

Gem Cutters News



Award Winning Bulletin of the Gem Cutters Guild of Baltimore, Inc.

Baltimore, Maryland

<www.gemcuttersguild.com>

Volume 60, Number 4 April, 2011



Program Notes

from Mary Keller

You've seen Steve's wonderful display of faceted stones at our annual show each September. Have you wondered how the gems are cut and polished?



Steve has taught faceting for the Guild and at the EFMLS Wildacres Workshops for the past 15 years. Taking a class such as this is a wonderful way to learn the process, get a good feel for why good faceted stones command the prices they do, and find out if faceting is something that you want to pursue.

Want to learn more? Come to the April meeting and join Steve as he gives a photo demo and goes through the process of selecting rough material, cutting a stone and selecting the proper equipment.

Our meeting will be Tuesday, April 5th beginning at 7:30 pm. If you have faceted stones that you've cut yourself, bring them to the meeting for show and tell.

Changes to Our Board

from Mary Keller, President

Whenever there is a vacancy on the Board of Directors, our Bylaws require that the vacancy be filled by the Board itself. Recent vacancies have now been filled and are as follows:

Recording Secretary - Sallie Miller

Director to fill the remainder of Sallie's term will be Gene Miller.

Director to fill the remainder of Pauline's term will be Jan Anderson.

We welcome our new Directors and thank Sallie for volunteering to become our Recording Secretary.

Goodies 'N Such

Although we still do not have a chairperson for our coffee breaks committee, we did get a number of volunteers to bring refreshments for the meetings in 2011.

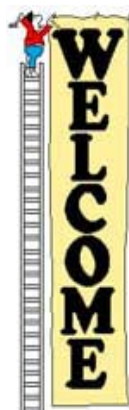


Thanks to those who signed up for April - **Jen Wilde, Faye Westhoff** and **Angela Wilson**.

Welcome!

from Linda Goldberg, Membership Chair

We're delighted to welcome three new members to our Guild.



Mayo Lucas has been taking classes at our workshop now for several years, so she's certainly not a stranger to us. Born in Waterloo, Iowa, she's one of a dozen children! Her interests, besides jewelry fabrication and lapidary, include tap dancing and taxidermy (but only on Tuesdays!).

Dennis and Faye Westhoff have interests in lapidary, jewelry fabrication and gold prospecting. Dennis was born Jersey City, NJ and is retired from the Univ. of Maryland where he was a Professor of Microbiology. He and wife Faye have two children.

Information for Mayo, Dennis and Faye is in the new roster.



The Gem Cutters Guild is a founding member of the Eastern Federation of Mineralogical and Lapidary Societies, Inc. and affiliated with the American Federation of Mineralogical Societies.

About our Guild:

The Gem Cutters Guild of Baltimore, Inc. was established in order to allow its members to gain knowledge and skills in gem cutting, jewelry making and in identifying and evaluating lapidary materials. Through field trips, exhibitions, and cooperation with other societies, we endeavor to further not only our own knowledge, but also that of the general public.

Meetings are held on the first Tuesday of each month except January, July and August at our workshop which is located at Meadow Mill at Woodbury, 3600 Clipper Mill Rd, Suite 116; Baltimore, MD 21211. Meetings begin at 7:30 P.M. Visitors are always welcome. Dues are \$30 per year for families and \$18 for individuals. More information and directions to our meetings can be found on our website, <www.gemcuttersguild.com>.

Officers:

President - Mary Keller
info@gemcuttersguild.com

Vice President - Joe Gehring

Recording Sec'y - Sallie Miller

Corresponding Sec'y - Trinh Phan

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Past President - Richard Meszler

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2010 - 2011

Jan Anderson
Richard Hoff
Gene Miller

2011 - 2012

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Thoughts From My Rockpile

by Mary Keller, President



Thank you to everyone who attended the March meeting. It was good to see the crowd and the enthusiasm.

The presentation on caving was fascinating. I particularly enjoyed the larger formations formed by nature. However, with all of the squeezing through tight spaces, this is obviously not a pastime for anyone with claustrophobia.

There are a couple of more changes to the Board to announce. Sallie (Patterson) Miller has offered to serve as Recording Secretary and her husband Gene Miller has agreed to serve as a Director in place of Sallie. We also welcome Jan Anderson as a new Director replacing Pauline Furtaw. There is still a need for Chairs for the Publicity and Refreshment Committees.

The spring class list is out. Remember first come first served. If you want to take one of the classes, sign up quickly to insure your place. If you do not see a class you would like to take, now would be a good time to ask about others you may want to see offered. Talk to any class planning committee member about your ideas.

Unfortunately the Texture Plates class has had to be cancelled due to insufficient enrollment, but I'm delighted to report that the PMC Certification class will go on.

Mark your calendars for the first weekend in July, not just to celebrate my birthday, but for the next InterGem show at Timonium Fairgrounds July 1 -3 and also for the Guild's show September 24-25 at the Howard County Fairgrounds.. Volunteers will be needed for both.

I just spent Friday, Saturday and Sunday (March 11-13) at the Baltimore Heritage Quilters Guild semiannual show. I am exhausted, but just like the GCG show in September, it was a lot of fun and a great time to talk to other Quilters Guild members and vendors. Although I have never tried polymer clay, I bought a couple of wooden stamps meant for batik fabric. The vender told me that some clay artists in Ohio began buying them for use with polymer clay last year. I will have them at the next meeting for "show and tell," along with a couple of very nice necklaces made by the batik vendor's niece in India.

Mary

March Meeting Minutes

from Carolyn Weinberger, Secretary pro tem



The March 1st meeting of the Gem Cutters Guild was called to order at 7:33 pm by President Mary Keller. Following a moment of silence in remembrance of Donald Gerbrick, minutes of the December meeting were approved as printed in the bulletin.

Treasurer Steve Weinberger indicated that the Guild remained solvent. He also reviewed how the monetary assets of the Guild are divided and for what purpose each can be used.

Committee Reports:

Sunshine - Adam Block became engaged. Pat Oshel, one of our long time dealers at our show passed away.

Class Planning - Richard Meszler reported that the class fliers were at the printer and should be out within the next week. Members were reminded to register early for the PMC Certification and Texture Plates classes

since they both have a March 15 deadline. Info for both is on our website.

Workshop - Dave Mitchell reported that he and Richard Meszler were in the process of possibly acquiring a faceting machine that could be used during Open Shop, as well as a 10" trim saw to replace the current one. He's also replaced the bearings on the other saws.

Show - Bernie Emery reported that dealer contracts had been sent out and that GP Rocks would not be returning due to Pat Oshel's death. He's contacted another vendor for the spot. Dave Mitchell will serve as Asst. Show Chair again this year.

There was no Unfinished or New Business.

Following Show & Tell and the refreshment break, Dave Mitchell presented a DVD that he helped make on the Grand Caverns in Virginia.

The meeting was adjourned at 9:30 pm.

Pat Oshel

from Bernie Emery



Pat Oshel, co-owner with his wife Virginia, of GP Rockshop passed away in mid-February. Pat was a fixture at our shows, most recently occupying one of the center aisles booths. Professionally, Pat worked for the Corps of Engineers as a geologist and this led him into the business as a dealer. Pat was also very active in working with Masonic Children's Charities. He was 75 years old.

Virginia tells me that she will not be able to continue coming to our show - loading and unloading all that rock is just too hard for her as is working the two days of our show.

Birthday Wishes

from Linda Goldberg, Membership Chair

The old song lyric tells us that "Diamonds are a girls best friend" and so it's fitting that diamond is the birthstone for the month of April. I'm sure the "guys" in our group appreciate diamonds too!

Pam Sliwoski - 1
Eric Willison - 3
Theresa Hope-Goddard - 8
Gordon Hanna - 11
Jenifer Wilde - 12
Pam Jeffries - 14
Lynne Garrison - 19
Bruce Dennis - 19
Pauline Furtaw - 22
Marcia Rauscher - 30



Warm birthday wishes to all!

Sunshine

from Pat Baker

Wedding bells will soon ring for **Adam Block** who became engaged at the end of February.



Gene Miller

spent over a week at Sinai Hospital recovering from surgery to relieve an obstructed bowel. He's now back home recuperating and should be able to come to the April meeting.

The Texture Plates class scheduled for Monday, April 11 has been cancelled due to insufficient enrollment.

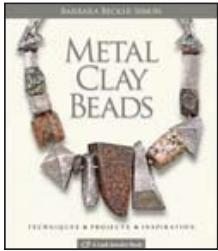
Show & Tell

from Steve Page



I was delighted to see such an assortment of work in our March Show & Tell display. We do have talented members!

Linda Goldberg brought a metal clay beads book by Barbara Becker Simon. She also displayed examples of PMC beads that she has made as well as a necklace she made during Pat's Intermediate Jewelry Projects class.



Pam Sliwoski showed us some lampwork beads she made that exhibited an opal effect.

Dave "E-bay" Mitchell brought some Kaleidoscope Agate, he's purchased. The rough piece was accompanied by a cab he had finished.

Dennis Westhoff showed off Mexican lace, plume agate and polished flint cabs.

Adam Block displayed some cabs he'd recently cut during open shop.

Steve Page brought a knife blade that showed off a new metal stamp of his signature that he recently had made for him from a company out in Nevada. He also brought in a Laguna agate nugget.

Several of Pat's students brought in examples of some of the projects they made during their J1 and J2 classes this semester.

Internet Resources

by Lorraine Johnston

This month's Gem Cutter's Guild bulletin features a new column for sharing members' favorite lapidary and jewelry-making websites. For this first column, I offer a few of my own favorites.

In the skillset category, The Ganoksin Project <www.ganoksin.com>, the brainchild of Israeli-born Hanuman Aspler, MD, offers much to jewelers and lapidaries, chiefly via three key resources:

- The Orchid jeweler's discussion group, with over 10,000 members—many of whom are professional jewelers—generously answers questions from fellow members at all skill levels. No point is too minor, no question too naïve for the numerous members who willingly share their experience for free.

- BenchTube, the jeweler's version of YouTube, consists of videos that demonstrate technique. BenchTube is second only to a one-on-one mentor when a picture really is worth a thousand words.

- A robust archive of know-how, tips, and thousands of Orchid discussion exchanges dating back to 1997.

Ganoksin, which is Thai for "the art of gold", promotes an annual fundraising raffle, with truly substantial prizes worth thousands of dollars, to offset the cost of hosting Orchid and BenchTube while keeping Orchid membership free.

Also in the skillset category, the United States Faceter's Guild <www.usfacetersguild.org> hosts a discussion group for problem-solving, design ideas, equipment recommendations, and faceting competitions.



Participating in the Yahoo discussion group is free; full USFG membership is \$18.00 USD per year.

And finally, the shopping category, because we all love tools and pretty rocks, eh?

For beaders, The Bead Warehouse <www.thebeadwarehouse.com> in Silver Spring, Maryland. Marvin Schwab and his wonderful wife Theresa's website will lure you into an onsite visit that you'll never regret! On the rare occasion when Bill Rinker's Terra Firma store <www.tfeinc.biz>, 1316-B Reisterstown Road) doesn't have that one string of beads your project must include, the drive to Silver Spring is sure to be fruitful. Pretty rocks indeed.

For lapidaries who want honesty, clarity, consistency, and a huge selection, Rob Kulakofsky's ColorWright (www.color-wright.com) offers slabs, rough, equipment, and more, via clear photos and descriptions and quick service.

For metalsmiths, Rio Grande <www.riogrande.com> is a comprehensive metalsmithing supply company that sells retail to both hobbyists and those in the trade.

To share websites for inclusion in future columns, Guild members are welcome to send ideas directly to me. My contact info is in the roster. Ciao!

Not Exactly

by Steve Weinberger, Wildacres Workshop Committee from EFMLS News, April 2011

Imagine yourself stepping out the door of your motel and walking into a wonderland of snow covered mountain scenery. No human footprints mar the pristine surfaces and the only sound you hear is the slight whisper of a gentle breeze wafting across the mountain where you are.



You can have all this if you attend one of the EFMLS Wildacres Workshops....well, **not exactly** because by April or September when we have our workshops, the snow in the area will be just a pleasant memory and you can enjoy viewing the photographs while enjoying the gentle spring or fall breezes, warmer temperatures and green surroundings. Aaaah Wildacres!

Although the spring session will be just around the corner when you read this, there are still a few spaces left for you to join the fun. Dates are April 11 - 17 – an absolutely beautiful time because the world is just awakening from its long winter nap. The robins have returned, squirrels are busy scampering around, and the trees and shrubs begin to “leaf out”. Aaaah Wildacres!

Details about our speaker, Gene LaBerge and spring classes can be found on the EFMLS website <www.amfed.org/efmls> or in past EFMLS Newsletters. You can get an application from me - just send an e-mail - Don't delay in sending in your reservation if you plan on joining us this April since

final class and room assignments are about to be made by registrar Pamm Bryant.

The fall session will be held from September 5 - 11 and our speaker-in-residence will be Dr. Steve Chamberlain, Chairman of the Carnegie

Award winning Rochester Mineralogical Symposium. Steve will be presenting six talks during the week.

In addition, a wide range of classes will be offered. See the complete list on the next page.

Is Wildacres on your “Bucket List”? Why not come this year. Registration is easy, the cost is very affordable at \$350 for the entire week, including lodging in lovely motel-style rooms, all your meals, the talks given by our guest speaker, a “free” day to allow you to go off exploring or field tripping if you wish, all the other activities of the week, and lots and lots of learning and laughter. Aaaah Wildacres!

Director Fran Sick, Registrar Pamm Bryant and I look forward to sharing our week at Wildacres this year. Once you've been, you too will be saying “Aaaah, Wildacres”.



Gems Along the Erie Canal

from Cathy Patterson

The Gem & Mineral Society of Syracuse is hosting their Diamond Anniversary show in conjunction with the EFMLS / AFMS Convention the weekend of July 10 - 11, 2011.



We have many exciting events planned for the show weekend so they can enjoy all Central New York has to offer in addition to the show.

We'll have some exceptional exhibits from the New York State Museum, the Smithsonian in Washington, and a special exhibit from the Dundas Quarry in Canada. In addition, the dazzling exhibit of thousands of Herkimer Diamonds featured in the 2009 August Rock and Gem Magazine will be on display. You MUST see this!

We'll have guest speakers, and planned field trips in addition to our over 60 dealers - most who are not usually seen in the Maryland area.

In addition to the show, we'll have an awards banquet on Saturday evening - always a fun event and terrific chance to socialize with fellow rockhounds from across the US.

More details, as well as registration forms and hotel information can be found on the EFMLS website <www.amfed.org>, Just click on the “Convention” tab.

Come and enjoy the Syracuse area in July and visit a wonderful show, wine country, Herkimer “diamond” collecting area and more.

Ant Hill Garnets

by Gayland Graves, from Victor Valley Gem & Mineral Club, December 2010
via Hounds Howl, January 2011

Arizona pyrope garnet is called ant hill garnet because ants bring up the smaller crystals from below ground and deposit them in the ant hill when building or remodeling.



Ant hill garnets are recognized as possessing the finest bright ruby-red color of the garnet family. During the 1800s Navajos in this locale used the water-worn and rounded ant hill garnet crystals as bullets. This use had both a practical side and an emotional appeal. The Navajos believed the blood-red color helped produce fatal wounds.

Ant hill garnets occur in a remote section of the Navajo Nation in Arizona. The gems have never been mined commercially because there aren't enough of them. That means these gems are beautiful...and rare. Gems over a carat are even more rare! The world supply of these gems depends on those living nearby who collect a few stones after the occasional rainstorm and trade them at the local store.

The Four Corners area of northeastern Arizona derives its name from the fact that there the state borders of Arizona, New Mexico, Utah, and Colorado meet. Nowhere else in the United States can a person simultaneously stand in four states at one time. Monument Valley, the site of awe-inspiring sandstone pinnacles, spans the Arizona-Utah border, not far from the four corners.

Just south of Monument Valley is the town of Kayenta and Garnet Ridge. Gem-quality garnets have weathered from the underlying in-

trusive rock and can be found scattered throughout the area. This location is on the Navajo reservation and is strictly off limits to non-tribal collectors.

Most of the garnets are smaller than a pea, are smooth, and rounded. Often they are referred to as ant hill garnets because the tiniest garnets are thrown out on the surface of the ground as ants excavate their nests. The garnets are collected by the Navajo and sold in bulk for the gem trade.

Ninety percent of the material is the deep ruby-red color of pyrope garnet, but small quantities of rhodolite and spessartine garnets are also found. Although the hue of this pyrope is gorgeous, the saturation is so great as to make cut stones over a carat or two in size too dark. Nevertheless, if properly cut, Four Corner pyrope garnets are stunning gems.

The ants carry up stones excavated from the soil they dig in, and can amass quite a collection over time. Such ant hills are a place where the Lakota historically sought out sacred, perfectly round stones used in making ceremonial rattles or for personal tokens.

Elsewhere in the Badlands and Black Hills, we found smaller, active ant hills where tiny shells and even tinier garnets were being brought up by the ants. The treasures returned to the surface by the tireless work of ants collect very slowly. How many billions of ant hours went into making the massive fossil ant hill, I wonder?"

12,000 Carat Tanzanite Discovered

adapted from Jewelers Circular
Keystone Online

TanzaniteOne Ltd. has announced the mining of a 12,000 plus carat tanzanite at its mine in the Simanjiro district of Tanzania. Company officials believe that it is the third largest tanzanite recovered at the mine and possibly the third largest ever found.

The rough will now undergo evaluation to determine grading for color and clarity. Initial examination indicates that it probably contains a significant amount of A grade material.

The rough will most likely be divided into smaller, but still large, pieces which will be faceted at TanzaniteOne's in-house cutting facility.

[Ed. Note: At press time very little about this particular gemstone was available. From what I've been able to learn, Tanzanite is usually a reddish-brown in its natural state and heat treated to obtain the blue-violet color for which it is known. Heat treating usually is done after cutting is done so that the stone being heated does not contain fractures that could cause the rough to explode during the process. Based on this information, it appears that this stone is one of the rare ones that does not need "cooking".]



Apache Tears

by Shirley Greenberg, EFMLS President, , 1991
9th place winner, AFMS Adult Article Contest, 1995

If you have a specimen in your collection labeled "Apache tear" and want information about it you could have a problem. Not all rock and mineral books have a listing for "Apache tears." This is because "Apache tear" is not a valid mineral name, but is a well known nickname for some obsidian nodules. Obsidian is a rock, not a mineral.



As you probably have guessed, these nodules are found in locations where Apache Indians lived in the U.S. Southwest. "Apache tears" have been found primarily in Arizona, Nevada, and New Mexico.

All "Apache tears" are obsidian, but not all obsidians are "Apache tears." Obsidian is natural volcanic glass. Don't look for crystals of obsidian because you won't find any. The hot lava forming obsidian cooled much too quickly to allow crystals to form.

"Apache tears" are found in grayish white volcanic material called "perlite." Perlite is obsidian that has weathered and altered until it has become porous and lightweight. Each "Apache tear" lump will have an uneven coating of perlite clinging to it after being pried or dug from a mass of perlite.

Tumbling and polishing will reveal a shiny glass pebble that may be black or smoky in color. Hold the "tear" to the light to see how trans-

lucent or transparent it is. It is interesting to note that the "Apache tear" and perlite surrounding it have been formed from the same volcanic material and yet the "tears" are dark in color and its coating of perlite is light in color.

Perlite is used in making lightweight concrete and is also used in the manufacture of insulation.

Obsidian, with a hardness of 5 to 5.5, is brittle and chips easily. Nevertheless it has long attracted gem cutters and gem carvers. Obsidian was used for bowls and cups as early as 3200 B.C. in Mesopotamia. Jewelry set with obsidian made about 1352 B.C. was found in the tomb of King Tutankhamen.

"Apache tears" are sometimes cut by faceters today because they are plentiful and inexpensive.

References:

- Color Encyclopedia of Gemstones* by Joel Arem
- Earth Treasures, Vol. 4*, by W. Eckert
- Gems & Crystals from American Museum* by A. Sofianides and G. Harlow
- Gemstones of North America* by John Sinkankas
- Precious Stones* by R. Metz
- Prospecting for Gemstones and Minerals* by John Sinkankas



Unpolished Apache Tears

Photographing Minerals (and Gems)

by Charles Calkins
from *Rock Lore*, March 2011

Ed Note: Although this article focuses on photographing minerals, the same techniques can be used to photograph gems and jewelry.

It is common for a mineral collector to want to document his collection for cataloging purposes, insurance, or simply for show-and-tell. Collections can be presented on the Internet via web hosting providers, or using services such as Mindat (<http://www.mindat.org/>) which encourage members to contribute to their mineral database. Mineral photography does not need to be a challenge, and good images can be obtained with a consumer-grade camera and basic setup.

Photographing small mineral specimens falls under the category of "macro photography" because the final image is often as large as, or larger than, the sample itself. Jeffrey Scovil (www.scovilphoto.com/), Associate photographer for the *Mineralogical Record* and *Rocks and Minerals* magazines, is likely the best-known photographer in this area. He has described his techniques in *Photographing Minerals, Fossils, & Lapidary Materials* (ISBN 0-945005-21-0), a definitive work on obtaining excellent images. Good images can be obtained, however, with simpler setups (mine is shown in Figure 1), provided that certain issues, described below, are kept in mind. Although all of these issues apply to digital photography, many affect film photos too.

Lighting: Specimens need to be well-lit, but a direct light must be diffused. Otherwise, specimens will have bright highlights or look unnat-

continued on page 8

usually flat. Figure 1 shows direct light provided by a frosted daylight bulb. Room lights are also used so shadows are filled in with ambient light. I have found that a windowless bathroom, with overhead lights near the ceiling, is a good place for taking photos. Lighting can be controlled, and the bathroom tile diffuses much of the light so the lighting of the sample is not harsh. Bouncing light off of white paper or Styrofoam, or placing a lamp behind translucent material, can also diffuse light well enough for a good image. Even with good lighting, however, the angle of the specimen may need to be adjusted to avoid glare, to accentuate a crystal facet, or the like.

White balance: Setting a camera's white balance properly for the lighting conditions is essential. Light can be "warm" or "cool," producing reddish or bluish tints, respectively, in photos. Some cameras are also susceptible to shifting color due to fluorescent lights. While the eye can perceive a white object as actually white under a wide variety of lighting conditions, a camera is often fooled. Digital cameras have an automatic white balance setting that generally works well in sunlight, but frequently has trouble when other types of light are used. The white bal-

ance can be set using a neutral gray card or a special purpose device such as the WhiBal (<http://www.rawworkflow.com/whibal/>). The card is placed in the same position as the sample that is to be photographed, and the camera's white balance is adjusted. With a correct white balance, the color of the mineral sample will appear correct in the photograph.

Camera support: For a sharp image, the camera must be firmly supported. Figure 1 shows a camera stand with a gray base. The camera can be mounted on the black post so it can face straight downward. This works for some samples, but the best view of a sample is not always from directly above. Also, a stand like this may place the camera too close to a sample for the camera to be able to focus properly, especially if any magnification is used. In Figure 1, the camera is mounted on a mini-tripod that allows great freedom in the camera adjustment. Not only can the camera be adjusted to any angle, but the tripod can be placed at any distance from a specimen. Here, the sample is viewed at an oblique angle from a greater distance than what would be possible if the camera stand were used. The neutral gray base of the

camera stand makes a good background, though.

Depth of field: Depth of field refers to the range of distance that is in focus. "Zooming out" to show the widest view yields the greatest depth of field. "Zooming in" to magnify an area narrows the depth of field. Figure 2 demonstrates this. On the left, the camera is zoomed completely out (1x magnification) and the Doe Run lead pig is completely in focus. On the right, fully zooming in (18x magnification) to the D of the word DOE produces a close-up image of the D and O, but E and RUN are out of focus. A good image balances the close-up view with how much of the sample is in focus. Focus stacking (http://en.wikipedia.org/wiki/Focus_stacking), where many images are combined to yield a greater depth of field, is a way to address this issue. (Editor's note: digital cameras generally have much greater depth of field than film cameras)

Macro mode: Macro mode, generally indicated by a flower symbol, allows an object that is very close to the camera to be in focus, so it is often needed for photographing small mineral specimens. For instance, the digital camera shown in Figure 1 is a Panasonic Lumix DMC-FZ35. When not in macro mode it cannot focus on an object that is closer than 30 cm. However, in macro mode, the minimum focusing distance is only one centimeter. Increasing magnification (zooming in) also increases focusing distance. Therefore, zooming in may require the camera to be moved away from the subject, reducing the magnification effect. For the FZ35, in macro mode, using the full telephoto zoom of 18x increases the minimum focusing distance to one meter.

continued on page 9

◀Figure 1



Figure 2 ▼



Close-Up lens: The minimum focusing distance can be reduced by attaching a close-up lens to the camera. For example, the camera in Figure 1 has the Panasonic DMW-LC55 close-up lens attached, which reduces the focus distance by a factor of 3. So, with this lens, in macro mode, using the full telephoto zoom of 18x, an object can be as close as 33 cm, making the subject appear much larger than it would otherwise.

Software: It is important to capture the best image possible with the camera, but software can modify the raw image to fix flaws and produce a final image. A multitude of free programs such as Paint.NET (<http://www.getpaint.net/>), GIMP (<http://www.gimp.org/>), and RawTherapee (<http://www.rawtherapee.com/>) provide alternatives to more-expensive programs such as PhotoShop (<http://www.adobe.com/products/photoshop>). With these programs, photographs may be rotated, cropped, sharpened, and/or re-sized. Also, without modification, photos of specimens with bright colors may appear washed-out, especially if strong, localized lighting is used. Increasing the image saturation by 10% or so with software improves the image so it more accurately represents the original sample.

Image quality: When processing photos, it is helpful to work with high quality images. Use the highest-quality file format your camera provides whenever possible. To save memory space, a consumer-grade camera typically discards information when it converts images into a JPEG format. When using TIFF or RAW formats, generally, no informa-

tion will be lost. Also, while JPEG is limited to 8 bits per color channel (256 shades each of red, green and blue), TIFF or RAW may use 12 bits per channel (4096 shades) or more. The greater the color depth, the greater freedom available for correction after the image is taken.

Image size: As with quality, images should remain at the size they are obtained from the camera while they are being processed, and only reduced in size, if needed, once image processing is complete. A large image can always be reduced in size, but a small image made larger will look blocky. One measure of image size is the number of pixels it contains. The FZ35, for instance, captures images that are 12 MP (mega-

pixel), 4000 x 3000 pixels. If printed by a 300 DPI (dots per inch) printer, this would yield an image 13.3x10 inches in size. While this is a good resolution for printing a poster, it is too large for Internet presentation. For instance, Mindat reduces images to no more than 1024 pixels across for the primary image display. Considering that a standard computer monitor's resolution isn't much larger, this is reasonable – the image will fill most of the screen.

Figures 3, 4 and 5 show examples from my collection, taken with the setup shown in Figure 1. More photos can be seen on my page on Mindat (<http://www.mindat.org/user-10785.html>).

Rutile on Hematite
Novo Horizonte
Bahia, Brazil



Vivianite
Canutillos Mine
Potosi Dept., Brazil



Wulfenite
79 Mine
Gila Co. AZ

Making Filigree Jewelry - Part 7

by Leon Hornstein. Reprinted from *Gem Cutters News*, October, 1992.
Original article used with permission of the Author

Make a Pendant with a shell or cabochon

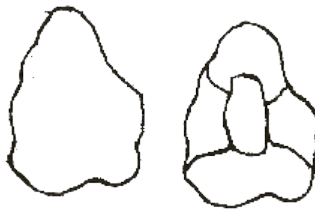
As lapidaries and jewelry fabricators, combining the two crafts is a wonderful way of expressing your unique talents. Whether you cut the cabochon (or shell) yourself, or purchase it at a gem show does not matter, but cutting the material yourself will give you greater satisfaction with the finished project.

Start by making a rough sketch or drawing of your planned filigree. Design the outline so it will have no sharp corners.

When making your sketch, keep in mind the importance of the units making good contact with the outline of your piece. Try to curve the outline so the curvature of the units will nestle with the outline. Remember too that when you are fitting the elements of the filigree into the outline, you will shape the elements with your fingers rather than shape the outline.

After planning and sketching your piece, decide where you are going to place the shell or cabochon. Make another sketch with the cabochon (or shell) positioned in the outline. The next step is to decide how you are going to attach the cabochon into the pendant.

Working from your last sketch, try to visualize four wires of the kind used to make the frame or assembly connected from the four sides of a silver setting to the opposite sides of the outline. The wires should not be perfectly straight; they should be slightly curved because the elements or units will be soldered to them.



Placing the silver setting for the cabochon or shell

The next step after you're satisfied with the design is to make the setting for the shell or cabochon. This can be done simply by using a serrated or non-serrated silver bezel that has a silver backing.

After making the setting and being sure that you have pickled both the setting and outline of the pendant, begin the assembly. Pin the outline to the soldering pad and solder the setting to the outline, making sure that the wires are slightly curved. To ensure a good job, tack the connecting wires to the bottom edge of the setting and the other ends of the wires to the inside edge of the outline. The use of the word "tack" denotes soldering just a single connection.

You now have four separate spaces to fill with elements. Remove the piece from the pad and pickle it. Carefully examine them to see if you used too much solder and if the units made enough contact with one another. Were all the spaces filled?

Place the assembly back on the pad, not forgetting to use the "B & B" and finish the necessary soldering. Before removing the finished assembly, add a finding such as a jump ring, bale or rabbit ear. Pickle for the last time, then neutralize the piece and you're done.

Bench Tips

from Brad Simon

Stiffening Earring Posts

Soldering an earring post will always soften the wire a bit. Easiest way to harden it is to grip the end of the post with your flat-jaw pliers and twist it a couple half turns. This workhardens the wire and at the same time tests your soldered joint.

Use a Spray Bottle

Those little spray bottles you can find at the drug store are great for firescale preventors and debubbling solutions. A quick firescale preventor is liquid flux, and a homemade debubbling solution is a little Dawn® liquid in rubbing alcohol.

Broken Drills

Have you ever broken a drill bit off in a hole? Sometimes you can grab it with pliers, but other times the steel piece is below the surface in the hole. If this happens, you can usually dissolve the steel in a solution of alum. Alum is typically available from a food store or a drug store.

Use about a teaspoon per cup of warm water. Submerge your piece so that the partially drilled hole is facing up so that bubbles can float free.

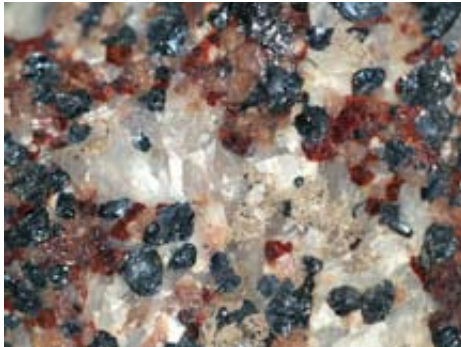


Finished project using an abalone shell

Franklinite – The Non-Fluorescing Mineral from Franklin, New Jersey

by Brett Whitemack, McPherson Gem & Mineral Club via CentrILL Gems, February, 2011

If you were to ask a rockhound "What is franklinite?" there is a good chance that they might tell you it is a fluorescent material from New Jersey. In reality, while they would have the correct location, they would be greatly mistaken that it is fluorescent.



Franklinite, Calcite, Willemite and Zincite
Franklin, Sussex Co. NJ

The mineral franklinite is actually the name

for the main zinc ore that was once mined in Sussex County near the towns of Franklin and Ogdensburg. Franklinite was first discovered during the early 1800's and was named for the nearby town of Franklin Furnace (later to become Franklin) as well as to honor the name of Benjamin Franklin. Pierre Berthier, a French geologist and mining engineer, was responsible for naming the mineral and wrote that it was "derived from Franklin, in order to remind us that it was found, for the first time, in a place to which the Americans have given the name of a great man, whose memory is venerated equally in Europe as in the new world by all the friends of science and humanity."

While franklinite occurrences are rare elsewhere around the world, it is locally abundant and was considered the king of ores in the zinc mines in Sussex County. There, miners delved deep into the earth to retrieve this, the most valuable of the zinc ores found within the deposits. It once was thought that franklinite was found only in the Franklin Mining District of New Jersey. Over the last few years, deposits have been

discovered in other parts of the world, though never in commercial quantities. A few of these localities include Australia, Germany, Sweden, and in the United States where it is also found in Alaska and New Mexico. The major element composing franklinite is zinc along with iron and oxygen giving it the chemical formula of $ZnFe_2O_4$

and the formal name of zinc iron oxide in its pure state. The zinc portion was what made franklinite as desirable and valuable as an ore. Often, manganese is present as a second or third element (depending on its oxidation state) giving franklinite an official chemical formula of $ZnFeMn_2O_4$. The franklinite deposits are believed to have occurred when carbonate rocks rich in iron, zinc, and manganese formed in marine environments, and were altered by high temperature metamorphism. The outcome of an intrusion of high temperature igneous magmas into the cooler rock caused the franklinite to crystallize out of the resulting solution and led to great ore deposits in this region of New Jersey.

The "classic" specimens of franklinite are opaque and black in color exhibiting an octahedral (eight-sided) crystalline shape and occasionally, dodecahedral (twelve-sided) crystals. Crystalline franklinite can sometimes be mistaken for magnetite or spinel due to its octahedral shape. Unlike magnetite, which is highly magnetic, franklinite is only weakly so. Its reddish brown streak distinguishes it from spinel, which

has a white streak. Franklinite crystals are also frequently found as small (2-3 mm), rounded, pebble-like grains within a calcite matrix associated with willemite and zincite. It is also found in large, amorphous masses within the ore body with no distinct crystalline shape.

Perfect crystals are highly sought after by collectors. The largest crystal on record is an octahedron that is seven inches on each edge and resides in the Canfield Mineral Collection of the Smithsonian Institution.

Collectors should take care in choosing specimens however, as repairs to crystals or even outright fake crystals were common. It seems that miners would spend some of their down time filling in cracks or even constructing crystals from plaster and then coloring them with lamp-black or some other dark pigment to conceal their handiwork. They would then sell these fakes to unsuspecting customers. Other physical characteristics help in identifying franklinite from similar looking minerals. It has specific gravity between 5.0 and 5.2 making it slightly above average for a metallic mineral. While it has no cleavage (the tendency to split along



A single crystal of Franklinite
on Willemite
Sterling Mine, Ogdensburg, NJ

Continued on page 12

Franklinite

continued from page 11

a definite plane), franklinite does have a conchoidal fracture and will exhibit a metallic luster, especially on freshly broken specimens.

The mines around Franklin, New Jersey no longer produce franklinite or any of the other ores that were found there. The Franklin Mine closed in 1954 and the Sterling Hill Mine closed in 1987. Most of the mine shafts, some of which exceeded 2,500 feet in depth, have now flooded with water and mineral specimens can no longer be collected from the mines. One tunnel, located at the Sterling Hill Mining Museum, has been turned into a 1,300 foot long display where visitors can walk and view exhibits of the mine equipment that was once used when the Sterling Hill Mine was in operation. Lately, both professional geologists and amateur rockhounds are lobbying to make franklinite the "official" state mineral of New Jersey. The Franklin, New Jersey area is home to more than 350 different mineral species with over two dozen of these found nowhere else in the world. Of these minerals, at least 90 different species are fluorescent making Franklin the "fluorescent mineral capital of the world." However, a mineral from Franklin doesn't have to be fluorescent to warrant adding it to your collection. Just make sure that when you are trying to obtain a specimen of franklinite, that you and the person you are acquiring it from are both on the same page and that you mean the non-fluorescing mineral, the "king of the ores" that was once mined at the Franklin and Sterling Hill mines in New Jersey.

Anyone We Know?

photo by Pam Jeffries



Pat minds the store at the ACC show

References:

Chesterman, Charles. The Audubon Society Field Guide to North American Rocks and Minerals. New York: Knopf, 1978.

Dana, Edward and William Ford. A Textbook of Mineralogy. London: J. Wiley, 1949.

Dunn, Peter J. Franklin and Sterling Hill, New Jersey: The World's Most Magnificent Mineral Deposits Franklin: Franklin-Ogdensburg Mineralogical, 2004.

"Franklinite." <www.mindat.org> Web.20 May 2010

Kushner, Ervan F. A Guide to Mineral Collecting at Franklin and Sterling Hill, New Jersey: With Notes as to the History, Geology, and Fluorescence. Paterson: E.F. Kushner Books, 1974.

Russell, Daniel E. "The Mines of Sterling Hill, Ogdensburg, New Jersey". <www.mindat.org> 16 Dec. 2007. Web. 20 May, 2010.

Sinkankas, John Mineralogy. Princeton: Van Nostrand, 1979.

Booming Sand Dunes

from the Rockpile, March 2008

Booming sand dunes, which generate droning sounds that can last a minute or longer, have been found at about 30 places worldwide, including Dumont Dunes in Southern California. Their often deafening tones are typically loudest at a single frequency between 0 and 105 cycles per second. The sounds can often be heard for kilometers.

The sound originates when sand avalanches down the face of a dune. The thickness of a surface layer of dry sand dictates the frequency of their tones. Researchers measured the speed of sound in a 5 foot thick dry layer of sand at 200 meters per second. Below the dry layer was a moist layer where the speed of sound traveled between 300 and 350 meters per second.

The abrupt difference in speed causes the boundary between moist and dry sand to reflect sound waves and bouncing the sound of avalanching sand back and forth within the dry layer, creating a resonance that boosts the sound at the resonance frequency .



Tips on Selecting Good Material

submitted by Mike Gaines from Strata Gem, April 2009

At a recent meeting I was asked, "How do I know I'm buying good quality material?" This is a hard question to answer, but here are a few tips that may help:



1. Look for certain characteristics in any piece you buy:

- Hardness - the harder the material, the better polish you'll achieve.

- Flaws or Fractures - will the piece stay together or will it break in the saw? Can you easily work around the flaw? If it's really rare, you might want to take a chance. Many plumes are pitted on the surface, but you can learn to fill those flaws with epoxy. If you're buying a chunk, does it look like the part you wish to cab goes deep enough or is it only on the surface?

- Thickness - A lot of great slabs are unworkable because they were cut too thin. Slabs cut too thick are extremely hard to recut and may end up too thick for many jewelry mounts. 1/4 inch or there about, is a good capping slice.

- Color - is it natural or dyed? Ask the dealer, they usually can tell you.

- Pattern - Is the pattern too perfect? It might be reconstituted (they take scraps of the original rock and under high pressure glue them together, adding artificial patterning). While reconstituting is not bad, you should know that you are buying something that is not in its "natural" state.

- Special Features - Plumes -- are the plumes so dense that they're hard to see? Plumes in clear agate make the best stones.

- Banding - are the bands wide enough to show the pattern clearly? Rutile - Like plumes, rutile shows best in clear agate, too much rutile won't show as well. Crystal pocket - many people consider this a flaw-- depending upon how you orient the pocket, it can actually make a spectacular piece. Carry a small template so that you can "window" a piece before you buy.

- Matrix - Sometimes you find a really great piece, but there's a lot of unusable matrix attached to it. Ask the seller if they took into account the matrix in determining the price. Depending on how bad you want the piece, you might get them to reduce the price. It usually doesn't hurt to ask.

2. Buy a small amount of the best material, rather than a lot of the cheap material. I can't emphasize this enough. Getting a "bargain" isn't really a bargain if when you get home, you spend a lot of time and energy creating a piece that is only so-so, and you have a lot of waste to get rid of.

3. When you find nice material for a reasonable price, buy extra. Many times I've kicked myself for not buying more and never saw the material for sale again. You can always use the extra for trading material or offer the excess to a rockhound friend for a reasonable price and recoup part of your investment.

4. Get acquainted with the Dealers. If they know what you like to work on, they can keep their eyes open for the material and steer some great material your way before it goes "out on the table". Learn to pick up business cards from dealers you like to do business with -- make notes on the back of the card regarding what they offer. (Stationary stores have clear binders designed just for holding business cards and believe me, they work great to keep with the telephone book.

5. Last, and probably most important -- ask friends and fellow rockhounds for help. I wouldn't still be in this hobby if it wasn't for fellow club members who took me under their wings and willingly volunteered to help me. But remember, you're the one that ultimately has to work on the material that you select, so you are the one that must decide whether or not to pay the price asked. I hope this helps!

EFMLS /AFMS

Convention

July 8 - 10, 2011

Syracuse, NY

Delegate needed to attend the annual EFMLS Meeting on Friday, July 8

Terrific show, lots of wonderful displays and dealers

New York Wine Country
Erie Canal

Herkimer Diamond collecting

See Mary if you're interested in representing the club at the meeting on Friday evening.

Inukshuks – Silent Arctic Messengers

by Ed McCabe in Vox Rox, April 2009



A few years ago, my wife Judy and I visited Vancouver's Gas Town where we acquired a small Inukshuk statue in a shop specializing in carved nephrite jade figures. At the time we were more interested in the shop's use of nephrite jade than in Inukshuks although we did have some appreciation of the use of Inukshuks by the Inuit of Northern Canada. Recently, through a review several sites on the world wide web, we did some study of Inukshuks. The following is a summary of what we found.

At the outset it is appropriate to know some related terminology used by the Arctic's indigenous people, mostly the Inuit and other peoples who live in this flat, barren area stretching from Alaska to Greenland. An Inukshuk (plural, Inuksuit) is a man made stone landmark. Inukshuks vary in shape and size, and have deep roots in the Inuit culture. The word Inukshuk "something which acts for or performs the function of a person". Other interpretations of the word are, "stone man that points the way". A structure similar to an Inukshuk but meant to represent a human figure, is called an Inumnguaq. Other sources translate the above words slightly differently. To keep this discussion simple, we will only use the word Inukshuk henceforth.

The Inukshuk has been used for centuries by the Arctic's indigenous people for navigation, as a point of reference, a marker for hunting grounds, and as a food cache. To many they represent something

very mystical; figures holding spirits with secret meaning, and direction. When given as a gift, they symbolize our dependence on each other and remind us of the importance of strong relationships and friendships.

The Inukshuk has become a symbol of leadership, cooperation and the human spirit. To illustrate, the Inuit Inukshuk has been incorporated into the flag and the coat of arms of Canada's Nunavut Territory as well as the flag of Nunatsiavut in the Inuit region in Labrador.

Versions of Inukshuks can be found throughout Canada. In Ontario, they are reported to be a common site along the Trans Canada Highway and other arterial highways in North-western Ontario. At Toronto's Pearson International Airport, Inukshuks can be found at the passenger terminals pointing the way to entering passengers.

The organizers of the 2010 Vancouver Winter Games selected the Inukshuk as a symbol for this Olympic event. It is reported that some 1,200 carvers from 14 different communities worked on the production of 40,000 hand carved soapstone (green serpentine) figurines for sale as souvenirs. You too could make your very own miniature Inukshuk. Consider how that 'leaverite', brought from rockhounding expeditions, might be used to accomplish this. With as little as 7 pieces, appropriately shaped, one could construct a 4 to 8 inch tall figurine. Note that the stone must be proportioned to balance standing up and the notion of direction should included. Subsequently epoxying the stones together, applying a clear varnish finish,

and mounting the assemblage on a firm base, could produce a handsome version of an Inukshuk.

Some References:

Inukshuk: <en.wikipedia.org/wiki/Inukshuk>
Inukshuks: members.shaw.ca/northernlitehikers/inukshuks.htm>

2010 Vancouver Winter Olympics: <www.freespiritgallery.ca/inuitinukshukolympics.htm>

The Inuit Inukshuk: <www.freespiritgallery.ca/inukshuk.htm>

Road Trip America: <www.roadtripamerica.com/roadside/Ontario-Inukshuk.htm>

Enough of the Inukshuks Already: <www.theglobeandmail.com/servlet/story/40,000> (controversial) tiny stone men: Maclean's

Worth Repeating!

from the Ft. Collins Lodestone
via Back Benders Gazette, April 2011

Did you know that malachite is very poisonous in its raw state?

Never lick the material to see the color. Don't even repeatedly lick your finger and apply. When you grind, wipe the contaminated oil off your skin right away. If you smoke and the taste becomes very sweet you are absorbing the malachite dust. The copper oxide dust is mixing with the moisture in your mouth and reacting to the tar in the tobacco, turning it into saccharine. Needless to say, you should take some immediate steps to stop the inhalation.



What is Sugilite?



Sugilite (soo-ji-lite) is a by-product of manganese mining. It is a potassium sodium lithium iron manganese aluminum silicate. Sugilite can range in color from lilac (light purple) to a very dark purple.

Most of the material found today is opaque. Sugilite that is translucent is highly prized. The black areas in Sugilite is the Manganese. Occasionally you will find some blue areas, which are Richterite (an extremely rare mineral). The orange/brown areas are Bustamite. Sugilite does not form wellshaped crystals and is found in large mass.

Sugilite forms in syenite, a rock that was created through volcanic activity deep beneath the earth's surface. Material that is dark purple and translucent (resembling grape jelly) is the rarest of the material and is sometimes faceted. The hardness is 6-6.5 on the Mohs scale.

Where is sugilite found?

Sugilite was originally found on Iwagi Island, Shikoku, Japan. It has also been found in Canada, India, and South Africa. The only cutting grade material has been found in South Africa.

Does it have a history?

Sugilite has had other trade names such as Royal Azel, Royal Lavulite, Purple Turquoise, Gem Sugilite, and Royal lazelle. Sugilite (soo-ji-lite) was first discovered in 1944 in Japan by Ken-ichi Sugi, a

Japanese geologist who specialized in rock formation and composition. This first discovery was in sand form. The specimen that professor Sugi found was a light brownish yellow and not as appealing as the prized sugilite on the market today.

The second known occurrence of sugilite came in 1955, when a single dark-red ore specimen with pink crystals across its surface was found in central India. However, this specimen was not identified as sugilite until many years later.

The great discovery of the mineral did not happen until 1975 when sugilite was discovered in large quantity. A thin, but bright magenta band of sugilite ran through a core sample obtained at a manganese mine in the small town of Hotazel (lovingly referred to as Hot-as-hell due to the climate) in the Kalahari Desert of South Africa. This first discovery there was a low grade ore but significant for the size of the deposit. The major deposit of gem grade sugilite was found in 1979 at a depth of approximately 3200 feet below the surface. This deposit yielded between 10 and 12 tons of material. This is the only deposit that was found to produce this grade of material. Because it has been found only in one limited deposit, gem quality sugilite is considered collectible.

This material made its way into the gem market in 1981 at the Tucson Gem and Mineral Show. Sugilite started making its debut in Southwestern jewelry and started being referred to as "Purple Turquoise" because of the patterns it often has, even though there is

no relation to turquoise chemically, and it was often paired with turquoise and coral for the complimentary colors.

What are its uses today?

Sugilite has become very popular with jewelry designers because it is appealing in color and is so distinctive from other stones. Since it comes in fairly large pieces, it can make very impressive, one-of-a-kind designer pieces. Faceted stones have been cut from the rare gel of this material. Phenomenal carvings have been made from this stone too. It also has found a place in Feng Shui as the stone that assists in mindbody connections. It is also sought after as a collector's stone due to its limited supply.

How is it cut?

Sugilite isn't difficult to cut. Sugilite will leave your hands and water white. If you have a lot of manganese or bustamite, your water will get brown or dark when cutting the other associated minerals. The material is mined with explosives, just like pietersite, most jaspers, and some other materials. This causes fracture lines throughout the material. This is also caused because of the way the material was formed and the depth they acquired the material. Lots of pressure at those depths. Nice pretty white lines throughout the Sugilite are usually fracture lines and should be stress tested by trying to break it by hand or cut out. Sugilite takes a good polish. I have found that Cerium Oxide (French Cerium) or Sapphire powder (Alumina) work very well.



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