The Conglomerate

Newsletter of the Baltimore Mineral Society
www.baltimoremineralsociety.org
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Program Notes

Our civilization is made possible because ancients figured out how to extract metals from ore. They could make copper and bronze and later smelt iron. Before chemistry was a thing, blacksmiths were forging iron. We think of weapons, but much of the ancient metal work was practical implements to make life convenient.

Separating copper from ore takes chemistry, but sometimes metals occur naturally. Many collectors enjoy collecting native copper, but other metals occur as native elements including such exotics as arsenic and mercury. **At the October meeting, Phil Greenberg will show examples of metallic minerals including native metallic elements and explain how they are used in industry today.**

The October meeting will take place on October 25th at the Natural History Society of Maryland. We'll begin at 7:30 pm. The meeting will be co-hosted by JAT Thompson and Steve Dyer.

The BMS Desautels Symposium

photos and text by Mike Seeds

Members of BMS presented the 61st incarnation of the Desautels Micromount Symposium October 13-15, 2017. Betsy Martin and the late Henry "Bumpi" Barwood were inducted into the Micromounters Hall of Fame. Attendees traded speciments, shopped with dealers, explored the give-away tables and heard three excellent programs on minerals, mines, and museums.

In the photo shown here, long-time friend of BMS, Betsy Martin, was inducted into the Hall of Fame by Steve Weinberger also a Hall of Fame member.

More photos can be found on page 9.

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 .....Jim Hooper
<ijhooper at jhu.edu>

Vice President ..... Al Pribula
<apribula at towson.edu>

Secretary ..... Jake Slagle
<jake at marylandminerals.com>

Treasurer ..... Carolyn Weinberger
<cscrystals2 at gmail.com>

Directors:
Bernie Emery — Al Pribula
Brad Grant — Steve Weinberger

Conference Chair — Mike Seeds

Editor ..... Mike Seeds
<mseeds at fandm.edu>

Write for "The Conglomerate"!
Send news, announcements, comments, observations, or articles to <mseeds at fandm.edu>. No e-mail? Hand in your submission at a meeting.

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President's Postings

by Jim Hooper, BMS President

Birthstone of the Month – According to my favorite source of litho-pathos, 'The Curious Lore of Precious Stones' by George Frederick Kunz, Beryl somehow outranks both Opal and Tourmaline for the natal stone. But the reasoning is not entirely clear. This is not an unknown occurrence when dealing with Talismanic properties including precious stone-bearing breastplates from the Bible's Old Testament and health, wealth, and prosperity from royal claims from yesteryear on down to the present. But that's a whole 'nother subject for another presentation at another time. The thing to remember is that all three stones are renowned beauties and easily able to inspire people with their crystalline wonder and colors. And such inspiration can lead to poetic ditties like this one of years ago;

October's child is born for woe,
And life's vicissitudes must know;
But lay a beryl on her breast,
And Hope will lull those woes to rest.

When fair October to her brings the beryl,
No longer need she fear misfortune's peril.

Worth putting one on your keychain, sounds like. Fortunately each month lasts about a month and in a couple weeks we'll have another stone and issues to consider for November's child.

Our annual Desautels Micromount Symposium was held last weekend and from what I've heard, was a great success. If you've never taken the opportunity to see spectacular crystals in forms not available without microscopy, I urge you to find an opportunity to do so. I want to thank all members of the society who work to stage this BMS specialty event that draws hobbyists from around the country and world. Thank you in particular to Mike Seeds, Al Pribula and Steve and Carolyn for their hard work and to Steve Dyer for extraordinary help with the clean up efforts.

Thanks also to all our members who stopped by and hung out at the BMS table at the Gem Cutters Guild annual show out at the Howard Co. fairgrounds back in September. We welcome too, the new faces that learned of the Society and our meetings at the show.

The leaves are falling. Soon again we will have a better view of our countryside and the rock prominences that project from the hillsides especially around our watersheds. Soon should come the frost that will send the ticks, chiggers, skeeters, and other seasonal irritants allowing more outdoor hunting.

Thanks to Bob Eberle for setting up the field trip to the University of Delaware mineral museum. Vistors give it rave reviews.

That's pretty much all I have at the moment; see you at the meeting!
Jim

Minutes From our Last Meeting

by Jake Slagle, Secretary

President Jim Hooper called the September 27th meeting to order at 7:35 p.m. Minutes to the previous month's meeting were accepted as printed.

Treasurer Carolyn Weinberger announced that the Society was financially solvent.

Unfinished Business - none

New Business -

•Carolyn Weinberger mentioned that plans should be made regarding a time and place for the Society's Annual Holiday Party. Chris Altizer volunteered her home for the party. Date to be announced.

•President Jim Hooper announced that the time had arrived for the Society to put together a slate of officer candidates for the coming year. Jim said he is eager for suggestions as soon as possible.

•Carolyn Weinberger noted that the Society's roster had been updated to include new members and was available on the new Members Only page of the BMS Website.

Mineral of the Month:

This month it could be any specimens that members had acquired in recent months and believed should be of special interest.

Announcements:

Chris Luzier noted that the 28th Annual "Ultraviolation" Show, a "Swap, shop sell event featuring fluorescent minerals was to be held on October 28 at First United Methodist Church 840 Trenton Road, Fairless Hills, PA.

After a short break, John Vanko treated us with a presentation regarding the role of various crystal faces with respect to mineral collecting focusing on the isometric system.

submitted by,
Jake Slagle: Secretary

BMS Holiday Party

The BMS holiday party will be held on Saturday, December 9th at the home of Chris Altizer and her family. Although details are currently being finalized, we urge you to mark the date on your calendar.

As usual, the club will provide the meats (usually ham and turkey breast) as well as the various paper goods and utensils and members attending provide the "side" dishes -- veggies, noodle kugle, wine, and a few desserts.

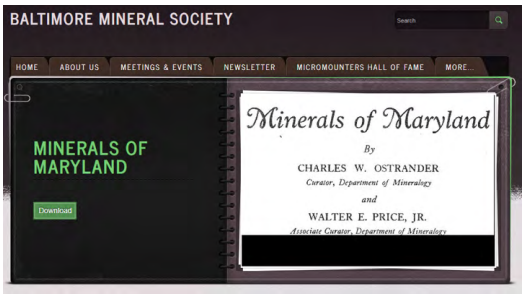
We'll place Chris' address and directions to her home on the club Members Only webpage in late November and will also send out an evite at that time so Chris knows how many will attend.

As always, this should be a nice evening.

New Updates on the BMS Web Site

from Carolyn Weinberger, webmaster

New updates on the BMS web site include photos from the just completed Desautels Symposium and the latest citations presented to the newest inductees. Just go to <baltimoremineralsociety.org> and take a look. While there, you can also download a copy of Ostrander and Price's *Minerals of Maryland*.



If you have photos, items for sale or other interesting tidbits, just send them along for inclusion.

Mineral of the Month

By Steve Weinberger

Our September meeting featured a presentation by John Vanko on the isometric (cubic) crystal system. He suggested that perhaps we could feature minerals from that system in a future mineral of the month. I thought that this month would be a good time to do just that, being so close to that presentation.

In the isometric crystal system all axes are of equal length and are at right angles to one another. It is the most symmetrical one and can have a number of forms, or shapes. These forms become more difficult to identify as the number of faces increases, but remember, they are all included in the isometric system. The following chart lists the various forms along with both the face shape and the number of faces.

Name	Face Shape	Number of Faces
Cube	square	6
Octahedron	60° triangle	8
Dodecahedron	diamond	12
Tetrahexahedron	triangle	24
Trisoctahedron	triangle	24
Trapezohedron	trapezoid	24
Hexoctahedron	triangle	48

Some examples of the various forms of the isometric system are in the following chart:

Cubes—pyrite (often striated), halite, fluorite
Octohedrons—magnetite, spinel, franklinite, chromite, diamond, and sometimes galena, pyrite, and fluorite
Dodecahedrons—garnet, cuprite, magnetite, sometimes diamond
Trapezohedrons—garnet, leucite, analcime
Tetrahexahedrons—(on edges of) fluorite crystals
Pyritohedrons—pyrite, cobaltite
Tetrahedrons—tetrahedrite, sphalerite
Hexoctahedrons—diamond

Sometimes metals have formless masses, nuggets, wires, etc. These can include gold, silver, copper, platinum, etc.

To further help identify the various forms, visual inspection of the mineral provides the clue. The octahedron and tetrahedron modify corners of the cube. The dodecahedron modifies the edges of a cube. The trapezohedrons bevel the edges of a dodecahedron.

Why not bring in some examples of minerals in the isometric system and tell a little about them? You do not have to go into great and complex detail about the crystal structure or the variations— just a minute or two about why you like those minerals.

References: Peck, Donald B. *Mineral Identification. A Practical Guide for the Amateur Mineralogist*.
Sinkankas, John. *Mineralogy for Amateurs.*

Color in Minerals - Part XVI: Cryptocrystalline and Amorphous Silica Varieties

by Al Pribula

In the previous installment, I discussed the causes of color in crystalline quartz. However, many occurrences of quartz do not consist of distinct macroscopic crystals, but rather consist of aggregates of microscopic crystals of random orientation. These microscopic crystals may be fibrous, or the material may be granular in texture. Still other silica or silica-like materials have no definite crystal structure, and are therefore amorphous. Because they lack a crystal structure, materials in this last group (with one major exception (see below)), are technically not minerals, but are termed mineraloids.

When the sample is made up of large number of tiny fibrous quartz crystals, it is said to be cryptocrystalline or colloform. This type of material crystallizes at a lower temperature than does macrocrystalline quartz, and is usually translucent. The name chalcedony is often used for this material, and it is given varietal names depending on its color and appearance. As with quartz, "pure" chalcedony is colorless or white, but can be various colors due to impurities or inclusions. Inclusions of hematite color chalcedony orange and inclusions of limonite color it yellow-brown. Both of these colors are due to d-d transitions in Fe^{3+}. Orange chalcedony is called carnelian (British: cornelian) and yellow-brown chalcedony is called sard. Green chalcedony is called chrysoprase and is typically colored by inclusions of nickel oxide or nickel-bearing clay. Some green chalcedony is colored by Cr^{3+}; this is called chrome chalcedony, mtorolite, or mtorodite. Inclusions of chrysocolla can give chalcedony a blue to green-blue color, and inclusions of celadonite also produce a green color. The "damsonite" variety of chalcedony is colored purple by a color center similar to that in amethyst, and it is likely that the color of the "grape agate" (actually chalcedony, or perhaps spherical aggregates of quartz crystals) from Indonesia has a similar cause. Inclusions of sugilite can also produce a purple color. Inclusions of red cinnabar in white chalcedony (or opal) produce the material called myrickite.

When a chalcedony sample is made up of layers or bands of different colors (often concentric), it is called agate. In agates, the fibers are oriented perpendicular to the banding planes and are cemented together by a hydrated form of silica (essentially opal). When the layers of different colors (often white and essentially black) are roughly flat and parallel, the material is called onyx; when there are layers of red-orange carnelian with white chalcedony or quartzite, it is called sardonyx. Both of these are used to cut cameos. Much commercial onyx is dyed to change or intensify the color. Carved and polished agate has been used for at least 4000 years for jewelry, beads, buttons, amulets, signet rings, letter seals, etc. It was one of the stones in the Jewish High Priest's breastplate (Exodus [28:19]), is the third foundation stone of the heavenly city (Revelation [21:19]), is one of the traditional birthstones for May or June, and the zodiacal birthstone for Gemini. Most commonly, the bands of color are in the red/orange/brown range due to inclusions of Fe^{3+}-containing minerals. If other minerals are included (typically those containing manganese, nickel, chromium, or copper), it can be found in other colors such as yellow, black, green, blue, or gray. It is usually found in igneous rocks, often in nodules or botryoidal or stalactitic masses, or in geodes which have quartz crystals in the center. Different varieties are often named for the locality in which they are found. Historically, the region around Idar-Oberstein, Germany produced large quantities of agate, leading to the formation of a large agate-cutting industry in that town. Presently, Brazil and Uruguay are major producers, but agates of various colors and patterns are also found in Argentina, India, Botswana, Mexico (Laguna, Agua Nueva, Coyamito, etc.), Australia, and the US (Lake Superior area, CA, NV, OR, MT, WY, NM, SD and many other states). Inclusions of other minerals (such as metallic copper in some "Lakers" and stibnite and realgar in Trent agate from Oregon) have been found in a number of different agates. Agate is probably deposited at low temperature from silica gel, but, despite much scientific study, the jury is still out as to the exact mechanism of formation, and there may very well be more than one mechanism for this.

Color in Minerals

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Various types of agate are named for the way in which it formed (amygdaloidal, seam) or the pattern shown (fortification, lace, eye, cloud, landscape, snakeskin, plume, ruin, brecciated, water-level, thundereggs, etc.). When moss-like inclusions of green chlorite or hornblende, yellow goethite, red hematite, black Mn oxides, etc. are found in colorless chalcedony, it is called moss agate (which is not a true agate since it's not banded). Chalcedony/agate is frequently found replacing organic materials such as wood ("petrified wood," which can also be jasper (as in the Petrified Forest in Arizona)), bone, shell (e.g., turritella agate), and coral. Some chalcedony is covered with a very thin layer of layer of iron minerals, causing diffraction/interference colors to be observed; this is called fire agate. If the bands of chalcedony in an agate sample are extremely thin (about 12000-20000 to the inch), a similar "rainbow" effect is observed, producing iris agate. Most agates show banding of white with red/yellow/orange layers, but other colors are found naturally and virtually every color can be (and very often is) produced by dyeing and other treatments. The book Gemstone and Chemicals (subtitled "How to Create Color and Inclusions") by George W. Fischer not only discusses what treatments have been used to produce color in lapidary materials (especially agate), but gives specific "recipes" for doing so. An extensive list of quartz treatments and simulants can be found in the reference given in the previous article. Additional information about agate can be found at www.minerals.net/mineral/agate.aspx. (This last website includes a number of photos of agates, including one which was dyed in "stripes" to show the variety of colors which can be produced artificially. A similar specimen in the collection of Chicago's Field Museum is pictured as the frontispiece of Dake's Quartz Family Minerals referenced in the previous article.) There are also a number of "coffee table"-type books which have been published recently showing beautiful examples of agates from around the world.

If the texture of the microscopic quartz crystals is granular, rather than fibrous, the nomenclature of the many varieties can get even murkier than with chalcedony. If the sample is formed of many small grains of quartz formed by weathering of a parent rock which have been cemented together by some other mineral (such as chalcedony, calcite, or hematite), the resulting rock is called sandstone. This can be any color, depending on the color of the parent rock and the identity of the cementing material. The color of the common "red beds" of sandstone and of the "brownstone" used for building material is due to iron-containing materials. If the quartz crystals have formed by metamorphosis of pre-existing rock (usually sandstone or conglomerate), the resulting granular interlocking mass of crystals is called quartzite. Granular quartz containing inclusions of other minerals (up to as much as 20%) is given many different names. When the inclusions are iron-containing (such as hematite or lepidocrocite, Fe oxides/hydroxides, etc.), the color is in the red/orange/yellow/brown range and the material is usually called jasper, but this name is also applied to material of other colors (such as that colored green to bluish-black by nickel-, copper-, or iron(II)-containing minerals). One distinction between chalcedony/agate and jasper is that "true" jaspers are opaque (not translucent like chalcedony/agate), but this distinction is not universally made when naming these materials. Like with agate, jasper occurs in a huge variety of localities, types and colors (often referred to by "local" names such as Biggs, Deschutes, Morgan Hill, Owyhee, ...), many of which are polished or carved as lapidary materials. When the stone consists of sections of various colors, the pattern sometimes reminds people of a scene (often in the mountains or desert), and these are referred to as "scenic" or "picture" jaspers. If the pattern shows a large number of circles, it is called "orbicular." Jaspers of various types have been used as ornamental stones since antiquity; it was named as the first foundation stone of the heavenly city in Revelation [21:19]. When the material contains masses of green chlorite, it is called plasma. If it contains spots of red jasper in addition to the green chlorite, it is called bloodstone (or heliotrope). Jasper which is relatively dull, uninteresting (at least by the person doing the naming), and lacking significant patterns is called chert, and black or gray chert occurring in nodules is called flint. The boundary lines between chalcedony/agate, jasper, chert, and flint are somewhat fuzzy and fluid; for example, aventurine is said to be a type of chalcedony by some, but a type of jasper by others. And some names

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are just flat-out incorrect, such as "bumble bee jasper" (aka "eclipse jasper"), which is a carbonate-rich mixture of volcanic lava and sediment colored by realgar, with no real silica basis. The websites www.stoneplus.cst.cmich.edu/chalcedony.htm#chalcedony and www.stoneplus.cst.cmich.edu/jasper.htm give lots of information about the various types of chalcedony and jasper, including long lists of varietal names.

Amorphous forms of silica or silica-like materials are fairly common. Natural glasses such as obsidian (including "Apache Tears") are typically about 70% silica, along with alumina (Al_2O_3) and other materials. These are generally green, gray, or brown due to iron-containing or other impurities. A type of natural glass which is about 98% silica is found in the Sahara Desert and is named Libyan Desert glass. Because it is so pure, it is colorless or only a pale yellow color. A special case is that of tektites, which are formed when the energy of a meteorite strike melts the impacted rock. When this molten rock is ejected from the impact site and travels through the air, it cools to produce a glassy solid. Like obsidian, these are generally green or brown (often so dark as to appear black) due to iron-containing materials melted with the other rock. These are often given names reflecting their origin (moldavite, australite, indochinite, etc.). The sand which was melted by the heat of the first atomic bomb test at the Trinity site in New Mexico is called trinitite and is dark green due to inclusions of olivine and other iron-containing materials. Another mineral in the silica group is lachatelierite, which is the name given to sand or rock melted by a lightning strike. Such samples are called fulgurites, and they are generally tan or brown (i.e., "sandy" color), but can be other colors depending on the composition of the sand/soil/rock which was struck.

A special case of amorphous "quartz" (special in that it is an accepted mineral species in spite of lacking a definite crystal structure) is opal. Opal is not pure SiO_2, but rather contains a variable amount of water, so its chemical formula is often written as $SiO_2 \cdot nH_2O$ (where the "n" normally is from about 0.15 to 0.33, but can be as high as 0.83 (corresponding to 20% water)). The name probably comes from the Latin opalus, meaning "to see a change in color. While overall it is amorphous (i.e., non-crystalline), its structure is such that it contains layers of SiO_2 spheres. As discussed in Part IV of the series, these layers cause incident light to be diffracted, producing the observed play of colors. In common opal (or potch), the domains of equal-size spheres are too small to produce observable colors. Its body color is usually white or off-white, but can be yellow/amber, purple, blue, black, or more rarely red, green, or orange due to impurities containing typical chromophoric ions such as Fe^{2+}, Fe^{3+}, Ni^{2+}, etc. If the body color is pale (essentially white), it is called "light" or "white" opal; if it is dark (literally or at least close to black), it is called "black" opal. The "black" color has been attributed to inclusions of carbon, volcanic ash, or to oxides of iron and/or titanium. Lower-quality white opal is sometimes dyed to darken the matrix, which makes the colors "pop" more. The color patterns are given names such as harlequin, pinfire, flame, flash, flagstone, ribbon, palette, etc. Synthetic opal has been made by the Gilson method, but it's not a convincing reproduction of natural opal.

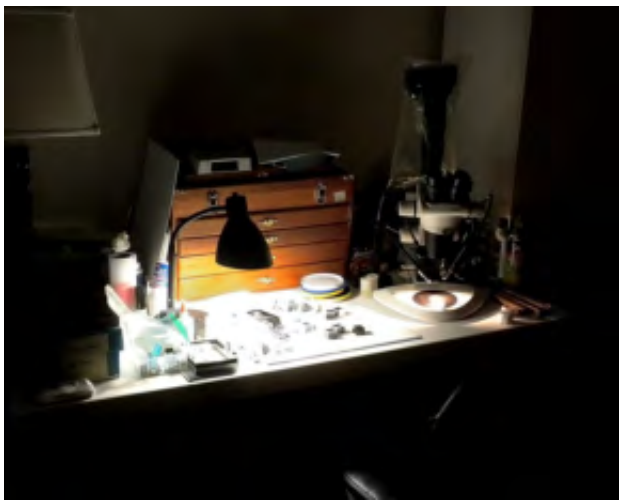
Further information on cryptocrystalline and amorphous silica varieties can be found in the references given for crystalline quartz in the previous installment.

In the next installment, I'll present information on the causes of the colors which can be exhibited by the hardest known material, and one of everyone's favorites—diamond.

Shoebox Adventures 71: A Pool of Light

photos and text by Mike Seeds

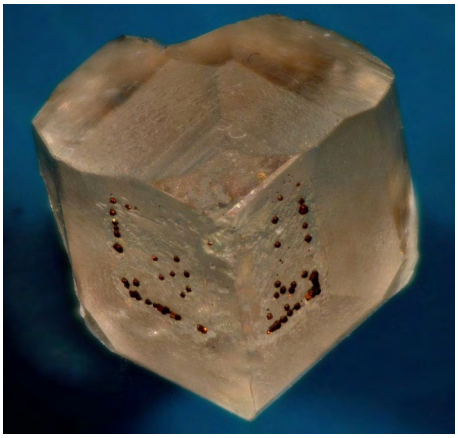
Sometimes, late at night, I come down to the basement and turn on the desk light beside my 'scope. I leave the rest of the basement in darkness, so the desk light makes a pool of light on my worktable. It's quiet there. The world, even when it makes sense, is too frantic, too busy, too demanding. Downstairs in my pool of light there are just minerals and tools and a handy microscope.



A pool of light beside a microscope

Last night, Benny Goodman and his band came by and began playing Sing Sing Sing with Gene Krupa pounding his tom toms. That's a great tune and Krupa touches his cow bell at just the right moment, but it seemed too much there in the dark. It was exhausting. Luckily Art Tatum and I go way back and I asked him to play some piano jazz. He started with Stardust, and that was perfect for an astronomer turned micromounter working in the dark.

I reached into my shoebox and pulled out a rock in a baggie. It was a little bigger than most and composed of a hard gray matrix with a centimeter long vug of crystals. Under the 'scope it was obvious the crystals were calcite, and the vug was a glittering cavern. But turning the rock revealed a hairline crack that went right through the vug. The matrix seemed hard and it was just a bit too big to fit into my little rock trimmer. I thought about taking it back into my shop and putting it into Moe, my biggest breaker, but the shop has fluorescent lights that are harsh and blue. I didn't want to leave the pool of light at my scope. And it was easy to imagine the rock breaking right through the vug and destroying the crystals. It would take some planning and effort to save the little crystal cavern. I put it back in my shoebox. I wasn't there to solve problems.



Calcite with pyrite from an unknown location. FOV 9 mm

Instead, I opened a drawer at random and began looking at finished mounts from my collection. By luck I found myself looking at pyrites and admiring little cubes, pyritohedrons, and penetration twins. Striations on crystal faces hinted at busy atoms clicking into place like nano-Lego blocks and building the crystal click by click.

It was restful there beside my 'scope and I soon found one of my favorite mounts, calcite with pyrite. It's a bit of a mystery how the little pyrite crystals came to grow along straight lines on the calcite faces. I've read recently that the pyrite probably grew along the edges of a growing calcite crystal, which makes a little more sense. But the calcite continued to grow, filled out the crystal and left the pyrites isolated in the middle of crystal faces.

It's easy to daydream in the dark about drifting atoms building crystals. Trimming specimens and mounting them in boxes is fun and satisfying, but last night it seemed like EOOP, effort out of place. I just wanted to look at specimens and enjoy them. Suddenly I was looking at one of my all-time favorites, The Pyrite Flag.

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More Desautels Symposium Photos

from Mike Seeds, Pamm Bryant and Kathy Hrechka

Adam Barwood acceptsing the Hall of Fame plaque for his late father, "Bumpi". With HOF member Steve Weinberger. PB photo

Micromounters Hall of Fame members present at the Symposium. Adam Barwood (representing his father "Bumpi", Bob Rothenberg, Steve Weinberger, John Ebner, Carolyn Weinberger and Betsy Martin. PB photo

Michael Pabst and Bob Rothenberg examine the micromounts for sale from Don Smoley. MS photo

Phil Greenberg at his microscope. MS photo

A small portion of the group at their 'scopes. KS photo

⮜Hillar Ilves and Jim Daly peruse the silent auction table. MS photo

Safety Maters – Kid Safety

by Ellery Borow, AFMS Safety Chair from AFMS Newsletter, October 2017

Kid safety? Isn't kid safety the same as adult safety? Well, yes it is, more or less, and that is the crux of the matter — the "less" part that is. Kids are generally less — less experienced in matters of safety, less tall, less heavy, have smaller hands and overall, have smaller proportions than adults.

There are thus, some safety considerations when it comes to kid safety. Namely:

1. Some safety goggles are made of hard plastic or rubber. They do not easily conform to the smaller faces on kids. Solution: try using softer vinyl framed goggles which are flexible enough to properly fit kid faces. Goggles with elastic head bands can easily be adjusted to fit kids. If one is using safety glasses with side shields make sure the temples are sized to fit kids. One would find it uncomfortable to have safety glasses keep sliding down the nose every time one looked downward - and let's face it, looking downward is a large part of rock, mineral and fossil collecting.

2. Heavy duty work gloves in either large, or sometimes medium size are easily found in most stores. Heavy duty kid work gloves are not so easily found. Solution: try looking for ladies small-size heavy duty gloves. Sometimes the more well stocked suppliers will have smaller, heavy duty gloves.

3. Hard hats for kids? Sometimes I have seen the play hard hats, but never have I send downscale hard hats that meet all the various ANSI or OSHA specifications. Solution: check out the adjustability of the head band and suspension system. Some are more adjustable than others. Seek one that can be adjusted to fit smaller heads. The benefit is that a good hard hat can be adjusted to fit as the child grows.

4. Steel toe work shoes in smaller sizes? There again, in some specialty work clothes establishments one can find safety toe work boots that fit smaller ladysize feet. The problem there is often finding the correct width, but with a little luck one might be successful in finding a safety shoe that fits. As fast as kids grow, it will be quite a trick to keep kids in proper safety footwear. The best one can mostly hope for is just providing good sturdy work boots. Oh, there are steel and safety toe sneakers, so there may be some suitable offerings there as well.

5. Kid appropriate tools? Sure, kids love to hammer on things. Can one find kid appropriate rock collecting tools? Solution: I have found none specifically made for kids, but what I have seen are what I call "travel tools", tools that are smaller -- less heavy rock picks, crack hammers, and chisels. Why does a kid need smaller tools? Well, smaller tools are more easily controlled in kid's smaller, less strong, and less coordinated hands. Mind that any use of tools should be suitably adult supervised. Along with tool use safety and first-aid kits should have kid-sized bandages packed in with all the adult-size bandages.

We like protecting our kids from harm. Large, dangerous working mines, quarries, pits and other hazardous commercial operations often limit kid entry. Insurance and liability requirements in operating facilities often dictate that no one under 18 is permitted on site.. Thus, kid specific safety gear is often not needed because kids are often not permitted inside. Common sense should reign in other collecting sites.

In general, safety requirements are similar for kids and adults – keeping hydrated, minding site specific rules and regulations, wearing safety goggles, and so on. The trick with kid safety, the one thing that makes it easier for adults is this one simple guideline: kids use adults as role models. If kids see their parents wearing goggles, they will want to as well, because it's the adult thing to do If kids see their parents using gloves, kids will want to as well. Kids learn from us, so if we adults set a good example, our work in keeping kids safe is made much easier. The bonus with that approach is that we say safe too (for our kids sake).

Terrific News from EFMLS Wildacres

by Steve Weinberger

Athough we don't yet have the dates for our fall 2018 EFMLS Wildacres Workshop we are delighted to let you know that our spring session will be

May 21 - 27

And...drumroll please, our Speaker-in-Residence will be the always exciting and popular

Helen Serras-Herman

Helen comes to us from Arizona and will be accompanied by her wonderful husband Andy. She's an award winning glyptographer (gem carver) who also creates one-of-a-kind jewelry utilizing a variety of materials including carved gemstones, beads, silver and gold findings, and carved and cast silver portraits. A few of her creations can be seen on her website <gemartcenter.com>. Helen is passionate about her work, and that passion translates into her always interesting talks.

As of this writing Director Pamm is working on the schedule of classes to be offered and we should have these for you in the December issue of EFMLS News. We anticipate lots of interest in our session so we encourage you to register for this (and / or the fall session) as early in 2018 as you can to ensure your place.

Tuition for 2018 will be $425, a slight increase from this year because of an increase imposed on us by the Wildacres Retreat. Regardless, those of you who have attended a Wildacres session in the past, know it's a fabulous bargain. Where can you get a week of lodging in comfortable rooms with private bath, outstanding talks by a delightful speaker-in-residence, instruction given by outstanding teachers and so much more? Registration will begin in January.

The Conglomerate
Mike Seeds, Editor
2412 Lime Spring Way
Lancaster, PA 17603

Upcoming Events

October:

25: BMS meeting at NHSM - 7:30 pm. Phil Greenberg on Metallic Minerals and Native Elements and their uses in industry.

29: GLMS/DC Auction & Sale. See coupon and info on page 11.

31: Happy Halloween

November:

7: Gem Cutters Guild meeting at Meadow Mill

10: Chesapeake Gem & Mineral Society Meeting at Westchester Community Center - 7:30 pm. See website (chesapeakegemandmineral.org) for info.

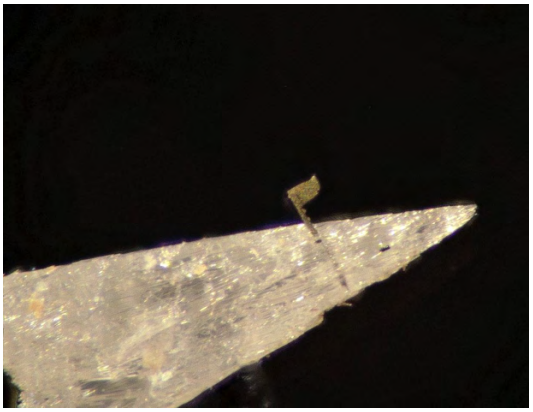
18-19: No. Virginia Gem, Mineral & Fossil Show at George Mason Univ. (www/noamineralclub.org).

22: NO BMS meeting this month!

23: Thanksgiving

A Pool of Light

continued from page 8



Pyrite flag on calcite. Rt 8 Roadcut, Watertown, Connecticut. Collected by the Webers in 1963. The flag is about 0.1 mm long.

The flag is tiny and it flaps in a tiny breeze. Just over the horizon, polar bears wander across the ice. Or is the flag on the lunar surface left behind after the lander carried the micro astronauts away?