

Gem & mineral journal

*The Official Monthly Publication of the
Gem and Mineral Society of Lynchburg, VA, Inc.*

SEPTEMBER 2011 VOLUME 20 ISSUE 9

Presidents Message

Hello To All,

Good news again, the ceiling in the Parks & Rec Auditorium has been repaired, so the Club will meet at regular place and time. This September 21st meeting will be unusual as we are having a special guest speaker with a very limited business meeting. Look for Jack Curtin's article for details. You don't want to miss this meeting.

We have a great lineup of activities for the rest of 2011. September 17th will be the last Club workshop before we go to the Apple Harvest Festival at the Amherst County High School October 15-16th. We also have the field trip to Kyanite Mining Corp on September the 24th.

The October 19th Club meeting will be our annual Auction. This year we are very pleased to have a large offering of some great specimens the Club acquired from the purchase of a local mineral collection. So tell your friends and family to come join us for this opportunity to add some nice

minerals and crystals to your collection. Some of the items will be on our September silent auction. Also keep in mind two more upcoming events: again this year the GMSL will sponsor the Fluorescent Mineral Display at the Gem & Mineral Show at the Salem Civic Center. This three-day event on Friday Saturday and Sunday following Thanksgiving Day. Also plan to attend the GMSL December 21st meeting when we will celebrate with our annual Club Christmas Dinner. If you haven't participated in past years, everyone is invited to bring their favorite covered dish to share as well as showing their mineral find of the year or just share a story of Rock Hounding. This is a great opportunity to enjoy a good time of fellowship with other Club members. Be sure to join in any or all of the above Club activities and look else where in this newsletter for more details or find out more at the meetings. I hope to see you all there at this September 21st meeting. Until then.

Keep Looking Down,
John Haskins

From The First VP:

Greetings to all rock hounds out there! This month we're honored to host Dr. Stephen W. Lenhart, Ph. D., CPG; geology professor at Radford University. He has graciously accepted our invitation to present a program at our September meeting. He has been giving a series of talks to our fellow Roanoke club members for several weeks now and will present to us his

initial talk in that series. You may wish to bring a pen and paper to carry home some of the valuable information he'll present. Please search your collections for some nice, self-collected, Virginia minerals to donate to Professor Lenhart's museum.

Now let's continue last month's article written by Donald Clark, CSM on cabbing. (page 11)
Jack

2011 ELECTED OFFICERS**John Haskins - PRESIDENT**

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Bernardino Rivera &

Tony Shields

COMMITTEE**CHAIR PERSONS:****Field Trips**– David Callahan**Hospitality**- Monthly Volunteers**News Articles**– Natalie Darling**Silent Auction**– Warren Darling**Swap for Rocks**–Warren Darling**Website**– Casper Voogt**Workshops**– Dave Callahan**FRA Adult Liaison**- Daryl Grant**Membership**- Ralph Torning**August Meeting Minutes****Meeting:** Wednesday, August 17, 2011**Attendance:** 26 members and 9 guests**Hospitality:** Our hosts for this evening were Cindy and Tony Shields, and they will host Septembers meeting as well.**On Time Drawing:** Winners were Ann Torning, Dave Callahan and Jane Muller.**Old Business:** No Silent Auction tonight, Dave Callahan has rocks for sale of which he will donate some of the proceeds to the club.**First Vice President:** Jack Curtin provided tonight's DVD presentation on Volcanoe's.

He has invited guest speaker Dr. Stephen Lenhart to come to our September meeting to present the first of his series about geology. He is very well known, informative and it should be very interesting to hear his life's work. He only asks for donations of Virginia rocks. Dave Callahan has some he will donate, and anyone wishing to donate some Virginia

rocks to Dr. Lenhart may bring them to September meeting.

Second Vice President: Dave Callahan: provided a sign up

sheet for Club T-shirt order.

Need at least 12 to place order. The Northern Virginia club has invited us to the Vulcan Quarry this upcoming weekend. Upcoming field trips planned for 9/16/11 to Georgia Vulcan quarry and 9/24/11 is the Willis Mountain fieldtrip to Farmville (please see field trip section and sign up sheet at the meeting).

Treasurers Report: Treasury balance at this time is \$5,994.67.**New Business:** Group discussed whether or not to participate in the November 25th – 27th Salem show. Dave Woolley suggested we only do the fluorescent display. It was decided it would not be profitable for the club so we **will not** set up a booth at the Salem Show. The club members will concentrate our efforts on preparing items for the Apple Festival coming up in October.

Jack Curtin has purchased 2 Chairs for the workshop. Thom Noble donated 2 new chairs and will purchase 2 additional chairs for the workshop.

*Minutes submitted by
Thom Noble*

The purpose of the Gem & Mineral Society of Lynchburg, VA, INC. is to promote education in The Earth Sciences including: Mineralogy, Geology, Gemology, Paleontology, and Crystallography

The Gem and Mineral Society of Lynchburg VA, Inc.
Meets on the third Wednesday of each month,
From 7:00pm– 9:00pm
In the auditorium of the Parks and Recreation Building
301 Grove St. Lynchburg, VA 24501
Public is invited, Please join us!

Programs

The program for the August meeting was a DVD on Volcanoes. Thank you Jack Curtin for providing the educational programs for our monthly club meetings.



The program the September 21st meeting will be a presentation by Sr. Stephen Lenhart, Geology professor at Radford University. Please join us for this exciting opportunity to hear Dr. Lenhart speak.

Bench Tips by Brad Smith

**More Bench Tips by Brad Smith are at: groups.yahoo.com/group/Bench_Tips/
Or facebook.com/Bench_Tips**

BALL BURS

I use ball burs quite a bit for carving and for cleaning up bits of solder that need to be removed. Ball burs seem to be more controllable than other cutting burs. They're less apt to grab and walk over your piece leaving nasty scars. And I've found that size matters. The large 8-10 millimeter size is a useful size for carving off bulk material while the small half millimeter or less size can be used at high speed for signing your name on the back of the piece.

CLEANING STEEL SHOT

Steel shot in a vibratory or rotary tumbler works great to burnish up your finished silver pieces. Surfaces are shined and hardened by the shot impinging on it. Carbon steel shot can get rusty and even stainless steel can develop a blackish coating that's hard to remove. My solution of choice to clean the shot is Classic Coke. Just pour an ounce or two over the shot and let the tumbler run for an hour or so. A bad case might require a second cleaning. I'm no chemist, but I've heard that it's the phosphoric acid in Coke that does the trick. While you're waiting for the shot to clean up, just settle back and enjoy the rest of the Coke.

DEBURING A HOLE

When you drill a hole, there's usually a burr produced on the underside of the metal. Typically you would then file or sand this smooth, but doing so will put scratches on your piece that will take time to polish off. A quick way to remove the burr is to grab a drill that's about three times as large as your hole. Simply twist it in the hole to cut off the burr. I usually do this by hand but if you have many holes to do, put the drill into a holder like a pin vice.

Up Coming Field Trips



Contact Information for Field Trips:

David Callahan,
Field Trip Chairman
Home phone 540-297-1853-----
Cell phone-----540-874-520-----
E-mail dbcall1@aol.com

THE GEM AND MINERAL SOCIETY OF LYNCHBURG, VA INC. (HOST)
THE ROANOKE VALLEY MINERAL AND GEM SOCIETY INC. (HOST)

KYANITE MINING CORP. ----- ANNUAL FIELD TRIP

WILLIS MOUNTAIN KYANITE MINE, NORTH END and EAST RIDGE MINE, SOUTH END
If the mine is working, we may have to limit our collecting areas

SEPTEMBER 24, 2011
9:00AM to 1 PM

Sign-up is required, call me, email me or sign-up at the meeting.

SAFETY: Everyone should arrive at the office parking lot by 8:45 for a safety briefing. Each Club field trip leader, or his appointed replacement, will act as safety observer and will be expected to be on the lookout for and correct all safety infractions from any collector. Keep in mind that this site is one of the few that is still open for collecting. Not obeying the safety rules will cause this site to be closed to collecting as well.

DEPARTING TIME FOR THOSE IN THE LYNCHBURG AREA: If you choose to drive as a group, we will meet the Roanoke Club at the Sheets Station on US 460 and Rt. 811 in New London under the gas price sign, which is on the West side of Lynchburg. There is an Exxon on the opposite corner. We will depart promptly at 7:00 am the 1.5-hour 77-mile drive to the mine site.

LOCATION and ASSEMBLY TIME: If you choose to meet us at the Mine office for sign-in and safety instruction, be there between 8:30 and no later than 8:45am. The mine is located north of Farmville, Va. on Rt. 15 North. Proceed from US 460 North on Rt. 15 for a little over 12 miles to Willis Mt. Plant Rd. The stone mine office on the right. If you approach from Rt. 60 at Sprouses Corner, then go south on Rt. 15 for 4 miles to Willis Mt. Plant Rd. and the office will be on your left. Wait in the parking lot and do not block traffic. Many trucks may be using the road. While you're waiting, be sure to enjoy the beautiful blue kyanite bolder in the front yard from the old closed Baker Mountain.

COLLECTION: Willis Mountain is what's known as a monadnock. The kyanite exposure resisted weathering and, as the surrounding area was eroded and weathered away, the mountain outcrop was left standing. This is very much like the famous Graves Mountain kyanite mine in Georgia. The center of the mountain has been mostly mined away. We should be able to find plenty of white kyanite blades in the massive kyanite quartzite; pyrite; quartz; hematite with some iridescent, red mica and possibly some blue kyanite and pale green trolleite. Some of the white kyanite here fluoresces a beautiful light blue as well as some of the quartz. East Ridge is rather new but the finds are slightly different and very impressive.

Continued on next page

Rutile has been found here in the past

EQUIPMENT: Standard quarry gear is required such as hard hats, safety glasses, good strong boots, long pants, gloves, hammer and chisels, wrapping paper, buckets, food and water. Be prepared for windy, hot or wet weather. We will be on the mountaintop and it's always windy. We can drive to the collecting area, so hand trucks should not be needed. Bring a camera, as the view is awesome.

AGE LIMIT: There is no age limit, but all children must be signed for and supervised by an adult.

WEATHER: The trip will be canceled in case of hard rain or a thunderstorm. Call to confirm if there is any question.

CONTACT: David Callahan, Phone [540-297-1853](tel:540-297-1853) Cell [540-874-5201](tel:540-874-5201) Field Trip Chairman for the Lynchburg and Roanoke Clubs, email dbc11@aol.com web sites www.LynchburgRockClub.org
www.rvmgs.com

Dixie Mineral Council Field Trips

The Southeast Federation of Mineralogical Societies, Inc.

An Official Field Trip of the MEMPHIS ARCHAEOLOGICAL & GEOLOGICAL SOCIETY (HOST)

An Official Field Trip of the (GMSL and RVMGS clubs)

9:00 AM TO 3:00PM CST

Saturday, October 15, 2011

Memphis Stone and Gravel Company, Coldwater, Mississippi

www.msgravel.com

Where: Memphis Stone and Gravel Company (Perry Plant)

Directions: We will meet at the Coldwater, MS exit at Interstate 55 and Hwy 306 (Exit 271). We will group together at the BP Convenient Store on the south side of the road. Be there no later than 8:45 to check in, we will depart at 9:00 a.m. **sharp!**

Collecting: Chert gravels with fossils (Mississippian, Devonian, and Silurian), petrified wood, agate, conglomerate, quartz and other rocks and minerals associated with regional alluvial terrace deposits of Pleistocene / Pliocene age. We will be collecting the gravel from stockpiles.

Lunch. Memphis Stone and Gravel and MAGS will provide a free lunch/cookout of hot dogs and hamburgers. Recommend attendees bring chairs and tables

Rock swap- Attendees are encouraged to bring material for a rock swap. MAGS will have available a number of specimens from the club's collection including several thumbnails from Magnet Cove, Arkansas such as Brookite

Restrictions: Pets must be leashed at all times. No fee is required. **See safety statement below.**
Continued on next page

Tools: Bucket and rock hammer, we will be surface collecting and no digging is necessary. Spray bottle with water is very helpful.

Safety: All safety rules must be followed. A copy of the safety rules can be obtained from the Field Trip Leader. Remember, any time eye hazards may exist, such as hammering or prying, safety glasses **MUST** be worn. This is an active mine with dangerous areas, including water hazards. Do not walk or climb under/on any equipment. All children must be under **CONSTANT ADULT SUPERVISION** and **NEVER** allowed to roam around. Shoes must be closed and laced (no flip-flops or Crocs) and Long Pants are required. Bring plenty of water and sunscreen!

Field Trip Leader:

Alan Parks (mobile phone/text: [901-481-9730](tel:901-481-9730))

Email:alan.parks@msg gravel.com

more information at www.memphisgeology.org

Directions to the quarry:

To get to the meeting place, from Memphis or Jackson, MS, take Interstate 55 to Coldwater, MS. At Exit 271 go west approximately 0.1 miles to the BP Convenient Store on the South side of Highway 306.

Note: If you get lost or do not make the meeting time:

Continue south on Interstate 55 to the Senatobia MS exit (265) ~5 miles

Exit and go WEST on MS-4 / E MAIN ST toward downtown Senatobia 1.0 miles

Turn LEFT onto US-51 / MS-4 / S PANOLA ST (then immediately get ready to make right at stop sign, as described next) <0.1 miles

Turn RIGHT onto MS-4 / W TATE ST. Continue to follow MS-4. 5.1 miles

Turn RIGHT onto JJ RANCH RD. 2.1 miles

Turn LEFT at fork onto HOGFOOT RD and proceed up the hill until you see the plant on your right (north). 1.9 miles

The plant entrance is all the way on the west side of the property on the right (north) side of the road. You should see the scale house.

Graves Mountain "Rock Swap and Dig"

Friday, Saturday, and Sunday, Oct 7-9, 2011- 8:00 AM to 6:00 PM each day.

"You are invited to field collect minerals at Georgia's premiere mineral location!"

The caretaker in charge of Graves Mountain, Clarence Norman Jr., has announced plans to hold two three day digs and rock swaps on the Mountain during 2011. He will have the mountain open to collecting from 8 am to 6 pm each day. All participants must stop at the welcome table in the Hospitality tent to sign a liability release and make a small contribution to defray the cost of opening the mountain and providing port-o-lets. There will be several golf cart type, four wheeled vehicles available to transport those participants who have trouble walking long distances. The dig will cease and everyone is expected to be off the mountain by around 6 pm each day. Participants will be allowed to park in a designated area on the mountain.

Continued on next page

***A special field trip opportunity
from club member Dave Lines***

Graves Mountain Trip *continued from page 6*

Rock Swap and Hot Food/Drink

Junior will set aside an area in the upper parking lot for tables to be setup for daily rock swaps. Anyone who would like to setup a table(s), please contact Junior at the phone numbers listed below. Hot food cooked on the grill, cold drinks and chips will be available for purchase on the mountain during all three days of these events. Don't forget to bring some extra money to buy the special "Graves Mountain Rock Swap and Dig" T-shirt!

Mark your calendar and tell all your friends about this great event!

THIS DIG IS OPEN TO ALL.

NO NEED TO SIGN-UP, JUST SHOW UP!

Contact Information:

Clarence Norman Jr. (Junior) - [706.359.3862](tel:706.359.3862) (his business) or [706.359.2381](tel:706.359.2381) (his home)

DIRECTIONS: From Washington Georgia, drive 11 miles on SR-378, or from the Hardee's in Lincolnton, Georgia, drive approximately 5-1/2 miles west on SR-378. Look for a sign at the entrance to Graves Mountain on the south side of the road.

Motels and Camping: Cullars Inn, Lincolnton, Georgia, [706-359-6161](tel:706-359-6161) Soap Creek Lodge, Clarks Hill Lake, Lincolnton, [706-359-3124](tel:706-359-3124) Elijah Clark State Park, [706-359-3458](tel:706-359-3458) / [800-864-7275](tel:800-864-7275)

Lots of Graves Mountain information, including reports and pictures, may be obtained on the Georgia Mineral Society website: <http://www.gamineral.org/commercial-gravesmountain.htm>

My experience: I have been to Mt. Ida 5 times and participated in the Championship Crystal Dig 2 times (in 2005 and 2008). I will be glad to assist you in planning for this trip and advise you in how to dig at the contest. I have several friends who come from great distances to participate in this. You will learn a huge amount about digging for quartz from other participants --- some of these folks have attended every year since it began. You will have some great fun and find some beautiful crystals --- guaranteed! There is also a rock and mineral show at the Fairgrounds during the same period where you can buy some fabulous specimens --- esp from local quartz miners and from dealers in the midwest region --- often material that we don't normally see around here.

This year is 25th annual dig --- which could make this an extra special event --- more mines open --- better preparation of mines by owners.

Total driving distance from La Plata, MD to Mt Ida, AR: 1,100 miles (about 18 hrs driving time 1-way) --- at 20 mpg, that's \$190 each way for gas. Not bad when divided up between 2 or 3 folks driving together. A motel will be required at least one night enroute each way for about \$50 per night.

Flying into Little Rock and renting a car is also an option. I did this in 2005 and someone who drove the RV brought my tools down and took my xls/tools back to MD. You can also pack a few light tools in your luggage and "rent" a freshly sharpened digging bar from Judy's Crystals and Things for about \$10/day. A quick check online of Southwest Airlines tickets shows them currently at \$172 each way and economy rental cars are reasonable for a week.

In 2008, 4 of us from So Md Rock Club rented a furnished 2BR house for 4 nights about 10 miles north of Mt. Ida -- it cost us \$90 apiece. In 2005, some of us drove RV's to stay in and some stayed in a condo in Hot Springs (Lorna and Mel swapped a week of their condo elsewhere.)

Continued on page 8

JOIN THE CLUB! A Special fundraising invitation from Rock and Gem...

Okay, we at Rock & Gem magazine know that you're already a member of a rock, gem or mineral club! Hopefully, you're familiar with our magazine, as we've been in print for 40 years and are the premier magazine for rock and mineral enthusiasts and hobbyists around the world. Joining our club will not only get your members enjoying the hobby even more, but will help your club, too!

Here's the deal:

A normal subscription to Rock & Gem magazine is \$27.95 per year (12 issues). With this new special subscription offer for club members only, new subscribers or current subscribers renewing will be eligible for a standard one-year subscription for only \$22.95! In addition to saving you \$5.00 off the regular subscription rate, Rock & Gem magazine will contribute \$6.00 per paid subscription directly back to your club treasury. This is 26 percent of the subscription price directly back to your club! This price is valid through Dec. 31, 2011.

Mail your club subscription forms to Club Subscription Offer, Rock & Gem magazine, 290 Maple Ct., Ste. 232, Ventura, CA 93003.

What's so special about Rock & Gem? Our knowledgeable writers provide up-to-date editorial each month and our photographers capture the essence of the beauty of the specimens we feature. From beginners to the seasoned hobbyist, Rock & Gem is the "definitive source" for the hobby. Even teachers in earth science classes use Rock & Gem for instructional purposes.

So join our club. If you have questions about this great offer, I urge you to call me or drop me an e-mail. Thank you, and we look forward to working with you in the future.

To speed up the process of getting your club's check from Miller Magazines Inc., please send subscriptions back in bulk, not individually.

Thank you,
 Brian Roberts
 Rock & Gem magazine
 (623) 327-3525 phone/fax
 Brian@millermags.com

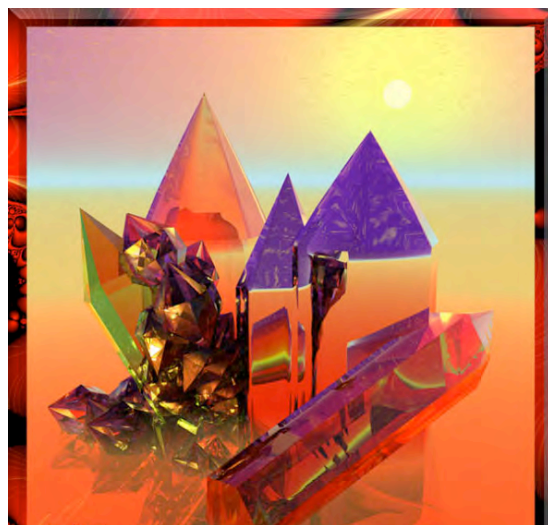


Mt Ida Field Trip... *continued from page 7*

Entry fees of \$75 per person allows you dig directly in the quartz veins each day from 9am to 3pm for 3 days (Thursday Oct 13 thru Sat Oct 15th) in your choice of 3 or 4 mines. \$1,500 of prize money will be awarded for the best single crystal and for the best cluster of crystals --- for 1st, 2nd and 3rd place in each category --- plus trophies.

Google "Mt Ida Arkansas quartz crystals championship dig" for plenty to read. If you want to go, email me or tell me at the upcoming August Meeting.

Best, Dave Lines (240) 427-7062 (cell)



September 2011

Upcoming Events

SHOWS AND TRIPS

Sept. 17th-18th- Annual Gem & Mineral Show sponsored by the Central Pennsylvania Rock and Mineral Club. Zembo Shrine, 2801 N 3rd St. Harrisburg, PA.

Sept 30th-Oct 2nd- Dallas NC, Gaston Gem, Mineral & Faceters Club. Show and swap. Resource Center; 1006 Biggerstaff Park, Dallas Cherryville Highway, Dallas., NC. Free admission. 9-6 each day. Contact Jackay McDaniel at 704-865-6748

October 21st – 23rd - Treasurers of the Earth Gem Show, Rockingham county Fair Grounds; 4808 South Valley Pike, Harrisonburg, VA www.toteshows.com for more information.

Nov. 12th - 9-3; Rock Swap 2011, Sponsored by The Richmond Gem and Mineral Club. Ridge Baptist Church Meeting Hall; 1515 East Ridge Rd., Richmond, VA . Contact: Murray Rosenberg at 804-740-0019 or email rgms_info@yahoo.com

Nov. 25th-27th- Roanoke Valley Mineral and Gem Club Annual Mineral and Gem Show at the Salem Civic Center in Salem, VA. GMSL will host the Fluorescent Mineral Booth. More details to follow at the meetings and in up coming newsletters.

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21 Meeting 7PM	22	23	24 Field Trip
25	26	27	28	29	30	

Workshop at Dave Callahan’s, September 17th, starting at 9 AM. Directions available at the meeting or call or email Dave Callahan. All items for the Apple Harvest Festival need to be completed as this is the last workshop we will have before the festival.

Please mark your calendars now for the Apple Harvest Festival October 15 &16 at Amherst County High School. We will have our club booth set up to sell our lapidary crafts, geodes, and our ever popular sluice line. Sign up sheets will be available at the club meeting, and any help you can offer will be appreciated. This will be our final fundraiser for the year, so lets all work together and make it great!

We are currently taking orders for club T-shirts that will be ordered in October. Order form and catalog will be available at the club meeting. We need to have at least 12 to place the order.

*Behind the scenes of managing and operating the
Gem & Mineral Society of Lynchburg, Inc.:*

Part 1 by Ralph Torning

**FAQ: Membership records and dues
management**

**Q: How do I know when my GMSL
membership dues expire?**

A: Your GMSL membership card / nametag shows the expiration date.

**Q: Why do I need to complete a membership
renewal form?**

A: By requiring you to complete a membership renewal form (which takes about 5 minutes at the most) we want to ensure that we have the most up-to-date contact information for you. Even if your physical address has not changed in years, your e-mail address or your telephone number(s) may have changed. We frequently catch changes in members' e-mail addresses when we receive the renewal form. Also, your family membership may have changed: you may wish to add or delete a family member, which affects your membership dues, of course.

Since more than one person at the club is involved in keeping membership dues and information up-to-date, your completed renewal form is a very important document for us. We file and retain the form until we receive a new form from you. Consider this: Every elected and appointed officer of the club is also required to submit a completed renewal form with his or her renewal dues, ***and they all do!*** Completing a renewal form is really not a big deal, except when you don't do it!

**Q: Who maintains the membership roster for
the club?**

A: Ralph Torning is currently the membership chair and maintains the roster. The roster is maintained as an Excel spreadsheet. Each



member of the club's Executive Committee receives a copy of the updated roster either as an Excel file or as a (partial) pdf file once a month.

**Q: Who else is using the membership
information contained in the roster?**

A: Viewing the roster information is strictly limited to members of the Executive Committee, including our newsletter editor (Natalie Darling) and our Field Trip Chair (Dave Callahan). Both utilize roster information (address, e-mail address, telephone) to perform their respective duties as newsletter editor (and distributor) and as Field Trip coordinator. That's why it is so important to update your contact information at least once a year!

**Q: The GMSL membership dues have not
changed in years. How can the club
operate with such low annual
membership dues?**

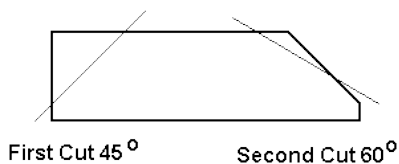
A: No doubt, our GMSL membership dues are one of the truly significant bargains for family entertainment you will see anywhere these days. The \$15 annual dues for an individual amounts to just 4 cents per day! And the \$3.25 dues collected annually for each additional family member amounts to less than a penny per day. When was the last time you bent down to pick up a nickel or penny off the sidewalk? GMSL provides you a true bargain for your low membership dues! We supplement our dues income by participating in a few regional festivals, such as Uncle Billy's Day in Altavista and The Apple Harvest Festival in Amherst.

Now let's continue last month's article written by Donald Clark, CSM on cabbing.

Submitted by First VP Jack Curtin

Shaping

Now it is time to begin cutting. If working with something hard, like a piece of agate, begin with your coarsest wheel. If you are working with something soft, like opal or turquoise, or something small, begin with one of the smoother wheels. If it cuts too slowly, you can always go to a coarser one, but caution dictates that you start gently.



Bring your machine up to speed and get your chosen wheel thoroughly wet before starting to cut. The water serves two important purposes. It acts as a lubricant, keeping the friction and heat down. It also carries away the swarf, (the cutting debris,) which prevents the wheel from clogging up. Most manufacturers recommend that you use an additive for additional lubrication. Unless your machine is made entirely of stainless steel, you will need an additive with rust preventative properties as well.

When grinding, it is important to use the lower quarter of the wheel. If you try to work above the centerline, there is a good chance the gem will be pulled out of your hands. "Pulled" is tame compared to what actually happens. The gem is yanked violently from your hands and flung to the far reaches of your shop. If you can find it again, it may well be broken.

Begin by grinding the excess material down towards the outline you have drawn. Use a pair of calipers to measure your progress. Templates are great for shapes,

but are not accurate for dimensions. Leave yourself some room for the remaining steps. Depending on the size of your cab, you may want to leave a half-millimeter or so. This is something you will learn from experience, as the amount varies with the hardness of the material and the size of the gem.

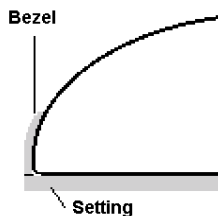
Once you have the outline shaped, it is time to begin the process known as "Peeling the Apple." Grind a bevel all the way around the gem at about 45 degrees, bringing it 2/3 to 3/4 of the way down to the bottom. Then grind another bevel, again all the way around the stone, at about 60 degrees, leaving some of the previous cut showing. Keep peeling the apple, cutting bevels at increasingly steeper angles, until they meet in the center.

This is the area that causes the beginner the most trouble. It seems that just three cuts will completely cover the stone, except for maybe a tiny area right in the center. That is not good enough. If you have even a tiny area that is flat and not properly domed, it will not take a proper polish. To make matters worse, it is right on the very top where it shows the most!

You have to be patient and learn to get the entire stone evenly domed. Look at the stone from both ends and both sides. The curvature should be even in every direction and all the way to the center. You should make this inspection at every step, but especially in the first, coarsest stage. Any irregularities are easier to correct now than later with the finer grits.

Now we are going to get ahead of ourselves for a bit, just so you know where we are headed. As you are shaping the gem, leave a small, vertical area on the sides before it begins to taper in. You will also want to sand a very small bevel on the

lower edge of your girdle. This is done in the fine sanding stage. The bevel prevents the edge from chipping and it also leaves a small area for solder.



Cabs are usually placed in a bezel setting. The bezel, a thin strip of metal, is soldered to the main piece. Hence, you need a little room for the solder. To hold the gem securely, it needs to be bent inward, over the curvature of the stone. The vertical area on the side offers support, without having to bend the bezel too far in. When finished, you want to see mostly the stone. You do not want the bezel to come so far over the edges that it distracts from the gem.

These steps are particularly important with brittle opal. If you leave a sharp edge on the girdle, the stone can chip or crack when tightening the bezel. The steeper the sides, more support the gem receives. Of course this can be over done. The above illustration shows ideal proportions, from the metal smith's point of view.

Smoothing

Once you are satisfied with the shape of your gem, it is time to start sanding out the coarse scratches. If you are using diamond, this will be in a series of steps. Typically, you would use a combination like 260, 600, and 1200. Inspect your gem after each step. Look for proper curvature, as you did before. Also, check to make sure you have removed all the coarse scratches from the previous step. This is very important. If you don't get them all out before moving on to

the next step, you will have to either back up and do it again, or settle for a low quality finish.

The gem needs to be dry for you to see the progress. This can be challenging in a humid environment. If possible, warm the room before starting. If you can't warm the room, at least use warm water. Have plenty of towels available and dry your hands before trying to dry the stone.

If you are using silicon carbide, all you need is 600 grit. It wears fast and becomes the finer grit you need for a prepolysh. Unfortunately, these have limited uses. You may have to have two 600 belts in use; one for shaping and a well used one for prepolyshing.



Evenly Domed

The quality of your prepolysh, the final fine sanding, cannot be overstated. This is the single most important element in getting a high polish. The surface should be ultra smooth, with no visible scratches at all. Any time you find you are having trouble getting a high polish, go back to the prepolysh step. Soft materials like lapis and opal scratch readily with diamond. 1200 diamond is a fine prepolysh for agate, but you might need something much finer, like 3,000 or 8,000 for softer gems.

Polishing

There are hundreds of polishing methods, which can be very confusing to a beginner. If you buy a new machine, it will probably come with a polishing system. That is a good place to start.

An old lapidary trick is to use aluminum oxide on suede, soft side out. This is the most versatile polishing method available. It

will put a high polish on more materials than any other method.

Quartz responds best to cerium oxide, which does well for opal too. You have to be very careful about heat build up with opal. Stones get hot quickly while polishing and heat can destroy opal.

Jade, on the other hand, needs a lot of heat and friction to polish. Use chromium oxide on leather or felt.

Diamond can be used on leather or specially made pads. However, it has never gained the popularity with cabbers that it has with faceting. It is more expensive than aluminum oxide and doesn't offer any significant improvements, except on ruby and sapphire.

These are the most common and most useful polishing methods. With them, you will be able to get a mirror polish on any material.

That mirror polish is important. It is a fair amount of work to come up with a machine, learn how to use it, find the rough, orient it and finally cut a gem. When you get that mirror high polish on a beautiful stone, it all becomes worthwhile.

Judging Your Work

When examining a cabochon, begin by judging the polish. Look for any scratches or pitting that will reduce the amount of light reflected from the surface.

The next thing to look for is how even the contour is. A cabochon should have an even curvature to its surface. Look at the cab from both ends and both sides. The shape, (the curvature,) should be a mirror image from side to side. No area should be thicker than its opposite and there should be no bulging.

The second way to judge the shape is to hold the gem so light reflects off its surface.

Move the gem so the light travels across the top. If the surface is properly cut, you will see the band of reflected light glide evenly over its surface. The band of light will begin to snake if there are any irregularities.

The very top of the gem is where you are most likely to see a problem. Often a small area will be somewhat flattened. This is hard to see when viewing from the side, but obvious as light passes over it. The fact that light doesn't flow smoothly over this area is why it is considered to be second-rate workmanship. However, if you look closely, that area probably doesn't have as good a polish either.

Some Real Facts on Lightning and Thunder-
Reprinted in part form "Being Safe During Storms by Owen Martin by way of AFMS newsletter Sept. 2011

The odds of getting struck by lightning is 1 in 606,944...being killed 1 in 2 million

Southern Manitoba, Canada, has the greatest occurrence of nocturnal lightning in all of North America.

Annually, lightning strikes the CN Tower about 75 times and the Empire State Building about 23 times.

Lightning is the greatest source of forest fires.

Thunder can only be heard about 12 miles away under good quiet outdoor conditions

Lightning bolts are extremely hot, with temperatures reaching 30,000- 50,000 degrees Fahrenheit.

Mineral of the Month:

PYROMORPHITE [Pb₅(PO₄)₃Cl]

By Tom Prachar, reprinted from the September 2011 issue of PESA Rock News

Pyromorphite is a popular mineral for Pennsylvania collectors due to its attractive color and crystallization. The mineral has also played an important role in the early historical development of the metallic mining enterprises of the state as a secondary ore of lead.

Pyromorphite is a supergene mineral found in the oxidized portion of lead veins associated with other oxidized lead and zinc minerals. The name pyromorphite is derived from the Greek words meaning fire and form, in allusion to the apparent crystalline form it assumes on cooling from fusion.

Notable localities for its occurrence are the lead mines of Nassau and at Saxony, Germany' Pibram, Bohemia; Cambria, England; and Lead Hill in Scotland. In the United States, it is found at the Cour'd Alene district of Idaho and at Phoenixville, Pennsylvania. The many fine specimens obtained by Pennsylvania collectors from the Wheatly, Brookdale and Chester county mines of the Phoenixville district have long been favorites among collectors. The brilliant array of green color, attractive crystal patterns and occasional combination of beautiful orange wulfenite crystals provide outstanding specimens for micromounters.

DIAGNOSTIC PROPERTIES:

Color:	Various shades of green, also yellow, brown, and white
Luster:	Resinous to adamantine, translucent
Crystal System:	Hexagonal, often in rounded barrels
Hardness:	3.0 to 4.0 (Moh's Scale)
Cleavage:	Good, rarely seen
Specific Gravity:	7.04
Streak:	White



Image from: www.mindat.org/min-3320.html

Welocme New Member



*Judith Hoffmann
from Chesapeake VA*

Tips for Being Safe During Storms

By Owen Martin, CCS Corporation
Reprinted in part from AFMS Newsletter,
September 2011

Along with hot weather come those intense summer storms that can include not only rain but thunder, lightning, hail and in the worst case situations tornados.

Depending on where you are working, paying attention to the weather forecast can become a very important part of your day.

Bolts of lightning can carry more than one million volts of electricity. These bolts of lightning can cause considerable damage and injury, both directly and indirectly.

So, What should you do to properly protect yourself in the event of an electrical storm? It is always best to try to find shelter indoors, and remember then to:

- Stay away from doors and windows- ensure that doors and windows are secure.
- Where applicable, avoid standing on or near bare concrete walls or floors.
- If and where possible, stay in an "inside room" one which does not open onto an outside wall.
- Unplug all electrical appliances (microwaves, fridges) and turn off all electrical devices (computers, printers, battery chargers, etc.)
- Do not use water faucets or other plumbing facilities or devices.
- Do not use a hard wired (land line) telephone. The leading cause of personal injury in lightning storms is contact through the telephone lines. A cell phone is considered safe to use.

- Battery powered devices (walkie talkies radios are not affected by lightning.
- Then wait a minimum of 30 minutes after the last lightning flash before returning outside.

The 30-30 Rule

If you are outdoors, a simple guideline that you should use to help you know when to find safety is what is known as the 30-30 rule.

- Take shelter when you have counted less than 30 seconds between a lightning flash and the actual crack of thunder
- Then wait a minimum of 30 minutes after the last lightning flash before returning outside.

If you find yourself outside and have no available means of shelter then you should follow these rules:

- Remove footwear with steel toes
- Avoid being near metal objects like fences, poles, equipment, etc.
- Also avoid being near water, no matter what size, even puddles.
- Stay away from trees or other tall objects- as electricity can easily travel from that object to things located around it.
- If you have a hard topped vehicle, stay inside of it but do not touch anything that is metal. Park away from power lines or trees that may collapse on you. Roll up your windows and keep your hands on your body.
- If you do not have a vehicle, seek shelter in a ditch, valley, or lowest part of the area you are in. Then crouch or lie down as low as you can to the ground.



The Gem & Mineral Society of Lynchburg, VA Inc.

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The purpose of the Gem & Mineral Society of Lynchburg, INC. is to promote education in The Earth Sciences including: Mineralogy, Geology, Gemology, Paleontology, and Crystallography



Lynchburg Rock Raiders is the official FRA association of The Gem & Mineral Society of Lynchburg, VA INC



***The Gem and Mineral Society of Lynchburg VA, Inc.
Meets on the third Wednesday of each month,
From 7:00pm– 9:00pm
In the auditorium of the Parks and Recreation Building
301 Grove St. Lynchburg, VA 24501
Public is invited, Please join us!***



ON THE WEB: Lynchburg Gem and Mineral Society: www.lynchburgrockclub.org

The SFMS Newsletter, the Eastern Federation Newsletter, and the AFMS Newsletters are available for all members to read on line at the Federation Websites:

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