and your activist nature to the meeting in January. And as committee head suggests, we are allowed to have more than one person in a given position. Thus far Bob Eberle has agreed to do another year as Field trips coordinator, Mike Seeds will continue as Editor of the newsletter and the Desautels Symposium coordinator. Thank you both for that. Carolyn and Steve W. have agreed to stay on as EFMLS and AFMS liaisons, Thank you very much.

That said let me stray once more into the world of mineralogy with a couple seasonal insights. Ice is a very prevalent mineral this time of year (for some reason). And the familiar chemical signature, H₂O, is only considered a mineral when solidly frozen. Not as water, or steam, not as snowflakes, only as ice. Water can produce hexagonal crystals that we call snowflakes but they're not mineral. The other seasonal notable is Halite. Baltimore and surrounding counties have special programs that will bring Halite to your street and often right out in front of your house or apartment where you can peruse them for display specimens. It's also known as rock salt and known to cause changes to a mineral like ice. So don't put them too close together in your collection.

Use care in getting about out there. Ice has been known to rapidly change a person's relation with the earth's surface from a vertical position to horizontal this time of year. Tune in to weather related closings especially the Baltimore County Schools system if the weather looks iffy. When they close, we don't meet. See you at the meeting in January. Hey it's going up mid 20's temperature today! Spring can't be far behind.

Jim

Minutes From our Last Meeting

by Carolyn Weinberger, Secretary pro tem

The December meeting of the Baltimore Mineral Society was called to order at 6:20 pm by President Jim Hooper. The only order of business was the election of officers for 2017 with the following slate of candidates being presented:

President -

Vice President - Al Pribula

Secretary - Jake Slagle

Treasurer - Carolyn Weinberger

Directors - Bernie Emery, Steve Weinberger, Mike Seeds, Al Pribula

Jim Hooper was nominated to continue as president and agreed.

Lynne Emery moved that the revised slate be accepted. Seconded by Barry Berlin, the nominees were duly elected.

The meeting adjourned at 6:27 pm after which those in attendance continued to enjoy the Holiday Party hosted by Linda Watts and Al Pribula.

Mineral of the Month

By Steve Weinberger

If you have ever wondered about the location and identification of minerals, two terms come to mind: **type specimen and type locality**.

When a potentially new mineral species is found it must be analyzed to be sure that it truly is something that has not been studied before. The work done on that particular mineral designates it as the type species; that means that it is the one item on which that identification was done.

The location from which it was first found is called the type locality and any mineral from that location can have the listing type locality on its label.

There can be any number of minerals listed, as type locality as long as they come from that specific spot, be it a mine, quarry, or other well-defined area, but there can be only one type specimen because, by definition, it is the first found or identified.

Many of us, of course, have type specimen because there are a lot of regions that produce abundant examples of those minerals. But it is rare to have a type specimen because most, if not all, belong to either the museums or laboratories that did the identification work or to the people who found them.

So, if you have a mineral labeled type specimen, ask yourself from whom or where did I get this?

Please do not bring in any minerals this month because the front table will be filled with our speaker's display.

Relocating to California

Long time BMS member Jim Schoonmaker has moved to California. As he prepared to move, he donated much of his private mineral collection to the Natural History Society of Maryland. He writes to send his best wishes to BMS members and to invite them to communicate with him.

Life in Nevada City, California presents so many opportunities for rockhounds like us. I have joined the Nevada City Gem and Mineral Society and look forward to going on some field trips in 2017. There are also many places for gold-panning and I am excited about trying that as well when the weather warms up again. I brought my faceting machine across country with me. Once I have it set up I plan on practicing on some topaz stones I bought at a local crystal store.

My sister Susie and I have an exciting trip right around the corner. We are going on a dig at the Pala Mine outside

of San Diego to collect crystals the first weekend in January. People find tourmaline, aquamarine, morganite and many other minerals at this site. I'll let you know what I come home with.

Please give my best to everyone in the club. Happy New Year. to you all. My e-mail is below

Jim Schoonmaker
jimschoonmaker@hotmail.com

Color in Minerals – Part IX: Some Minerals are Opaque

by Al Pribula

Many minerals form transparent crystals (at least some of the time). Humans seem to be attracted to the sparkly, gemmy nature of these objects, which show the purest colors. Purple amethysts, delicate blue aquamarines, fluorites of various colors, brown smoky quartz crystals, yellow heliodors, deep green tourmalines, red rubies—all of these colors are beautiful in and of themselves, even if the crystal is on the cloudy side. However, when we view a transparent sample of any mineral, we tend to appreciate and value the specimen more. Even well formed transparent but colorless crystals of fluorite, quartz, selenite, or topaz exert a fascination. We tend to consider any cloudiness as an imperfection or impurity (which, indeed, is often the reason for the cloudiness). When gemstones are evaluated, the clarity (freedom from defects) is considered an important aspect of their beauty and value—one of the “four C’s.” (Color, cut, and carat weight are the other three.)

However, there are some minerals that are always opaque and never transparent, no matter how pure they may be. Some of these are the native metals (gold, silver, copper, platinum, etc.), but many of them are merely metallic looking (even though they aren’t metals per se) and have a reflective surface and a gray-black or yellow/gold/bronze color to them. Some of them have bright colors such as red or orange. What causes these minerals to absorb essentially all of the visible light that hits them and transmit essentially none?

As mentioned in Part VIII, large molecules can have extended delocalized pi-bonding molecular orbital systems that allow them to absorb visible light. The situation is somewhat similar for the next three color-producing mechanisms on the list in Part III: metallic conductors, pure semiconductors, and doped semiconductors. In these cases, however, the molecular orbitals are so delocalized as to encompass essentially all the atoms or ions in the sample, rather than just some limited (perhaps large, but still limited) number of atoms in a molecule. Because of this, the electrons are very free to move around in the sample, and the molecular orbitals are extremely close together in energy. This huge number of molecular orbitals spanning an entire range of energies with almost no energy gap between them is referred to as an energy band, and the theory explaining this sort of bonding is named band theory.

In the case of a metal, the energy bands overlap in energy to such an extent that the electrons are essentially

totally free to “roam” throughout the entire sample. This freedom of movement for the electrons explains the high heat and electrical conductivity of metals. Since the individual molecular orbitals are so close together in energy within the bands, the electrons can absorb essentially any amount of energy provided to them (either in the form of heat or light) to be promoted to any one of a large number of excited states. This means that the selective absorption of just one or a limited number of energies is no longer the case—the electrons will take whatever energy you give them. Since essentially all the light is being absorbed, metals are never transparent, and usually have a silver/gray/black color. (Because of their particular electronic structure, copper and gold absorb slightly less light in the red/yellow end than they do in the rest of the visible spectrum, so they reflect more of those colors and end up with the characteristic red/orange and yellow colors.)

Once the electrons have absorbed this range of energies and have been excited to a large array of excited states, they want to return to their ground state as quickly as possible by emitting the energy they have absorbed. For that reason, essentially all of the energy absorbed will be immediately re-emitted. If the surface of the sample is rough, the light is re-emitted in a variety of directions (i.e., it will be scattered), and the sample will appear dull or “soft.” However, if the surface of the sample is very flat (either naturally or from being polished), the light rays will all be re-emitted in the same direction, giving the sample a very high reflectivity (that’s a fancy way to say it’s shiny), which is characteristic of metals. A somewhat similar but unique case is that of graphite. As I discussed in my article on the carbon group in the December, 2015 *Conglomerate*, graphite’s structure consists of infinite two-dimensional sheets of six-membered rings of carbon atoms. Between these layers are highly delocalized pi-electron clouds that allow two-dimensional metallic-type bonding, even though carbon is a nonmetal. This gives graphite some of the properties of a metal, including being opaque, shiny, and an electrical conductor.

In semiconductors, the situation is a bit different. Here, the energy bands do not overlap, but rather are separated by a so-called “band gap.” In order for the sample to absorb energy, enough energy to jump this gap must be supplied. As always, if the band gap corresponds to an energy of light in the visible region, the opportunity exists for the sample to be colored by this mechanism.

Color in Minerals

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Also, the promotion of an electron from its ground-state band (the “valence band”) to the higher-energy band (the “conduction band”) frees the electron to move about in the sample, increasing its electrical conductivity. This explains why the electrical conductivity of semiconductors increases as the temperature increases, which is the opposite of what is observed for metallic conductors. If the band gap is larger than the energy of visible light (for example, as it is in diamond or quartz), EM radiation can still be absorbed, but it will be higher-energy UV light. This means that the sample will appear colorless and may also be transparent. Such is the case for corundum, gahnite, sphalerite, spinel, and zincite (at least when these are chemically pure, which isn’t too often in natural samples).

For many oxides (such as bixbyite, cassiterite, groutite, ilmenite, manganite, pyrolusite, and tenorite), sulfides (such as alabandite, argentite/acanthite, bravoite, carrollite, chalcocite, covellite, galena, hauerite, linneaite, metacinnabar, molybdenite, siegenite, stibnite, and troilite), sulfosalts (such as boulangerite, enargite, jamesonite, tetrahedrite, and tennantite), arsenides (such as arsenopyrite, cobaltite, lollingite, safflorite, and skutterudite), and tellurides (such as calaverite, hessite, melonite, petzite, and sylvanite), the energy of the band gap is less than the lowest energy which can be supplied by visible light. That means that all of the visible light incident on the sample will be absorbed, and the samples will have a silver/gray/black metallic-looking surface. If the band gap is little larger, so that the higher-energy visible light (in the violet/blue/green range) is more strongly absorbed, the sample will reflect a color in the lower-energy red/orange/yellow end of the spectrum. This is the cause of the red colors of cuprite, cinnabar (used as the pigment vermilion), lepidocrocite, realgar, rutile, and the “ruby silvers” (proustite and pyrargyrite), the red-orange color of minium (used as the pigment red lead), the brown-red color of montroydite, the yellow-orange of orpiment, massicot, and litharge, the yellow of greenockite and hawleyite, and the yellow-bronze of chalcopyrite, cubanite, marcasite, millerite, pentlandite, pyrite, and pyrrhotite. (When synthetic greenockite (cadmium sulfide) is used as a pigment, it is called cadmium yellow. When about 25% of the sulfide ions are replaced by selenide ions (Se^{2-}), the band gap narrows and the pigment cadmium orange is produced. When about 50% of the sulfides are replaced by selenides, the band gap narrows further and the pigment cadmium red is the result.) Because of the way they are produced, colors produced by this mechanism are often called band-gap colors.

In some oxides and sulfides, in addition to the band-gap color, there can be light absorption due to charge-transfer transitions as well. This is especially true when there are ions of different charges present. These might be ions of different metals, such as in chromite (FeCr_2O_4 ; containing Fe^{2+} and Cr^{3+}), ilmenite (FeTiO_3 ; Fe^{2+} and Ti^{4+}), jacobsonite (MnFe_2O_4 ; Mn^{2+} and Fe^{3+}), pseudobrookite (Fe_2TiO_5 ; Fe^{3+} and Ti^{4+}) and in the artificial pigment copper chromite black (CuCr_2O_4 ; Cu^{2+} and Cr^{3+}), but can also be the same metal with two different charges, such as in magnetite (Fe_3O_4 ; Fe^{2+} and Fe^{3+}), hausmannite (Mn_3O_4 ; Mn^{2+} and Mn^{3+}), hollandite ($\text{BaMn}_8\text{O}_{16}$, Mn^{3+} and Mn^{4+}), vanoxite ($\text{V}_6\text{O}_{13}\cdot 8\text{H}_2\text{O}$; V^{4+} and V^{5+}), and digenite (Cu_9S_5 ; Cu^+ and Cu^{2+}). In these cases, light energy can be absorbed when an electron is transferred from the lower-charged ion to the higher-charged ion, adding to the intensity and breadth of the absorption, making all of these black in color. (My guess is that in franklinite (ZnFe_2O_4 ; containing Zn^{2+} and Fe^{3+}), the normal black color is due to charge-transfer to the Fe^{3+} from the Fe^{2+} almost always present partially substituting for the Zn^{2+} . It’s pretty hard to remove an electron from a Zn^{2+} ion.) The red-brown color of hematite is due to d-d transitions on Fe^{3+} , but if part of the Fe is present as Fe^{2+} , $\text{Fe}^{2+} \rightarrow \text{Fe}^{3+}$ charge transfer produces the frequently-seen black color. Synthetic manganese(II) sulfide (MnS ; mineral name alabandite) has a pink color characteristic of d-d transitions in Mn^{2+} when freshly prepared, but darkens to brown when exposed to air because some of the Mn^{2+} ions are oxidized to Mn^{3+} , allowing $\text{Mn}^{2+} \rightarrow \text{Mn}^{3+}$ charge-transfer transitions to occur. Naturally-occurring alabandite specimens are black due to this reason.

It is often possible for the conductivity behavior of a semiconductor to be altered (normally increasing its conductivity) by adding controlled trace amounts of some other substance. This trace impurity is referred to as a dopant (or activator), and the result is called an activated or doped semiconductor. This doping makes the band gap smaller. Carefully controlling the identity and amount of dopant is also a way of controlling the size of the band gap (and hence the conductivity behavior of the sample), and this is the (admittedly very over-simplified) basis for the entire modern electronics industry that permeates virtually every facet of life today. Of course, if you are controlling the amount of energy that the electrons have in your sample, you also can control (or explain) the colors of the samples in question (such as in the cadmium pigments mentioned above). This mechanism is the cause of many (if not all) of the colors that can be exhibited by

Gilding the Lily

by J.W. Downs, from *The Stone Chipper*, February, 2007

It is hard to improve on Nature, yet we have a strong tendency to take Nature's creations and try to make something else out of them. Obviously this does not apply to opening a geode or cutting and polishing a slab of stone to reveal the beauty of its structure. Agate frequently can be shown to better advantage when its colors are enhanced by judicious dyeing and the color of some crystals can be deepened by heat treating or exposure to radiation. All of this is fair practice to bring out the natural beauty of gems and minerals.

My objection is to the use of Nature's wonderful creations as a vehicle for something "cutesy." Does a metal deer or fisherman placed inside an otherwise beautiful geode or a Buddha glued to a nice piece of jade really improve it? Possibly the worst examples are hand-painted images of Indians (canoes optional) or amply antlered deer heads on otherwise flawless slabs of polished Brazilian agate. It would take a leap of the imagination to say that these items have been improved with the addition of the artwork.

This is analogous to young junior high school girls who think that they can improve their looks by applying eyeliner, lipstick and other artifacts of make-up in the belief that it makes them more beautiful. They do not realize that they have already reached a high degree of perfection and that nothing they could add would be an improvement.

Frequently we see an object and immediately think, "What can I make out of it?" Some mineral specimens are pressed in to service as bookends, which, in some cases can be a convenient way of displaying the symmetry of a good stone. This is better than making a wastebasket out of an elephant's foot or a hat rack from a moose head. It can be validly argued that neither the elephant nor the moose had been improved by the taking of its property and that the lives of the hunters probably had not been notably enriched.

An egregious example of improving on Nature was seen in a California store that sold quartz crystals that had been modified to have four sides and a pyramidal top, resembling an obelisk. Someone had taken high quality hexagonal quartz crystals up to six inches in length and modified them because "their vibrations were more powerful in this shape."

The most important part of art is knowing when to quit. Finishing touches on sculptures and paintings have some-

times been disastrous. Examples in music are legion. Upon hearing a Beethoven symphony, one young music student remarked that Beethoven missed a lot of good stopping places. Brevity is the soul of wit. If a beautiful crystal ends its days unadorned in a display cabinet, it is not the worst fate that can befall it. This would be the next best thing to remaining undiscovered in situ for future eons.

Field Trip Ideas

Spring is when our thoughts turn to rock collecting, but winter is when we dream and plan. If you are interested in collecting trips, contact the Field Trip Coordinator Bob Eberle with ideas



"Let's dig over here.
The ground is softer."

and suggestions for collecting sites. Do you know someone at a quarry or a property owner of a good location? Give your suggestions to Bob. 410-661-8436. Let him know that you are anxious to dig, and he will keep you on his list.

Color in Minerals

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diamond. (This will be discussed more fully in a later article in the series.) The light-emitting diode (LED) bulbs that are becoming more and more common also rely on this mechanism of producing light. For a long while, only colored LED sources were available, but once it was discovered how to make "white" LED's, this high-efficiency type of lighting has become increasingly prominent and popular. (I say "white" because the mix of visible light energies in a "white" LED is very different from sunlight, so that they often don't reveal the true colors of the objects they illuminate.)

In the next article, I'll discuss how the presence of chromium can lead to a wide variety of colors in minerals. And then: we're almost there—just one more color-producing mechanism to go! In the article following that, I'll discuss this last mechanism and then move on to looking at what causes the colors in a number of specific minerals that have not previously been treated in detail.

Shoebox Adventures 67: Forms

text and photos by Mike Seeds

We can enjoy a mineral by looking at its color or crystal structure or its chemistry. We can think about its origin or texture. Another way to think about mineral specimens is to look at their form. That's not a very scientific term, but it can help explain why we like certain specimens over others.

We might classify some specimens as natural forms. To put it simply, they look like the rocks that they are. Nothing particularly distinguishes them or suggests some thing else.

This Garnet on quartz came out of my shoebox from the Springfield show. The small quartz crystals form an oval cup that might be the lining popped out of a small vug. It's a little bit hard to see the depression in the cup in this photo made up of 30 or so frames stacked to improve depth of field, but viewed under a microscope, the cup formation is quite obvious. Perched on the edge of the cup is a lovely little spessartine garnet. The photo of the specimen might suggest a fried egg, but the yoke is much too small; it would not be a good egg. The specimen, in spite of its interesting shape, is really a natural form.



Garnet var Spessartine. Ruby Mountain, Chaffee County, Colorado.
Field of view 5 mm.

Some minerals have an organic form in that they have a shape that suggests a living thing. We might also specify that a mineral of organic form appears to have grown gradually as a plant or animal might. Of course, all minerals grow gradually, but that impression is especially marked in specimens that take on an organic form.

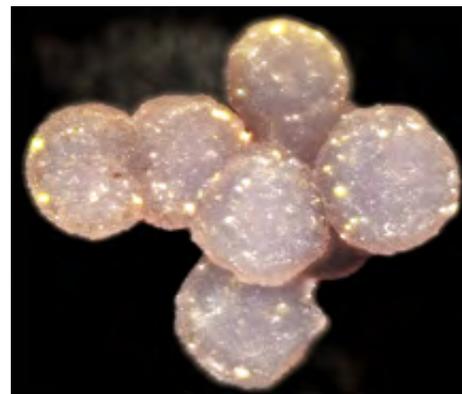


Celestine, Woodville, Sandusky County, Ohio. FOV 16 mm.

The Celestine shown here has an organic form. If someone told you it was a Kenyan turnip cleaned and ready to be chopped up and added to soup, you would

probably believe it. It appears to have grown gradually with new branches budding from the main stem. It is, in fact, Celestine, from Sandusky County, Ohio, and it came, not from Kenya, but from my Springfield Show shoebox.

How would you describe the cluster of purple spheres shown in the last photo? It doesn't suggest a natural form or an organic form. Perhaps we could term it artificial. It looks like it was manufactured, as if someone made seven sparkly beads and stuck them together. It is actually a natural formation of quartz best described as amethyst. These come from Sulawesi, Indonesia and are marketed as "grape agate". It was hiding in my Springfield Show shoebox.



Quartz var Amethyst. "Grape Agate", Mamuju area, Sulawesi, Indonesia.
Field of view 11 mm.

There is nothing official about this classification of forms as natural, organic, or artificial, and you might come up with some other forms. It would not be hard to argue about which form applies to a given specimen. After all, you could make a reasonable argument that the "grape agate" shown here could be termed an organic form. The point of the exercise is to use forms as an entry point to enjoying a specimen. Just as you might visit a sculpture museum and think about representational forms and rhythmic forms and geometrical forms, you can look at mineral specimens in a new way by thinking about their forms.

The Kick Off

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Each of our workshops features a guest speaker and a variety of classes for participants to take. Our week is divided into two parts (semesters) of 2 days each with an activity day between the halves. Activity day affords all a chance to leave campus and participate in a field trip, explore the region, visit Asheville with its fabulous Biltmore Mansion and unique craft shops, or whatever else you wish to do. There is also a tailgate session that afternoon for you to swap or sell items you have made or brought. One evening is devoted to an auction of donated hobby related items while another to "show and tell" so everyone can see the projects completed during the week. Wildacres is always a relaxing, fun and educational week.

Our spring session will feature Bob Jones as Speaker-in-Residence. Always a popular speaker, Bob will regale us with tales of his adventures in rockhounding around the world. Dates for this week are Monday, May 22 - Sunday, May 28.

Fall will feature Dr. Timothy Morgan as Speaker-in-Residence. Tim's specialty is gemstones and we're sure you'll drool over the tales and images he shares during his talks. Dates for fall are September 4 - 10.

Tuition for each week is \$410 per person and includes room and board. Your only extra expenses will be for materials fees paid to the teacher plus items you may purchase at the auction or tailgate.

If you're interested in attending, visit efmls-wildacres.org for a list of classes being offered, info on the speakers and a registration form.

Mark your Mineral Calendars:

Atlantic Micromounters Conference
March 31 – April 1, 2017

Speaker: to be determined

Location: Springhill Suites by Marriott, Alexandria.
6065 Richmond Hwy, Alexandria, VA 22303
Phone (571) 481-4441

Details: www.dcmicrominerals.org

Tab Events - Conference

Kathy Hrechka, MNCA Conference Chair

Time's Running Short - Renew Now!

by Carolyn Weinberger

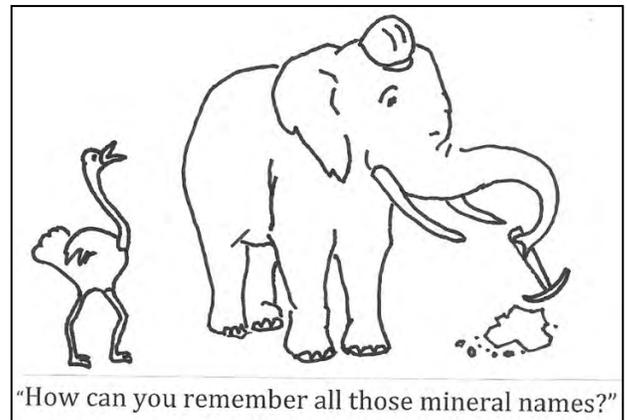
Now's the time for all good men (and women) to take pen in hand, fill out the membership form found on page 9, and renew your membership in BMS for 2017. Cost is only \$10 for individuals and \$15 for couples and children living at home under age 18.



What does that small amount bring to you?

- Membership in a terrific organization
- The award winning Conglomerate issues
- Numerous, well written education articles
- Interesting monthly programs
- The opportunity to participate on field trips
- And much, much more

So take a moment or two and renew your membership now so you don't forget. Then either bring the form and your dues with you to the meeting on January 25th or mail it to the address shown.



Baltimore Mineral Society Membership Renewal

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

E-mail: _____

Names of family members included in membership:

Annual dues for individual memberships are \$10.00

Annual dues for family memberships shall be \$15.00 for husband and wife and all children residing in the home under the age of 18.

Renewal deadline is the March meeting.

Mail or give to: Carolyn Weinberger
PO Box 302
Glyndon, MD 21071-0302

Checks should be made payable to "Baltimore Mineral Society".

The Conglomerate

Mike Seeds, Editor
516 Bald Eagle Ct;
Lancaster, PA 17601



Upcoming Events

January:

25: BMS meeting at the Natural History Society of Maryland, Belair Rd. Speaker Al Pribula on garnets. 7:30 pm

February:

7: Gem Cutters Guild of Baltimore meeting. Meadow Mill at Woodberry - 7:30 pm

9 - 12: Tucson Gem & Mineral Show - Tucson Convention Center, Tucson, AZ.

10: Chesapeake Gem & Mineral Society meeting at Westchester Community Center. Pam Jeffries and Dave Mitchell on collecting agates in the Cady Mountains.. 7:30 pm

22: BMS meeting at Natural History Museum of Maryland. Topic to be announced. 7:30 pm

Rockhound Soapbox

by John Martin, from AFMS Newsletter, Dec. 2016

There's an important and interesting article in the AFMS December, 2016 – January, 2017 that comments on the government definition of "Recreational Rock-hounding" and clarifies some of the rules for collecting on public lands.

You can find the article by going to the AFMS website <www.amfed.org/afms_news.htm> and downloading the issue.

In addition, the February EFMLS Newsletter contains information on new collecting guidelines being proposed for collecting fossils on public lands. That issue is attached or can be downloaded at <www.amfed.org/efmls>.