

# GEM & MINERAL JOURNAL

JULY 2014

VOLUME 23~ ISSUE 7

Official Monthly  
Publication of the Gem &  
Mineral Society of  
Lynchburg, VA, Inc  
[WWW.LYNCHBURGROCKCLUB.ORG](http://WWW.LYNCHBURGROCKCLUB.ORG)

## Presidents Message

Hello To All,

I'm sorry, I have no further comment at this time.

I hope to see you at the July 16<sup>th</sup> meeting.

Thanks

John Haskins



## From the First V.P.

This month's newsletter article is a discussion on gold. It will serve as an introduction to Dr. Steve Lenhart's talk this month about the mineral and how it came to be present on earth. Many of our members are "goldbugs" and surely will find Steve's talk invaluable. We may get some neat tips about gold prospecting! Our article was found on the Geology.com website.

### Gold

*A brief history of gold uses, prospecting, mining and production*

*Republished from a USGS general interest publication by Harold Kirkemo, William L. Newman, and Roger P. Ashley*

### Uses of Gold in the Ancient World

Gold was among the first metals to be mined because it commonly occurs in its native form, that is, not combined with other elements, because it is beautiful and imperishable, and because exquisite objects can be made from it. Artisans of ancient civilizations used gold lavishly in decorating tombs and temples, and gold objects made more than 5,000 years ago have been found in Egypt. Particularly noteworthy are the gold items discovered by Howard Carter and Lord Carnarvon in 1922 in the tomb of Tutankhamun. This young pharaoh ruled Egypt in the 14th century B.C. An exhibit of some of

these items, called "Treasures of Tutankhamun," attracted more than 6 million visitors in six cities during a tour of the United States in 1977-79.

The graves of nobles at the ancient Citadel of Mycenae near Nauplion, Greece, discovered by Heinrich Schliemann in 1876, yielded a great variety of gold figurines, masks, cups, diadems, and jewelry, plus hundreds of decorated beads and buttons. These elegant works of art were created by skilled craftsmen more than 3,500 years ago.

### Ancient Gold Sources

The ancient civilizations appear to have obtained their supplies of gold from various deposits in the Middle East. Mines in the region of the Upper Nile near the Red Sea and in the Nubian Desert area supplied much of the gold used by the Egyptian pharaohs. When these mines could no longer meet their demands, deposits elsewhere, possibly in Yemen and southern Africa, were exploited.

Artisans in Mesopotamia and Palestine probably obtained their supplies from Egypt and Arabia. Recent studies of the Mahd adh Dhahab (meaning "Cradle of Gold") mine in the present Kingdom of Saudi Arabia reveal that gold, silver, and copper were recovered from this region during the reign of King Solomon (961-922 B.C.).

*Continued on page 18*



## June Meeting Minutes

**Meeting-**Wed. June 18, 2014 7:00 PM

**Attendance-** 50 members

**Host-** Jessie and Don Dudley were the hosts for June, and Bernardino Rivera will host our July meeting.

**On Time Drawing-** Winners were Dee Tinsley, Kendra Turner, Linwood Hoffman, Adam Reynolds, Frank Midkiff, Thom Noble, Natalie Darling, Linda Noble and Sarah Fredericksen.

**Old Business-** John Haskins: John read a card from Don McIntyre thanking everyone for all of the cards, visits and phone calls he received since the death of his wife Nell.

Reminder: We will be doing a YMCA Summer Camp program presentation on July 9, at Sheffield School for about 70 children. Volunteers include Jack Curtin, Natalie Darling, Linda Noble, John Haskins, Dave & Noel Woolley. If you would like to participate or offer specimens for the children please contact any of the above.

**First V.P.-** Jack Curtin: Introduced tonight's speaker, Albert Dickas.

**Second V.P.-** Dave Callahan: Field Trips: 6/28- Enterprise Mine; 7/26-Boxley Quarry in Piney River; 7/26-27-Franklin NC shows and Field Trip; 8/1-3: Spruce Pine Field Trips and Shows. **Dave reminded everyone attending the quarry field trip of the necessary requirements: In date Hard Hats, steel toe boots, and wheels must be chocked.**

**Treasurers Report-** Balance at this time \$6834.11

**New Business:** None

**Program:** Albert Dickas gave an interesting presentation on American Geo-Sites and he had copies of his book for sale.

**Minutes submitted by**

**Linda Noble, Secretary.**



*There was no executive meeting this month.*

### 2014 ELECTED OFFICERS

**PRESIDENT - John Haskins**

(434) 525-8430

[JMhaskins1@netzero.net](mailto:JMhaskins1@netzero.net)

**First Vice President**

**Jack Curtin**

(434) 384 -6249

[jacwcurtin@gmail.com](mailto:jacwcurtin@gmail.com)

**Second Vice President**

**David Callahan**

(540) 297-1853

[DBCALLI@aol.com](mailto:DBCALLI@aol.com)

**Secretary**

**Linda Noble**

(434) 332-4869

[linda-noble@hughes.net](mailto:linda-noble@hughes.net)

**Editor - Natalie Darling**

(434) 941-1899

[gmsleditor@gmail.com](mailto:gmsleditor@gmail.com)

**Treasurer - Frank Midkiff**

(434) 660-1565

[midkiffsm1@gmail.com](mailto:midkiffsm1@gmail.com)

**Members At Large-**

Bernardino Rivera &  
Dave Woolley

**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-** OPEN

**Membership-** Thom Noble

PROGRAMS

The program for June was presented by Albert Dickas, on his book "101 American Geo-Sites you've gotta see." There were copies of the book was available for purchase also.

The program for our July 16th meeting will be about GOLD, presented by Dr. Steve Lenhart.



**Bench Tips by Brad Smith**

Get all 101 of Brad's bench tips in "Bench Tips for Jewelry Making" on Amazon <http://amazon.com/dp/0988285800/>

**SAWING SMALL TUBING**

When making a hinged bracelet, I needed to cut 16 pieces of small diameter silver tubing. These were to be just approximate lengths and trimmed to final size after soldering. Not having a tube cutter, I had trouble holding the tubing on the bench pin while trying to saw through it.

So here's what I did. I drilled a hole in the side of the bench pin just large enough for the tubing to slide into and almost as deep as the length of cut tubing I wanted. Sawing became quick and easy. With my free hand, I inserted the tubing and held it from rotating while sawing off each length.

**SECRET INGREDIENT**

Those of us who use paste solders sometimes find an old tube has dried out. There should be some way to recondition it, but what to use? Calling tech support at the suppliers didn't work for me. Either they don't know what the ingredient is or won't tell you the secret.

None of us likes to waste an expensive material, especially at \$16 - 20 a tube, so I've often experimented with ways to rejuvenate it. Mixing in a liquid flux doesn't work. When the liquid starts to boil off, it spatters the solder in all directions.

But after several failed experiments I finally found a way that does work. My secret ingredient is vaseline petroleum jelly. Mix in just enough to restore the consistency to something that's usable. If you use too

much, the lump of solder will flow over a wide area as soon as the torch starts heating it.

If your solder is in a syringe, it can be a little difficult to get the plunger out. I find the easiest way is to poke a hole through the solder from the tip to the rubber plunger (a bur shaft was the right size for my tube). The hole allows air to enter between the solder and the plunger, allowing the plunger to be slowly withdrawn. Once the solder is out of tube, you can easily add the vaseline, mix it up, and spoon it back into the syringe.

*Paste Solder >>>*



*Tubing/ saw >>>*



## FIELD TRIP REPORT...

2<sup>nd</sup> VP Report

Past Field Trip

**The Enterprise Mines  
Appomattox County, Virginia  
June 28th 2014**

Contact

Information  
for Field Trips

David Callahan,

Field Trip Chairman

Home phone: 540-297-1853

Cell Phone- 540-874-5201

E-mail [dbcall1@aol.com](mailto:dbcall1@aol.com)

The day turned out really nice but there were afternoon showers predicted that never materialized. We assembled at Templeton's Market on 460 East of Lynchburg and by the 8:30 departure hour, all but two families had checked in. We did have a very good attendance with a total of 21, many of which were new members and families.

We departed as scheduled and were at the site a little after 9. After a little vehicle shuffling, we headed down the hill to the collecting site. The road was dry and well maintained but we still left several of the smaller cars at the bottom and only proceeded up the hill with the four wheel drive high clearance cars and trucks. The road narrows and is very limited in parking and turn around places.

After a brief explanation of the collecting areas and the old processing machinery to our new and first time members, we split up and found some productive collecting areas. I saw some very nice individual quartz crystals as well as drusey and crystalline quartz in the quartzite and brown manganiferous chert matrix. The small shiny black manganite crystals in vugs were beautiful and plentiful. I also saw some very nice nodular botryoidal specimens of cryptomelane or psilomelane.

Everyone had a great time in spite of the few ticks and chiggers we also found. If you missed this trip and were unable to attend, we have been invited back later on in the year. We will try to schedule a return trip in the fall when things cool down.

**An Official Field Trip for The Gem & Mineral Society of Lynchburg, VA. Inc. (GMSL)  
and**

**The Roanoke Valley Mineral & Gem Society, Inc. (RVMGS)**

**8:00 to 8:45 AM EDT (assembly at the quarry for mandatory sign-in and hazard training)**

**9:00 AM EDT to 1:00 PM (collecting hours)**

**Saturday, July 26, 2014**

**Boxley Aggregates, Piney River Quarry (Amherst County)**

**739 Warrick Barn Road, Arrington, VA.**

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

**NEW SAFETY REGULATIONS NOW APPLY.....READ CAREFULLY AND COMPLY**

**COLLECTING:** According to the [mindat.org](http://mindat.org) Web-site, the following minerals are listed from Minerals of Virginia, 1990 edition. Some on this list have not been found on our past field trips. (An ( \* ) indicates those known finds on past field trips)

Anatase: A greenish-brown replacement of ilmenite.  
Ilmenite: Black metallic or highly weathered masses. ( \* )  
Kaolinite: White powdery masses from the alteration of feldspar. ( \* )  
Quartz: Light blue to white ( \* ) *continued on next page*



UP COMING



FIELD TRIPS...

continued from page 4

Rutile: Reddish-brown metallic to highly weathered masses. ( \* )

Tacharanite: White, dull to pearly. Occurs with the weathered anatase, rutile and ilmenite.

Zoisite var: Thulite: Veins of pink thulite occur in the feldspar. ( \* )

Some additional minerals we have also found there: Pyrrhotite: (has been verified) ( \* ) Silvery metallic when fresh but weathers to a dark rusty color when exposed to the weather. Pyrite: Small crystals and masses ( \* )

The main rock mined here is called APLITE. It is very hard, light-colored, and fine-grained and consists primarily of sodic plagioclase feldspar and quartz in the groundmass and, in some cases, orthoclase feldspar phenocrysts. Like pegmatites, aplite dikes may represent a residual fraction on silica-rich magma after most on the magma has crystallized.

Remember that the availability of these minerals depends on where they are working in the quarry at the time of the field trip and how many stock piles are available. Note that some of the occurrences are very small.

**DIRECTIONS:** From Lynchburg, VA., follow US 29 Bypass north to Amherst. Continue on the US 29 by-pass for about 2 miles until you come to Rt.151 (Patrick Henry Highway). Turn Left on Rt. 151 and continue for about 6 miles and turn left on RT. 665 (Warrick Barn Road). The entrance road to the quarry will be in about 1 mile on the right.

**MEETING LOCATION & ASSEMBLY TIME:** 8:00 to 8:45 AM. At the quarry scale house / office. You will need sufficient time to review the Boxley Release and Waiver of Liability along with the Hazard Training information, fill out and sign both the Hazard Training Certificate and sign the required Boxley Waiver of Liability form. There will also be a review of the site specific hazard training and safety regulations by the quarry Superintendent. Everyone must be present for this presentation. If you are late, you will not be permitted to enter the quarry. We all will enter the quarry as a group about 9:00 AM.

All safety rules will be strictly enforced or you will be escorted out of the quarry and barred from future field

trips. Our members adhering to the basic safety rules in the past is the only reason Boxley continues allowing us access to their quarry today. Any member not complying with the basic safety rules, will be promptly escorted from the quarry and barred from all future field trips.

**EQUIPMENT:** The Boxley Quarries are very safety-conscious. Standard quarry PPE (personal protective equipment) gear is required or you will not be permitted to enter the quarry. Hard hat (see mfg. date below), steel-toe boots (no exceptions), safety glasses and good common sense is required. Also good protective clothing and gloves must be worn. A set of wheel chocks or a suitable rock must be used when parked to be in compliance. The vehicle must be in park and the parking break applied when leaving the vehicle. It could be very cold, wet or hot in the quarry, so dress according to the weather forecast that morning. Be sure to bring plenty of water and snacks. Bring your own collecting equipment such as rock hammers, chisels, buckets and newspaper to wrap your delicate specimens. We will be allowed to drive into the quarry. Bring rain gear in case of bad weather. **HARD HAT NOTICE: CHECK THE MANUFACTURE DATE, LEFT SIDE, UNDER THE BRIM IN THE SMALL CIRCLE ON EITHER SIDE OF THE ARROW.** If you see a 1 on either side it was made in 2011, a 0/9 is 2009 and out of date. If it's older than 5 years, it must be replaced. This is a new Federal rule enforcement. You must comply or you will be rejected.

**AGE LIMIT:** All children will be allowed but it will be the parent's responsibility to keep them under tight control at all times and see that they obey all the safety requirements. The same dress and PPE requirements apply. If they don't comply, don't bring them!

**NOTE:** Severe weather or other crisis out of our control may result in the canceling or rescheduling of this trip. If there is any question, please call me to confirm the trip.

**CONTACT:** David Callahan, Field Trip Chairman. GMSL and RVMGS

Web sites [www.LynchburgRockClub.org](http://www.LynchburgRockClub.org) and [www.rvmgs.com](http://www.rvmgs.com)---Home Phone [540-297-1853](tel:540-297-1853)---Cell [540-874-5201](tel:540-874-5201) (the day of the trip only please) Email [dbc1@aol.com](mailto:dbc1@aol.com)

**DMC Program of the SFMS Field Trip Committee**

An Official Field Trip of the Tennessee Valley Rock and Mineral Club (Chattanooga, TN)(HOST)

8:00 AM to 2:00 PM Central Time

Saturday, August 16, 2014

GRUETLI-LAARGER, TN ON THE CUMBERLAND PLATEAU

**Place: GRUETLI-LAARGER, TN ON THE CUMBERLAND PLATEAU**

Time: Saturday, August 16, 2014 - 8:00 AM to 2:00 PM - Central Daylight Saving Time

MEET: MONTEAGLE TN , EXIT 134 ON I-24. MEETING PLACE IS WEST OF I-24 IN PIGGLY WIGGLY PARKING LOT , ON LEFT APPROX 1/2 Mile. There is no cell service after we leave the meeting area, late arrivals should call prior to 8 AM to let us know so someone can wait.

Cost: Free

Children are welcome under adult supervision.

What to find: Hunt area is in a wilderness area without facilities, easy access to abundant Mississippian and Pennsylvanian fern and tree bark fossils, some iron impregnated/red specimens are found. Park along road at the site.

WARNING : POISON IVY AND VENOMOUS SNAKES IN THE AREA. BE PREPARED!,

What to bring: gloves, buckets, pry bar, trowel, rock hammer, boots, gloves, long sleeve shirt. change of clothes(you may get wet), newspaper to wrap fossils, drink and food. SUN BLOCK and bug spray!

For further information call JACK WEAVER [423 596 0640](tel:4235960640), CHARLIE JONES 423, 563 4479

**Inter Regional Field Trip News**

by Doug True, Chair

*reprinted from AFMS News, May-June 2014*

In conjunction with the Inter-regional field trip this July 30-Aug 2, in Terry, Montana, there will be a benefit barbecue on Saturday evening (money raised will go to Cameron Gallery). Beef has been donated by local rancher. The barbecue will be held at the park in Terry and after that, a live band, provided by the Terry Chamber of Commerce will perform.

Sunday will be an open day, a time for buy-sell-trade day in the park- a good time to see if any of the locals will bring out some of their Montana Agate. There will also be a Junior or Kids hunt at the river Sunday morning. Kids will hunt the gravel for specially marked agates and they could win great prizes. The Ye old Timers Rock Club has donated two New Tumblers with kits and H&I lapidary donated a reconditioned tumbler with new barrels. Other prizes are still to come. After that we will have a farewell potluck Sunday evening at the park.

Agate hunting success will depend on three things: The amount of ice on the river this winter- ice jams open up new material and it looks good thus far. Then high water in the spring and summer will wash and sometimes clean the rock, and last but not least your being able to spot them. There is also lots of Petrified Wood, and Jaspers to be collected. There will be 8-10 field trip leaders to help make your trip successful.

This will give you a taste of what will happen in these four days. If you decide to join in on the fun I need to know a few things: Names of those attending, where you are from; club affiliation; how you are staying (RV Dry camp, Tent camping, RC Park, Motel, etc.) Everything is free- Music, Trips, Potlucks, Programs, Bus Rides, etc. We will have a donation bucket to help on our expenses.

Complete information on this trip in the Feb. 2014 AFMS Newsletter <[www.amfed.org](http://www.amfed.org)> or contact Doug True <[dtrue-fossils12@yahoo.com](mailto:dtrue-fossils12@yahoo.com)> for more information or to register.

## Safety Matters- The Eyes Have It

by Ellery Borow, EFMLS Safety Chair, reprinted from EFMLS News, June-July, 2014

They do! The eyes have it all! They give us depth perception, amazing colors, pattern perception in that pretty jasper slab—our eyes draw back the curtain on our window to the world.

Judging by experiences with all manner of rock and mineral collecting, it appears that the vast majority of our field identification of minerals and rocks is performed by visual means alone. In deed, we use our eyes to judge the mating of facets on that stone we are cutting, to lay out the cabochon template on that pretty slab of jasper, to follow the visual clues of the trail as we hike to that long lost rock quarry. There is an endless variety of how we use our eyes in our hobby. Our eyes allow us to enjoy many areas of our rock, mineral, fossil hobby that we might otherwise be unable to pursue.

So, why do I see so many folks pursuing the hobby without protection for the valuable resource that is their vision? I see folks hammering rock, grinding stones, working in dusty environments, spending hours in the blindingly bright sunlight- all without benefit of suitable eye protection. It seems strange that folks would so risk the precious gift of sight.

I have heard numerous reasonable-sounding arguments as to why protection was not being used during vision-risking tasks. Excuses such as "my goggles were accidentally left home," "the goggles' elastic straps

are worn out and no longer hold them in place", "the goggles are too scratched or hazy to see through," "the goggles were run over by a truck", "the lenses keep falling out," "they are uncomfortable to wear", and other excuses too numerous to list. Well, trust me on this one, there are numerous solutions to these problems.

Goggles are cheap (relative to the cost of eye surgery or vision loss). Lots of places sell goggles. Most hardware, grocery, department stores sell them. One does not need to visit a rock shop to find goggles. Please consider keeping an extra pair or two on hand.

There are replacement lenses available for many styles of goggles. New and replacement goggle straps can be made from elastics found in sewing, fabric and yard goods stores.

Store goggles in a protective box or case and keep them in the collecting bag so they are not inadvertently left home. Goggles are ill-fitting? There are numerous goggle styles. Visit a store and try on various kinds to locate ones you find comfortable.

Can't find well-fitting goggles? There are other ways to protect ones eyes, such as face shields, prescription safety glasses, safety glasses that fit over ones own regular prescription glasses and aviator style goggles—among others.

Please consider protecting your precious gift of sight. We also hope you use that precious gift to keep reading these safety matters columns

Your safety matters!

*Welcome New Members:*

Daniel Anderson from Forest,  
Ellissa and Steve Bowen from Forest, VA

James and Judy Elder from Lynchburg, VA

The Gem and Mineral Society of Lynchburg, VA. Inc. [www.lyncburgrockclub.org](http://www.lyncburgrockclub.org)

Upcoming Events

July 2014

**July 24-27-** Franklin NC Gem show and sale. Macon County Community Bldg.; 1288 Georgia Rd. Thurs.-Sat. 10-5; Sun. 11-4. Adults \$2. Children under 12 free. Contact: Linda Harbuck, 828-524-3161 or linda@franklin-chamber.com


**July 31-Aug. 3-** Spruce Pine NC Gem and Mineral Shows. 12966 Hwy. 226 South Spruce Pine, NC 28777

**Aug. 8-10-** Treasures of the Earth Gem, Mineral, Fossil, Bead and Jewelry Show and Sale. Northwest Georgia Trade & Convention Center 2111 Dug Gap Battle Rd. Dalton, GA 30722

**Sept. 13-14-** 51st Annual Gem, Mineral & Fossil Show sponsored by the Northern Berkshire Mineral Club. Fraternal Order of Eagles Aerie #310, 515 Curran Highway, Rt. 8; North Adams, MA.

**Oct. 3-5-** Annual Fall Rock Swap and Dig at Graves Mountain GA. Call for information or just show up- Jr. Norman 706-359-1544 or 706-401-3173.

**Oct. 18-19-** 41st Annual Jewelry, Gem, Mineral & Fossil Show sponsored by the Kanawha Rock & Gem Club. So. Charlestown Community Center, So. Charlestown, WV

SUN	MON	TUES	WED	THURS	FRI	SAT
		1	2	3		5
6	7	8	9	10	11	12 Open Workshop at Dave Callahans
13	14	15	16 Meeting 7PM	17	18	19
20	21	22	23	24 Franklin NC Gem Shows>>	25 >>>	26 Field Trip >>>>
27 Franklin Show Ends	28	29	30	31 Spruce PineGem Shows >	Aug. 1 >>>	2 >>>

**ATTENTION ALL CLUB MEMBERS**

Workshops will be held regularly on the second Saturday of each month at Dave Callahan's. Start time is 9:00 AM, but come anytime and stay as long as you'd like. There is a store/deli about a mile down the road if you want to break for lunch and return.

The workshops will be open format, and the purpose will be for club members to learn how to use the lapidary equipment to turn rough specimens into finished lapidary pieces for their own personal use. Experienced members will be available to help teach and assist.

We have a great set up with several sets of wheels for cabbing, faceting machines, saws, and much much more. From time to time there may be special class offerings, so be sure to let us know what you are interested in.

**Workshops are open to club members only, and due to liability we can not allow guests or non-members at our club workshops.** Remember, membership is just \$15.00 per year for the first family member and \$3.25 for each additional family member.

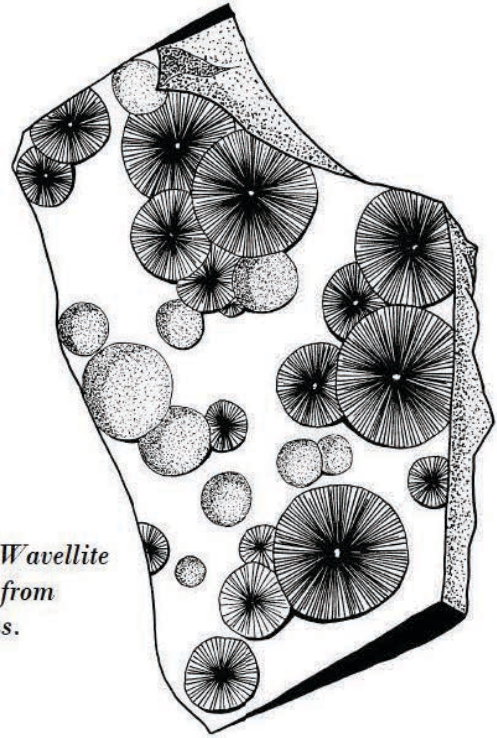




W IS FOR . . .

. . . Wavellite

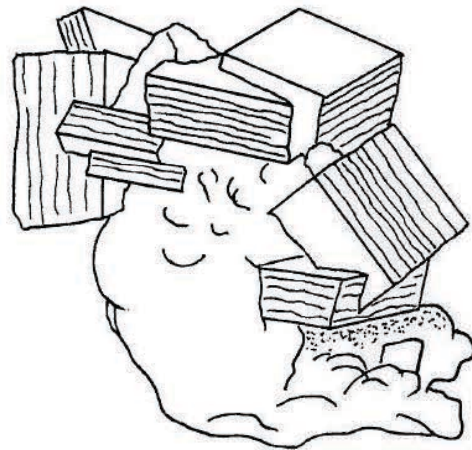
Wavellite often forms balls of crystals. When the balls are broken open, you can see how the crystals grow from the center out to the edge of the ball. This is called *radial* crystal growth. Wavellite can be white, yellow or green.



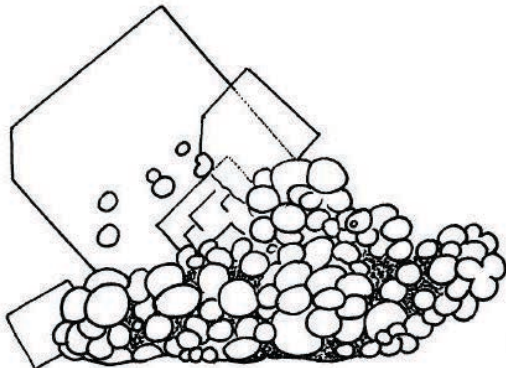
*Balls of Wavellite crystals from Arkansas.*

. . . Wulfenite

Wulfenite is a very popular, and very expensive mineral. Some crystals are thick and look like boxes. Others are so thin you can see through them. It can be found in bright, glassy red, orange, or yellow crystals.



*Orange wulfenite on brown matrix from Mexico. Notice how thick these crystals are.*

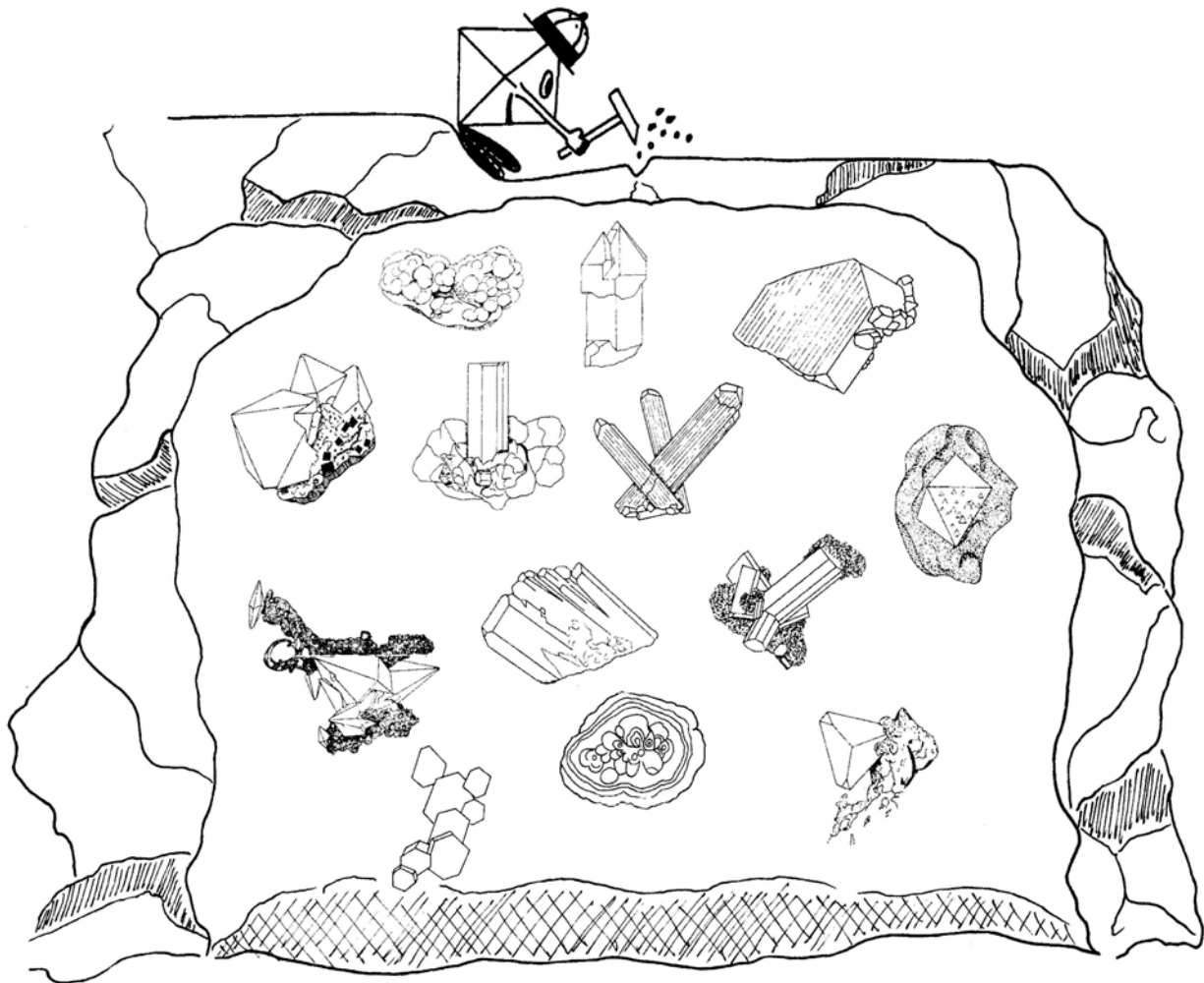


*Yellow wulfenite on orange, rounded mimetite from Mexico. These crystals are so thin that you can actually see through them.*

# X is FOR . . .

. . . KNOWING WHERE TO DIG FOR GREAT  
MINERAL SPECIMENS.

AS ALWAYS . . .  
X MARKS THE SPOT.



# Y is FOR . .

Why not try drawing your own minerals?! Copy your favorite pictures from this coloring book, or draw specimens from your own collection. When you are done . . . color them.



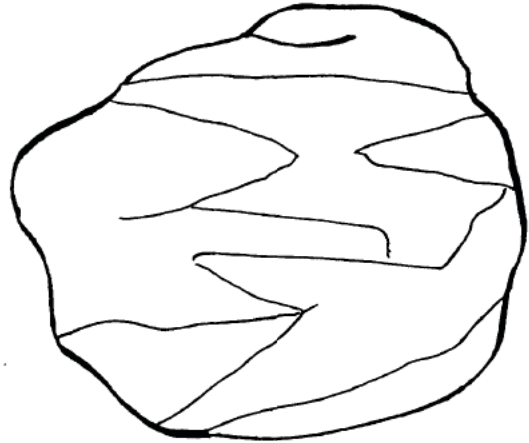
Rocky the Miner thinks your  
drawings are GREAT!!



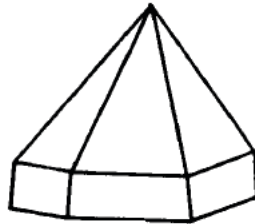
# Z is FOR . . .

## . . . Zincite

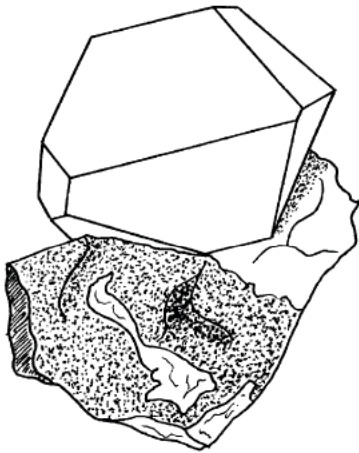
Zincite is an important ore of the element zinc. It seldom forms crystals. Franklin, New Jersey is one place where these rare crystals are found. It is orange to dark red in color.



*A perfect zincite crystal.*



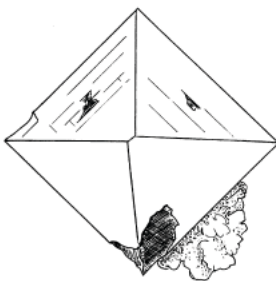
*This zincite looks like fingers. It grew with white calcite.*



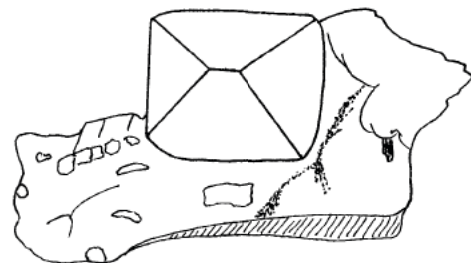
*A black zircon crystal from Bryson, Quebec, Canada.*

## . . . Zircon

Zircon is often found in well-formed crystals. They can be more than an inch across. Brown zircon turns blue when it is heated. This blue zircon is used to make jewelry. It will turn brown again if left in the sunlight.



↔ *Dark brown zircon from Mont Saint-Hilaire, Quebec, Canada.*



↑ *A deep red zircon crystal on white matrix from Colorado.*



## Rock & Gem Magazine has been Sold & Moved to Dallas

Reprinted from SCRIBE- Vol. 38 No. 2

Dear Newsletter Editors and Rockhounds,  
You may have heard about the sale of Rock & Gem to Beckett Media LLC at the beginning of May. It is important to note that we are no longer at the Maple street address in Ventura. Please do not send any mail to that address, as it will not be forwarded.

I am in the process of setting up a mailing address for Rock & Gem editorial. I will get that information to you as soon as possible.

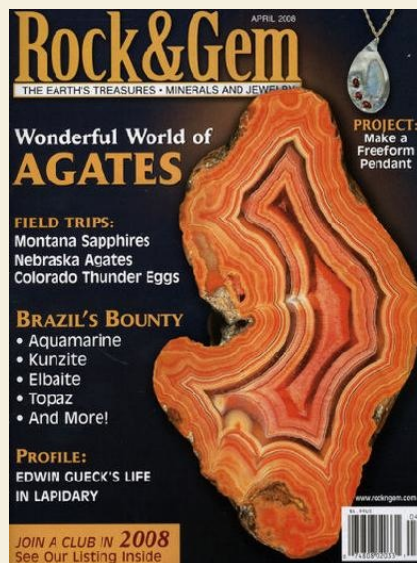
Any mail related to Rock & Gem advertising and print or digital subscriptions should be sent to Rock & Gem, c/o Beckett Media LLC, 4635 McEwen Rd., Dallas, TX 75244.

Email subscription address changes to

[subscriptions@beckett.com](mailto:subscriptions@beckett.com). Back issues may be ordered from [www.beckettmedia.com](http://www.beckettmedia.com) for the cover price, plus shipping. The new Rock & Gem phone number is (972) 448-4626.

This information will not appear in the magazine until the July issue, so I would appreciate it if you could help spread the word through your newsletters. I'd like to minimize the confusion on the part of our readers.

Thank You,  
Lynn Varon, Managing Editor  
Rock & Gem Magazine



## ATTENTION ROCKHOOUNDS... Highly Important....

*Read what has happened at Rock & Gem Magazine. Please send an email in support of Lynn Varon, to Bill Dumas in red below. Then copy this to all your rockhound friends, we must get this to every rockhound we know and ask for their help. Call your club members...*

At the CFMS Breakfast with the Editors & Webmasters Sunday, June 1st we had an unexpected visitor. Lynn Varon, Managing Editor of Rock & Gem Magazine visited us.

It seems that a new group, Beckett Media, LLC 4635 McEwen Rd, Dallas TX 75244 has bought Rock & Gem. Presently Lynn is a "contact person" and her future with the magazine is up in the air. I don't know about you, but personally I feel if these newbies let her go, it will abruptly end my relationship with the magazine. Lynn has been a rock for all of us. She's helped many of us over the years and now this new company has left her swinging in the wind.

I'm asking each and everyone of you to personally send an email in support of both Lynn Varon, current managing editor of Rock & Gem magazine and Bob Jones, Senior Consulting Editor. We are the magazines subscription base; Please forward this to all editor, club presidents, everyone on your email list and ask for help on this. We can save Lynn and Bob, but we must be swift and get it done...don't wait.

**DIRECT YOUR EMAIL TO:** Bill Dumas, Advertising and editorial director, at the address above, or or [bdumas@beckett.com](mailto:bdumas@beckett.com).

My email list is on my old computer, and I don't have access to it for a couple of days yet. So I am sending this to people who count...please don't let me down. Rock and Gem magazine was voted by the AFMS as our official magazine...this could also change if they think we don't care.

As you can imagine, I am really mad about this and the way Lynn has been treated. She now works out of her home on a contract basis, so they can fire her at any time. Let them know it will be at a cost- RENEWAL OF OUR SUBSCRIPTION. Remind them, our bulletins and our writers for our bulletins eventually become their authors,, and this could dry up.

Thanks for listening, and let's get to work,  
Shirley Leeson

*This came by way of email, so I am just passing it along. You can go to the link and listen to their idea-do with it as you please.*

## Father, Son Kickstarting Mineralogy

We're trying again on Kickstarter to raise awareness for mineralogy and mineral collecting! Please note, we're not selling anything. But we do need your help, chatter and support to get this project rolling! We're creating free downloadable educational content for kids and educators and we're trying to get a more formative television show going about mineral collecting! Please, if you value mineral collecting, you won't have to put in much effort at all to help out a bunch! It's as easy as forwarding a link, reviewing the project, "Liking" us on Facebook and "Re-Tweeting" our content on Twitter. Simple!

Kickstarter.com is a crowd funding website, where projects are submitted and approved by the staff to get a much needed funding boost from people all over the world. Well our project "Minerals or Bust!" was approved and we launched it on the Fourth of July! Now we need your support! We have specific goals, aims and budgets listed on the project website, so please take a minute to look it over. Two years ago we launched a project that failed to get the funding we needed, but we're not ones to roll over and give up! So we regrouped and created a bigger, better project!

Sadly, Mineral collecting is an interest that is dying out and we want desperately to breathe some new life into

this great past time. There are practically no young faces at swap meets, in local clubs and at conferences and if we don't do something fun and entertaining to grab some new interest now we'll lose an entire branch of scientific study. Every year notices circulate about friends and colleagues who made great strides in mineralogy who've passed away. Their collections and research materials disappear, sometimes just into the dumpster! Oh, what a true shame that is! But that's where we can help! There's no better bunch to put a comical spin on some educational awareness about minerals right now than a goofball father/son team with an extensive mineralogy background. Over the years we've been members of the Nittany Mineralogical Society, Kyana Geological Society, the Georgia Mineral Society, the Coon Creek Non-Meetings in Arkansas, the Montgomery Gem and Mineral Society, Alabama Mineral & Lapidary Society, Friends of Mineralogy Midwest, FM Southeast, the Northern California Mineralogical Association and Southern California FM! Our project deadline is August 28th, 2014. Please help us Kickstart an entertaining and informative series about gems, minerals and mineralogy!

Our project on Kickstarter.com: <https://www.kickstarter.com/projects/jbarwood/minerals-or-bust-season-one-episode-one>

"Like" our Facebook.com page with additional news/info: <https://www.facebook.com/Minerals3DHD>

Follow us on Twitter: <https://twitter.com/MineralsOrBust>

Website coming soon: <http://www.mineralsorbust.com>

All support, be it a "Tweet", a "Like" or just good word of mouth, is greatly appreciated!

## EFMLS Wildacres 2011

There is still time to register and take advantage of a wonderful week of learning and interaction with others who share a passion for our hobby.

The Wildacres Fall Session is Sept. 5-11, 2014. Enrollment is low and we must pull together if we want to keep this opportunity available to the EFMLS in the future. Please look over the schedule and class offerings on the next page and consider taking advantage of a surely unforgettable experience. The Speaker in Residence for this session will be Dr. Steve Chamberlain.

You may also be eligible for a scholarship (to help defray the cost) through the Gem and Mineral Society of Lynchburg, VA. (Talk to an officer for details.)

You can learn more about Wildacres at <http://www.amfed.org/efmls/wildacres.htm>



## Wildacres Fall Dates: September 5th-11th, 2014

**Basic Cabochons, Al DeMilo-** Hands-on instruction will be given to show how to transform a rough piece into a shiny, well-formed cabochon with no flat spots. The use of a trim saw as well as techniques to grind, sand and polish the stone into a standard size and shape will be covered. Slabs will be provided, but you may use your own with instructor's approval. 2-day class offered 1st semester. No prior experience necessary.

**Intermediate Cabochons, Al DeMilo-** course is an extension of already learned skills. It will focus on the crafting of cabochons of difficult shapes and sizes. Much one-to-one attention will be given. 2-day class offered 2nd semester. Pre-requisite: Students must know how to use the trim saw, dop a stone and use a grinding, sanding and polishing machine.

**Chainmaille Basic, Roger Campbell-** Learn the ancient art of chainmaille using non-soldered copper jumprings. Students will learn different weaves while completing class projects. All tools will be provided. An optivisor or other magnification would be helpful. 2-day class offered 1st semester. No prior experience necessary.

**Chainmaille continued, Roger Campbell-** The 2nd semester class will be a short review of chainmaille and students will learn additional weaves. All tools will be provided. An optivisor or other magnification would be helpful. 2-day class offered 2nd semester. No prior experience necessary.

**Cold Connections- A Riveting Exerience, Pat Baker-** Students will learn to make jewelry with cold connections, no soldering required. Materials with which we will work include silver, copper, bronze, brass and found objects/alternative materials. Students will learn how to create texture with hammers, stamps and the rolling mill; riveting and tube riveting and forming with a dapping punch and block. All students should bring optivisors. 2-day class offered 1st semester. No prior experience needed.

**Working with Reactive Metals: Anodizing Titanium & Niobium, Pat Baker-** Add amazing color to your jewelry! Titanium and Niobium, while gray in their natural state, can be treated by heat and/or electricity to create beautiful colors on the surface of the metal. We will make many samples with both metals using wire and sheet, discuss limitations and benefits. 2-day class offered 2nd semester. No prior experience needed.

**Faceting, Reivan Zaleznik-** Students will learn to cut and polish a 57-facet round brilliant gemstone. In addition, they will learn how to identify well-cut stones, select rough material and see whether or not they enjoy this fascinating aspect of the hobby. Students are asked to bring an optivisor if they have one. 4-day class. No prior experience necessary.

**Gem Identification, B. Jay Bowman-** Students will learn to use the various instrcuments used to identify cut gems. This will

include the microscope, refractometer, spectroscope and others. They will practice on a variety of stones provided. 4-day class. No prior experience necessary.

**Polymer Clay: Making Canes and More, Carolyn Stearns-** Each student will learn how to make millefiori clay canes. You will begin by making blends of clay and turning them into different canes including flowers and leaves. Learn to slice them tissue-paper thin and layer the slices to create clay fabric which will be used to make different shape beads. (If you bring your own clay, please bring Kato Polyclay. You may bring your own tools if you have them.) Kit and materials will be provided. 4-day class. No prior experience needed.

**Basics of Scrimshaw, Sandra Brady-** Scrimshaw, a folk art dating back centuries, is a special form of engraving applied to ivory and similar materials. This course offers an excellent way to begin traditional scrimshaw. Working with a hand scribe you will learn attractive shading techniques and work on both natural and man-made materials. You will also learn basic composition & tool sharpening, as well as transfer methods for those who are "drawing challenged". Optivisor or other magnification is recommended. 2-day course offered 1st semester. No prior experience needed.

**Scrimshaw Color Basics, Sandra Brady-** Building on the methods taught in the 1st semester, students will be introduced to color. Modern scrimshaw methods utilizing the beauty of color will be explored. Preservation of your artwork will be included. Please bring an optivisor. 2-day course offered 2nd semester. Pre-requisite: Basics of Scrimshaw.

**Silversmithing, Lendle Hill-** Students will learn the basic of soldering, fitting a stone, assembling and finishing either a ring or pendant. Starting with a piece of flat silver, students will learn to make a bezel setting, solder it to a piece of silver, and then add either a ring shank or pendant bail before finishing the piece on the buffer. 2-day class offered both semesters. No prior experience necessary.

**Wirewrapped Jewelry-Basic, Jacolyn Campbell-** Using pliers, gold-filled or sterling wire, assorted beads or gemstones, and a few basic wirecraft techniques, create your own fashion rings, bracelets, pendants and earrings. Designed for beginners, students will make a variety of projects. All tools and materials are provided. 2-day class offered 1st semester. No prior experience necessary.

**Wirewrapped Jewelry- Intermediate, Jacolyn Campbell-** Using the same techniques and materials as in the basic class, students will make more advanced projects. All tools and materials will be provided. 2-day class offered 2nd semester. Pre-requisite: Basic wirewrapping skills however, a brave new beginner could take the class.



## Green Minerals- *The Most Common and Significant Ones*

By Andrew Alden

Reprinted from *PESA News March 2014*, by way of [geology.com](http://geology.com)

Green and greenish rocks get their color from green minerals, but a lot depends on the type of rock: igneous rocks, sedimentary rocks and metamorphic rocks each have their own set of green minerals. Be sure you're looking at a fresh surface! Don't let a coat of green algae fool you. Here are some common green minerals. If your green or greenish mineral doesn't fit one of these, there are many more possibilities. Green colors usually come from the presence of iron, or chromium and sometimes manganese.

**Actinolite:** A shiny medium-green mineral with many long, thin crystals is likely to be actinolite. Look for it exclusively in metamorphic rocks, where it forms crystals in marble or is disseminated in greens one. Its color is from iron; the white variety without iron is tremolite. Luster glassy to pearly; hardness 5-6.

**Chlorite:** It's most widespread green mineral, but one you may never see by itself. In microscopic form, chlorite gives a dull olive-green color to a wide range of metamorphic rocks from slate and phyllite to schist. It is also found in small spots or masses in which it displays a flaky structure like that of a mica mineral, but it gleams rather than sparkles and doesn't split into flexible sheets. Luster pearly; hardness 2-2.5

**Epidote:** Epidote is common in medium grade metamorphic rocks as well as late-stage igneous rocks such as pegmatites. It's typically a pistachio or avocado green when it occurs in the massive form- crystals have a wide color range. Luster dull to pearly; hardness 6-7.

**Glauconite:** This is the usual green mineral found in greenish marine sandstones and the gardening amendment known as greensand. It's a mica mineral, but because it forms by alteration of other micas it never makes crystals. You'll generally see it in the form of a

blue-green color rather than a separate mineral. Luster dull; hardness 2.

**Jade:** (Jadeite/ Nephrite): Few minerals excite the rockhound like jade, but it can be hard to distinguish. Two minerals, jadeite and nephrite, are recognized as true jade. Both occur where serpentinite is found but form at higher pressures and temperatures. Nephrite (a microcrystalline form of actinolite) has a hardness of 5-6; jadeite (a sodium pyroxene mineral) has a hardness of 6.5-7.

**Olivine:** Dark primary igneous rocks (basalt, gabbro and so on) are the exclusive home of olivine. It's usually found in small clear olive-green grains and stubby crystals. A rock made entirely of Olivine is called dunite. Olivine breaks down at the Earth's surface by chemical weathering. It would rather live deep beneath the Earth's crust, where it is most stable. Olivine gives the rock peridotite its name, peridot being the gem variety of olivine. Luster glassy; hardness 6.5-7.

**Prehnite:** Rocks metamorphosed by hot-water solutions may have prehnite crusts and botoidal clusters along with pockets of zeolite minerals. Prehnite has a light "blittle green" color and is quite translucent. Any rock shop will have prehnite specimens you can learn this mineral from. Luster glassy, hardness 6-6.5.

**Serpentine:** Serpentine is a metamorphic mineral that occurs in some marbles but more often keeps to itself in the distinctive rock serpentinite. It typically occurs in shiny, mottled, streamlined shapes and never in crystals (except sometimes as asbestos fibers). Its color ranges from white to black but is mostly dark olive green. Serpentine is a sign of high -magnesium (typically deep-sea) lavas that have been thoroughly altered by hydrothermal activity. Luster greasy; hardness 2-5.

### Other green Minerals:

Several other minerals are typically green, but they aren't widespread and are quite distinctive. These include chrysocolla, diopside, diopside, furchsite, several of the garnets, malachite, phengite, and variscite. You find them in rock shops and mineral shows more than in the field.



## The Ultimate Rock Collector Checklist

Reprinted from *Geology Degrees*; <http://geologydegree.org/the-ultimate-rock-collector-checklist/>

Humans should pay more attention to rocks. You don't have to be a geologist to know that we live on a rock—the third from the sun—but that rock is actually made of thousands of varieties of rocks and minerals. The oldest known rock is 3.9 billion years old; it's no stretch to say that rocks will be the only thing to outlast cockroaches and Twinkies.

Those who understand how rocks form and change—and who appreciate the scientific and aesthetic differences in rocks—will build an understanding of Earth and its entire history. Here's your ultimate guide to being a rock collector:

### Go hunting

True rock collectors—sometimes called rockhounds—earn their specimens by hunting them down themselves. Store-bought rock collections are the easy way out. The good news is that even if they realize you're hunting them, the rocks won't run away—but it's still up to you to find them!

(Note: Rocks are not sentient beings. Unless they're pet rocks.)

### Get to know your surroundings

What kind of landscape do you live in? Are there volcanoes? Quarries? Is it named after a rock, like Quartztown? Your education begins with what you already know, but you can also look up your state's geologic map.

### Examine what you've got

Once you've got a few rocks, take the time to examine them. In good light, look at the rock's color and texture; how do the particles fit together? Are there any cracks, lumps, or bubbles? Are there any other minerals in it? What does it look like when wet? Does it crumble? Does it dissolve? What happens when you scratch it with a coin? Here's a quick guide to the three basic rock types:

1. Igneous (Latin for "fire") rocks cooled from a fluid state, such as lava. The texture usually look like something that was baked in an oven, with particles tightly packed together.
2. Sedimentary rocks were formed by the compression of sand, gravel, clay, or mud into

rock. Often formed under water, sedimentary rocks may preserve signs of life, like fossils or ripple marks.

3. Metamorphic rocks are igneous or sedimentary rocks that were changed by heat or pressure. Since they're made from different minerals than other kinds of rocks, metamorphic rocks are usually the most colorful, sometimes even exhibiting striping.

### Toss out the misleading rocks

Not all rocks you find will be natural—pieces of brick and concrete are easily misidentified as natural stones. Landscaping rocks, like those used in garden displays, are often trucked in from far away. Make sure your rock specimens come straight from a real outcrop of bedrock—and you'll start to learn more about the history of your area.

### Create a display space

A proper collection needs a space all its own, and organization is key. Ideally, each specimen you collect will be organized and labeled with what it is and where you found it. If you're collecting small rocks, there are a number of vendors who sell storage boxes that will help you keep organized.

### Protect your specimens

Storing your rocks isn't enough; you need to create the conditions they need to prevent oxidization, discoloration, and disintegration. Keep them in a dark, dry, and cool place. To prevent your rocks from absorbing moisture, start collecting those little bags of silica gel you get for free with shoes, some electronics, and certain food products. (But, as the label says, do not eat the silica gel.)

### Expand your good collection area

Many rock collectors start in their own backyard, but as your collection grows and your tastes become more exotic, you'll want to expand your collection area. Always know whose land you're on when you're collecting rocks. If you're on private property, you'll need permission to remove rocks from the area.

Most states have a Bureau of Land Management that oversee the lands (like parks) that many collectors roam for their rocks. For the most part, you're free to take what you want, but commercial collecting for the purpose of selling and collecting on lands with a mining claim is usually not permitted. Contact your local Bureau or park district to inquire what the rules are in your area.

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## *From the First V.P.*

### **Gold** *Continued from page 1*

The gold in the Aztec and Inca treasuries of Mexico and Peru believed to have come from Colombia, although some undoubtedly was obtained from other sources. The Conquistadores plundered the treasuries of these civilizations during their explorations of the New World, and many gold and silver objects were melted and cast into coins and bars, destroying the priceless artifacts of the Indian culture.

### **Gold as a Medium of Exchange**

Nations of the world today use gold as a medium of exchange in monetary transactions. A large part of the gold stocks of the United States is stored in the vault of the Fort Knox Bullion Depository. The Depository, located about 30 miles southwest of Louisville, Kentucky, is under the supervision of the Director of the Mint.

Gold in the Depository consists of bars about the size of ordinary building bricks (7 x 3 5/8 x 1 3/4 inches) that weigh about 27.5 pounds each (about 400 troy ounces; 1 troy ounce equals about 1.1 avoirdupois ounces.) They are stored without wrappings in the vault compartments.

Aside from monetary uses, gold, like silver, is used in jewelry and allied wares, electrical-electronic applications, dentistry, the aircraft-aerospace industry, the arts, and medical and chemical fields.

### **Gold Price Regulation and Variability**

The changes in demand for gold and supply from domestic mines in the past two decades reflect price changes. After the United States deregulated gold in 1971, the price increased markedly, briefly reaching more than \$800 per troy ounce in 1980. Since 1980, the price has remained in the range of \$320 to \$460 per troy ounce. The rapidly rising prices of the 1970's encouraged both experienced explorationists and amateur prospectors to renew their search for gold. As a result of their efforts, many new mines opened in the 1980's, accounting for much of the expansion of gold output. The sharp declines in consumption in 1974 and 1980 resulted from reduced demands for jewelry (the major use of fabricated gold) and investment products, which in turn reflected rapid price increases in those years.

### **Properties of Gold**

Gold is called a "noble" metal (an alchemistic term) because it does not oxidize under ordinary conditions. Its chemical symbol Au is derived from the Latin word "aurum." In pure form gold has a metallic luster and is sun yellow, but mixtures of other metals, such as silver, copper, nickel, platinum, palladium, tellurium, and iron, with gold create various color hues ranging from silver-white to green and orange-red.

Pure gold is relatively soft--it has about the hardness of a penny. It is the most malleable and ductile of metals. The specific gravity or density of pure gold is 19.3 compared to 14.0 for mercury and 11.4 for lead.

Impure gold, as it commonly occurs in deposits, has a density of 16 to 18, whereas the associated waste rock (gangue) has a density of about 2.5. The difference in density enables gold to be concentrated by gravity and permits the separation of gold from clay, silt, sand, and gravel by various agitating and collecting devices such as the gold pan, rocker, and sluicebox.

### **Gold Amalgam**

Mercury (quicksilver) has a chemical affinity for gold. When mercury is added to gold-bearing material, the two metals form an amalgam. Mercury is later separated from amalgam by retorting. Extraction of gold and other precious metals from their ores by treatment with mercury is called amalgamation. Gold dissolves in aqua regia, a mixture of hydrochloric and nitric acids, and in sodium or potassium cyanide. The latter solvent is the basis for the cyanide process that is used to recover gold from low-grade ore.

### **Fineness, Karats and Troy Ounces**

The degree of purity of native gold, bullion (bars or ingots of unrefined gold), and refined gold is stated in terms of gold content. "Fineness" defines gold content in parts per thousand. For example, a gold nugget containing 885 parts of pure gold and 115 parts of other metals, such as silver and copper, would be considered 885-fine. "Karat" indicates the proportion of solid gold in an alloy based on a total of 24 parts. Thus, 14-karat (14K) gold indicates a composition of 14 parts of gold and 10 parts of other metals. Incidentally, 14K gold is commonly used in jewelry manufacture. "Karat" should not be confused with "carat," a unit of weight used for precious stones. *Continued on next page*

## From the First V.P.

### Gold *Continued from page 18*

The basic unit of weight used in dealing with gold is the troy ounce. One troy ounce is equivalent to 20 troy pennyweights. In the jewelry industry, the common unit of measure is the pennyweight (dwt.) which is equivalent to 1.555 grams.

The term "gold-filled" is used to describe articles of jewelry made of base metal which are covered on one or more surfaces with a layer of gold alloy. A quality mark may be used to show the quantity and fineness of the gold alloy. In the United States no article having a gold alloy coating of less than 10-karat fineness may have any quality mark affixed. Lower limits are permitted in some countries. No article having a gold alloy portion of less than one-twentieth by weight may be marked "gold-filled," but articles may be marked "rolled gold plate"

provided the proportional fraction and fineness designations are also shown. Electroplated jewelry items carrying at least 7 millionths of an inch (0.18 micrometers) of gold on significant surfaces may be labeled "electroplate." Plated thicknesses less than this may be marked "gold flashed" or "gold washed."

Here's hoping that this article will whet your appetite for the precious gold mineral. See you at our next meeting.

**Happy hunting,**

**Jack Curtin**



## The Ultimate Rock Collector Checklist

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### Expand your mind

As your collection grows, so should your knowledge. You may remember the difference between igneous, sedimentary, and metamorphic rocks, but if you want to go a step further, there are a number of fantastic geology guides that can help you identify your rocks more precisely and make sure you're achieving a diversity of specimens. We recommend the field guides by the [National Audubon Society](#) and the [Smithsonian Institute](#). If you're specializing in your local rocks, check

out the offerings of [the state-specific rockhounding series by Falcon Guides](#).

### Consider an investment in equipment

One of the beautiful things about rock collecting is that it can be a low-cost hobby. Besides a field guide, some rockhounds choose to invest in topographical maps of their search area, a rock hammer (don't forget the safety goggles), and a magnifier. Experts recommend a 10x magnifier for examining your tiniest specimens; the [BelOMO 10x Triplet Loupe](#) is a popular choice.

### Keep your eyes open

Rocks are everywhere, and you never know when you might stumble across a specimen that pushes your collection to the next level of awesome. Advanced rockhounds always have a container and a field guide at the ready.

***Now get out there and start collecting!***



Natalie Darling, Editor  
211 Chesterfield Rd.  
Lynchburg, VA 24502



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



Lynchburg Rock Raiders is the official Future Rockhounds of America association of the The Gem & Mineral Society of Lynchburg, VA. Inc.



### MEETING LOCATION

Lynchburg Parks and Recreation  
Fairview Center  
3621 Campbell Ave.  
Lynchburg, VA

**DIRECTIONS:** *Fairview Center; 3621 Campbell Ave., Lynchburg, VA 24501 434-847-1751~ From Route 29 expressway or Route 460, take the Campbell Avenue Exit. Follow Campbell Ave. to 3621, which is across the street from a Citgo Gas Station. There is a fence around the building and parking on both streets running along the sides of the property as well as a lot in the back. We will be looking for you!*