



Sulawesi – Cave Art – 37,900 BCE

**Robin Williams, Newsletter Editor
Calaveras Gem and Mineral Society
P.O. Box 517
Angels Camp, CA 95222**

AUGUST 2021 EDITION

The Golden Frog

Calaveras Gem & Mineral Society, Inc.

P.O. Box 517
Angels Camp, CA 95222

Clubhouse: 2500 Meacham Ranch Road

Website: www.calaverasgemandmineral.org

Est. in 1948 and incorporated in 1950 as a non-profit charitable organization dedicated to share our love of rocks & minerals and all the lapidary arts with our community.

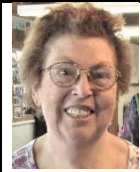
Member of both the California and American Federation Mineralogical Societies.

AUGUST BIRTHSTONE



310 CARATS, LARGEST PERIDOT in world

2021 BOARD of DIRECTORS



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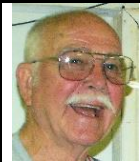
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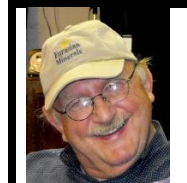
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**A Message from
Our PRESIDENT...**

We had a great turnout at our July 2021 Meeting and Potluck.

Richard Lundin and Glenn White gave a very interesting program on **VOLCANOES AND EARTHQUAKES**, including the faults and volcanos right in our local geologic back yard!

We had FOUR new members join our club and want to give them a great big

WELCOME!

I hope even more members attend in August. Our air conditioning system is wonderful and kept the room nice and cool even in the 100-degree heat!

See you in August!

Anna Christiansen
President 2021

AUGUST 15th Meeting Info

**POT LUCK Lunch at NOON!
MEETING STARTS at 1:00!**

- 3rd Sunday, AUGUST 15, 2021
- Meet & Greet at 11:00 a.m.
- POT LUCK LUNCH at NOON (or you may bring your own personal lunch)
- General Membership Meeting 1:00 p.m.
- Program: CAMP PARADISE Virtual Tour
- opt: Board Meeting TBA

**CAMP PARADISE
AWAITS YOU!**

After a year of COVID-19 SHUT DOWN it's almost like we're starting up a whole new club!

So many of our past members have not returned yet, but on the positive side, we have gained so many new members who are eager to get us ROCKIN' & a-ROLLIN' again and it's pretty exciting.

It's also a perfect time to reintroduce all the amazing activities and events that Calaveras Gem & Mineral has to offer to our members and our community!

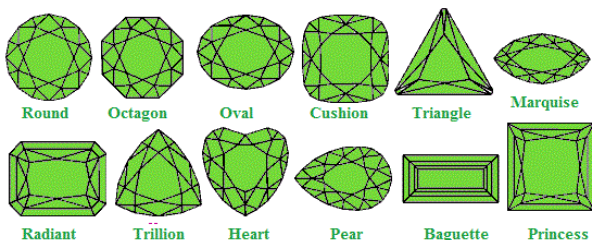
One of the most outstanding events is almost here...our CFMS Earth Science & Lapidary Arts Teaching Camp (who says the kids have all the fun?!)

This is the Eighth Wonder of the World!

For just \$405 a week you get 3 full meals a day and a room with bed along with Five days of FREE LESSONS (that's 30 hours!) with some of the top artists in the field! Plus fun evening activities, auctions, BBQ, swimming pool, and folks just like you having the time of their lives the last week of August and the first week of September, 2021

Still some spaces available!

AUGUST ~ TABLE of CONTENTS	
Pg	~ DESCRIPTION ~
2	List of 2021 Board Members & Info
3	President's Message & Meeting Date
4	JULY 18, 2021 General Meeting Minutes
5	cont. JULY 18, 2021 General Minutes
6	REMEMBER WHEN?
7	MINERAL PIGMENTS, BRIEF HISTORY
8	MINERAL PIGMENTS, BRIEF HISTORY
9	MINERAL PIGMENTS, BRIEF HISTORY
10	TOXIC DUST in SHOP
11	TOXIC DUST in SHOP
12	Safety solutions
13	Safety solutions
14	AUGUST CALENDAR 2021 & Birthdays



PERIDOT CUTS AND SHAPES

GENERAL MEETING MINUTES from JULY 18, 2021

GENERAL MEETING MINUTES Calaveras Gem and Mineral Society JULY 18, 2021

- Call to Order at 12:51 p.m. by President Anna Christiansen
- Pledge of Allegiance
- Introductions: Members: 26 Guests: 4
- Board Members Absent:
 - Federation Director: Marion Roberts
 - Director - 1 year: Pat Gulyas
 - Director - 3 year: Phyllis Kyle

Minutes for approval: June 20, 2021

- Lynn Becker made a correction: Bob Young is the Field Trip leader and CFMS Co-Op representative. Brad Becker is no longer the CFMS Co-Op representative.
- Bob Young made a motion to accept the June 20, 2021 minutes as corrected. Claire Mathison seconded the motion. Motion passed. Minutes accepted as corrected.

Club Correspondence: Debby Brooks

- The monthly newsletters received from AFMS and CFMS are posted on the sign-in table.

Treasurer's Report: Lynn Becker

- Lynn announced that Claire Mathison has placed her nomination for Treasurer. A mid-term election, per our Bylaws, shall be held at the September meeting for all members to vote.

NOTE: This position is open to all members and you may have your name added to the ballot prior to the Sept. vote if you wish to run for the office of Treasurer.

- Lynn reported on June/July bank balances, CD balance, income and expenses.
- Robin Williams motioned to accept the treasurer's report. Brad Becker seconded. Motion passed to accept with corrections.

COMMITTEE REPORTS

Federation Report: Anna Christiansen

- AFMS and CFMS newsletter located on the sign-in table for all to read.

Field Trips: Bob Young

- A field trip is planned for August 4- 6. Destination: Gabbs, Nevada. If the temperature is greater than 95 degrees, the field trip will be cancelled and rescheduled. The terrain is for all levels of walking and there is a wide variety of collection opportunities. Details of the trip will be emailed to club members. Please call Bob Young with any questions.

Historian/ Sunshine: Anna Christiansen

- Loretta is in Avalon Health Care.
- Vivian Roberts, Phyllis Kyle and Claudia Brackett have been going thru medical issues.

Newsletter: Robin Williams

- Please submit articles or pictures to Robin for submission to the monthly Golden Frog.

Shop/Classes: Brad Becker

- Shop hours are every Sat. 10:00 – 2:00
The rock saws are getting repaired

OLD BUSINESS

Gem Show Rental Refund:

- The Fairgrounds denied to refund the 2020 deposit for the annual Gem Show that we were unable to hold due to the Covid-19 pandemic.
- A CGMS committee is writing a rebuttal letter to the Fairgrounds Board of Directors requesting a refund of the 2020 deposit.

Cont...

Cont...GENERAL MEETING MINUTES from JULY 18, 2021

Camp Paradise Presentation: Aug. 15th

- Robin Williams will give a power point presentation on her experience at Camp Paradise.
- She is requesting any club member who has attended Camp Paradise to bring items that you made to display as samples of the available creative opportunities.

Rock hound of the Year 2021

- Ballot box and ballots located on the desk in the front of the room. Please vote for your choice, either an individual or couple. The Rock hound chosen for 2021 will be recognized by CFMS. Deadline for voting is August 31, 2021.

NEW BUSINESS

Future Programs: Rich Lundin

- Rich is attempting to obtain a speaker from the University of Arizona to share information at a meeting.

New Member Vote - A big Gem and Mineral Welcome to:

- Jeremiah Garcia,
- Marissa Mommaerts
- Gabriel Garcia
- Joseph Hoover

Thank you for joining, and
we welcome your participation!

Club Shirts & Hats: Anna Christiansen

- Anna has club shirts and hats available for purchase. See Anna for a purchase

Classes/Instructors: Robin Williams

- There is a monumental need for instructors to teach club members lapidary & jewelry making arts. Classes are opportunities to disseminate knowledge on a variety of topics and techniques. Cont...

- Classes are also a way to mingle and get to know other club members. If the instructor bug has bitten you, please see Robin to arrange a class for club members.

August 15th Program:

“Why you need to go to Camp Paradise!”

Meeting adjourned at 1:18 p.m. by
President Anna Christiansen

Minutes respectfully submitted by:

Debby Brooks, Secretary
Calaveras Gem and Mineral Society

Hey! How do we find out about classes?

We have some of the best teachers in California but no scheduled classes at this time. Why? Because nobody has asked for one. Yep. That's pretty much it. Actually, we're trying to recover from the Covid Shutdown. Most of the club didn't leave their homes for the past year and meetings weren't allowed.

It's time to change out of our lounge jammies and put on our “let's go have some fun” clothes.

The club house will sit vacant on Saturdays unless we make a concerted effort to pack up our tools, call some members, and everyone meet up for a Quilting Bee, I mean, Jewelry making session.

If you want to learn something specific, or need some guidance just call ahead and we'll bring the proper equipment to do the job!

BUT, IF YOU COMMIT, DON'T BAIL OUT AND LEAVE EVERYONE STARING AT THE EMPTY CHAIRS. Start with me: Robinski@yahoo.com. And we'll put our teachers on the task.

**REMEMBER WHEN...We had these classes?
They were FUN! Let's do some AGAIN!**



Suiseki Garden



Viking Knit
(reducing chain size via pull plate.)



Kumihimo



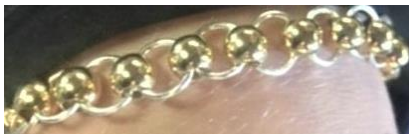
Wire Crochet



Wire-Wrap & Beaded Earrings



Kumihimo with Pendant



Chain Maille



Sheet copper earrings

**A BASIC BEADING
CLASS: TIPS,
TRICKS & BASIC
HOW-TO INFO
FROM EVERYONE**



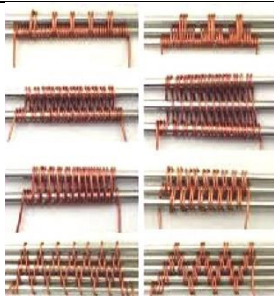
Woven Bead Bracelets



Wire Wrap Bracelets



Ming Trees



Wire Weaving



Dichroic Glass



Wire Wrapping



Hammered Wire



By Cal A. Veras

Hold On To Your Hats, Folks! Did You Know That “ARTISTS were the FIRST MINERS!



A couple of years ago Murray Smith and I were at the club house sharing ideas and making POUR paintings (his on used saw blades) when some visitors came by asking about our club.

Visibly perplexed, they asked us, “Why are you painting at a gem club?!” and “What does

paint have to do with Rocks & Minerals?”



(I suddenly felt the need to round up the cows to show folks where their milk comes from!)

Better yet, I decided I would design a Display Case for the 2020 Show to explain what “Paint had to do with Rocks and Minerals”.

Unfortunately, I never got to do the case with Covid cancelling the show but “Say! This would make a great Newsletter article”, I said; and then (LOL) I thought I’d give it the title:

MILK comes from ROCKS & MINERALS and so does PAINT !

Yep, they do! When you consider that the EARTH started out as “nothing but a rock” it stands to reason that EVERYTHING on earth is made from Rocks and their Minerals, right?! Then why should PAINT be an unusual exception?

Well, it’s not!

What is unusual is that PAINT & PAINTING began so *many thousands* of years ago!



DIDJUNO what was found with the paint?
BEADS! Beads painted with iron oxide paint!

Aside from the items that were essential to sustain life on EARTH, (food, water, shelter, etc) it seems that PAINT and BEADS were also essential to early man. (Coming in Sept: Beads!)

PREHISTORIC ARTISTS ROCK the WORLD of ART!



Head of the Great Bull, Lascaux Cave, France

Paint Mines and Bead Factories were being used over 110,000 years ago.

- The "Lion Cave" in Swaziland was NOT mined for flint or metal (for tool making), but rather it was mined for HEMATITE (iron oxide) to make red ochre (o-kur) pigment.
- The Wilgie Mia Red Ochre mine in Australia has been mined for *at least 40,000 years*, making it the world’s longest continuous mining operation! To make paint!



Map of Neanderthal’s European Mining Sites.

The OCHRE pigments were also used for body painting & tattooing. Humm, ochre contains iron. Maybe absorbing it into the human body and brain made us smarter?

Well, we’ve said it for years:

ART MAKES YOU SMART!

A human's need to express his individual creativity and make beautiful things is taken for granted today. But in the beginning, it was embraced by the whole clan* and they contributed their time and energy to MINE for PIGMENTS and to produce "ART".

We have no way of knowing what prompted early man to start painting but remains of paint-making sites found throughout the world indicate that it was not an isolated event AND, it hasn't stopped to this day!

The early artist's Palette only contained the "earth colors"...



and those served mankind well for many thousands of years!

THE PREHISTORIC PIGMENTS



LIMONITE = OCHRE (o-kur) PIGMENTS

LIMONITE, $\text{FeO}(\text{OH}) \cdot n\text{H}_2\text{O}$, is the main MINERAL of all the OCHRE pigments. It made YELLOW OCHRE paint but when heated, Limonite converts to the mineral HEMATITE, Fe_2O_3 and becomes RED OCHRE! (The first Chemists?!?)

The Earth OCHRE Pigments

- YELLOW is from LIMONITE and also made from GOETHITE, $\text{FeO}(\text{OH})$ minerals
- RED & ORANGE is from HEMATITE minerals

Earth BROWNS

- UMBER PIGMENT (Raw & Burnt)
Umber: brown or reddish-brown, contains both iron oxide, Fe_2O_3 and manganese oxide, MnO_2 . It turns darker when heated (burnt).
- SIENNA PIGMENT (Raw & Burnt)
Sienna: an earth pigment that contains both iron oxide and manganese oxide. In its raw state it is yellowy-brown but when heated (burnt), it turns partially into HEMATITE and becomes a reddish brown.



Lascaux Cave Art - 17,000 BC

The BLACKS

MANGANESE PIGMENTS:

Lascaux Cave artists in France obtained their black colors from manganese oxides from mines up to 250 kilometres away! And no delivery trucks were available. Minerals used:

- Groutite $\text{Mn}^{3+}\text{O}(\text{OH})$ = jet-black
- Hausmannite $\text{Mn}^{2+}\text{Mn}^{3+}_2\text{O}_4$ = brown-black
- Manganite $\text{Mn}_3\text{O}(\text{OH})$ = grey-black

And, of course,

- Charcoal (carbon) -from wood & bone

The WHITES

- Kaolinite $\text{Al}_2(\text{Si}_2\text{O}_5)(\text{OH})_4$
- Huntite $\text{Mg}_3\text{Ca}(\text{CO}_3)_4$
- Calcite aka Lime White CaCO_3

And eventually, The GREENS:

- Celadonite = Green Earth
 $(\text{K},\text{Na})(\text{Mg},\text{Fe}^{2+},\text{Fe}^{3+})(\text{Fe}^{3+},\text{Al})(\text{Si},\text{Al})_4\text{O}_{10}(\text{OH})_2$
and possibly;
- Glauconite = aka Terra Verte or Verona Green
 $\text{K}(\text{Mg},\text{Fe}^{2+})\text{Fe}^{3+}(\text{Si}_4\text{O}_{10})(\text{OH})_2$



A 45,500-year-old warty pig.

* See the coming SEPT. article about BEADS and prehistoric BEAD FACTORIES.

Has Anyone Noticed Any BLUE or PURPLE in CAVE ART?

What MINERALS would you grind up for **BLUE** and **PURPLE** paint?

Don't feel bad if you can't come up with more than lapis lazuli and azurite...although...

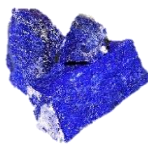


Azurite

DIDJUNO: there are over 583 minerals that give a blue streak? A mineral's streak color is also the color of the mineral when powdered and used for pigment!

Today most blue pigments and dyes are man-made by a chemical process or, what we call **SYNTHETIC**. I always thought "synthetic" was a modern term. Wrong. The Egyptians made the first synthetic paint 4,200+ years ago!

DIDJUNO: Lapis Lazuli, (found mostly in Afghanistan) is believed to be the most expensive pigment ever created! Worth more than its weight in gold.



Lapis Lazuli

Moving on...it's now 2,200 BC

...and the Egyptians loved BLUE. So, with Lapis Lazuli too expensive and difficult to obtain, they turned to the blue mineral LAZULITE.

The Egyptians "cooked" LAZURITE with crushed LIMESTONE and created the first



SYNTHETIC PIGMENT:
Egyptian Blue
It is also known as:
CUPRORIVAITE
 $CaCuSi_4O_{10}$
(calcium copper silicate)

Man would have to wait another 500 years before the Phoenicians made **TYRIAN PURPLE** from Sea Snails.





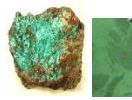
25,000 squished Murex Sea Snails made one ounce of purple dye!



OOOH! PRETTY COLORS! & the Darwin Awards Kick In.

USING POISONOUS MINERALS FOR PAINT? Even Cave men were smarter than that!

After 300,000+ years of the same old paint colors man began to lust for something new, brighter, more vibrant, and all reason went out the window.

Artists started grinding poisonous minerals to make glorious bright glowing paints.

 Orpiment = As Naples Yellow is ☠ ARSENIC	 Cinnabar = As Vermilion is ☠ MERCURY	 Cu-Arsenate = As Paris Green is ☠ ARSENIC
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 ☠ LEAD PAINTS	 ☠ CADMIUM PAINTS
--	---

	Lead made their "whites glow"		Cadmium Yellows "glimmer like the sun."
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Historic records show that Vincent Van Gogh struggled with profound symptoms of LEAD POISONING. He also loved ☠ Cadmium paints.

I'll bet some of you think these poisonous paints are no longer made or sold, right?! Wrong. "Ignorance" *could* have been excused- but mankind is a greedy lot and even after manufacturers *knew* their paints were deadly toxic to lifeforms they continued to deceive us and sell them to us.

1. 45 countries still use lead paint and sell products to USA.
2. USA didn't ban Lead from residential use until 1978.
3. Industrial lead paint can still be used in USA: on highways, steel structures, industrial buildings, automobiles & other vehicles, and farm equipment.
4. Residual Lead dust is still #1 cause of lead poisoning.
5. There's no safe way to remove lead paint; best abatement is removal of the building components painted with them.

So what DOES PAINT have to with MINERALS? PAINT is MINERALS that are mined to create PIGMENTS that are used EVERYWHERE to add COLOR to EVERYTHING.



In fact, The Global Pigments Market was worth more than \$22,000,000,000 in 2019 AND estimated at \$32,000,000,000 in 2021! Stay Smart – Know Your Minerals!

With so many new members joining I thought it would be helpful to refresh the Safety Rules for working with Rocks and Minerals (and, fossils!) Enjoy.

TOXIC MINERALS & DUST in the Lapidary Shop

Story and art by Douglas Hamilton

After 30 years of procrastination, I finally decided to purchase a brand-new rock saw and grinder/polisher. Wow, did I have fun! For that first few months of cutting and grinding, I was in seventh heaven. All those lovely rocks I had lusted after for so long were finally put under my polishing wheel: lapis, agate, jasper, tiger's-eye, malachite, turquoise, chrysocolla and quartz.

The joys of rock polishing without a respirator will frequently lead to serious lung problems later on.

But I soon began to experience a nasty and completely unexpected cavalcade of health problems: coughing, hoarseness, difficulty clearing my throat, breathlessness, and a dull ache in the pit of my lungs.

Of course, I had always worn safety glasses with side protection, as recommended in every manual, but a mask seemed a cumbersome hindrance.

As the situation worsened, I did try several dust masks, but there was little improvement. It was time to do a little research, so I hit the books and started talking to fellow rockhounds. It was a revelation.

Rock dust from lapidary work turns out to be more than just a nuisance; it can be deadly.

A single heavy dose of toxic dust can cause crippling lifelong problems. It attacks the lungs in a variety of ways:

First, by coating the inner lining and blocking the transmission of oxygen into the bloodstream.

Second, tiny sharp fragments slice and cut into the alveoli, which coat the inner lining of the lungs, causing irritation and inflammation.

Fresh dust seems to be more harmful because the sharp edges have not had a chance to be softened by moisture.

Forget the cheapo dust masks — a quality NIOSH approved respirator is essential to the lapidary's respiratory health.

THE COPPER MINERALS:

Among the worst offenders are minerals containing copper (II) oxide (CuO), the higher oxide of copper, which can cause damage to the endocrine and central nervous systems.

These minerals include some of our most colorful and treasured semiprecious stones: turquoise (9.8% copper oxide), chrysocolla (45%), and malachite and azurite (70%).

It is worth remembering that other closely related copper compounds are highly bioactive and have been used for decades in pesticides, fungicides, and wood preservatives. This is dangerous material.

These high-copper rocks should not be licked to bring out the color, and oil mixed with the dust should be carefully cleaned off exposed skin.

Several lapidarists who smoke have described their own novel test for overexposure: Apparently, copper-impregnated dust combines with nicotine and tobacco tar in saliva to form a sickeningly sweet compound similar to saccharin.

...Cont. on next page...

Cont...Dangerous Dust *Story by Douglas Hamilton*

When their mouths start to taste like a candy factory, these rockhounds know it's time to quit.

Another sign is influenza-type symptoms. **CuO dust poisoning mimics the flu**, causing headaches, coughing, sweating, sore throat, nausea and fever.

Skin, eye, and respiratory tract irritation are also common, along with a distinct "metallic" taste. A common name for these health effects is **"metal fume fever"**.

THE SILICATES:

In fact, when you get right down to it, almost all the rocks most favored by cutters and polishers contain compounds that can be dangerous when inhaled. Silicates are the most common family of minerals on Earth, and **silicosis** has long been one of the chief hazards facing stonemasons.

The ancient Greeks and Romans were the first to observe its ravages, and correctly associated the problem with mining and rockwork. Similar to the "black lung disease" of coal miners, it came to be known in later years as **"grinder's consumption"**.

The symptoms of inhaling crystalline silica (SiO) dust include shortness of breath, cough, fever, emphysema, pulmonary fibrosis, lung scarring, and increased susceptibility to tuberculosis and cancer. Silicosis often takes many years to develop from repeated exposure to low doses of dust - but once established it is irreversible.



Red jasper, Brazilian agate, & petrified wood all contain high amounts of silicon dioxide & can cause silicosis.

The quartz silicate family is huge: chalcedony, jasper, agate, aventurine, bloodstone, carnelian, chrysoprase, amethyst, opal, onyx, beryl, petrified wood, obsidian, flint, chert, soapstone, sandstone, glass and tiger's-eye.

In almost all of these, the content of silicon dioxide approaches or exceeds 50%. It should be mentioned that African tiger's-eye has another potent danger: **asbestos**. The vibrant optical effect of its chatoyancy is caused by parallel-oriented, finely fibrous amphibole asbestos. Serpentine has a high chrysotile asbestos content, but this is not considered quite as dangerous as the tiger's-eye. Some soapstone varieties also contain asbestos and should be cut or carved with caution.

RADIOACTIVE FOSSILS

Radioactive? Yes. In some areas, like the Hagerman Fossil Beds National Monument (Idaho) and the Morrison Formation at Dinosaur National Park (Colorado/Utah), fossils have even been hunted using Geiger counters. Even small fossils like shark teeth and trilobites can have significant readings and, **radioactive dust is highly carcinogenic!**

3 QUICK SAFETY SOLUTIONS:

1. Always wear a National Institute for Occupational Safety and Health (NIOSH) approved respirator with replaceable cartridges and dust filters.
2. Always use water or oil as a lubricant when cutting, drilling, polishing or faceting, but be aware there are problems with both fluids.
3. Take a shower after your lapidary work, shampooing your hair and using lots of soap. Launder coveralls, aprons, gloves and work clothes frequently and NEVER dry sweep* the workshop.

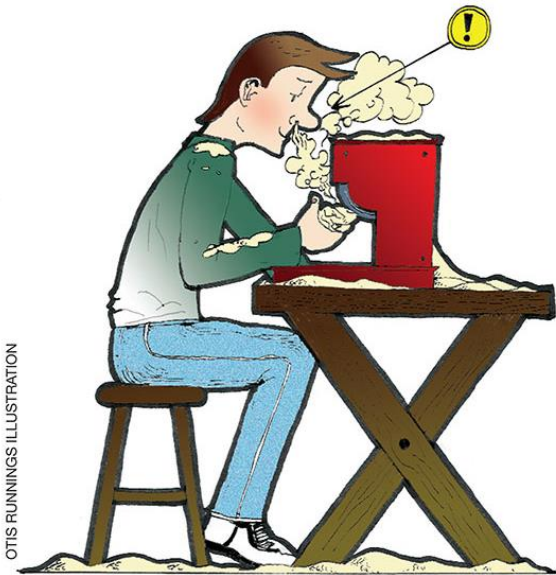
* Expanded precautions on pages 12 &13.

Here is a list of suggestions that will make your workshop a lot safer and allow you to enjoy lapidary work in good health.

1. Always wear a National Institute for Occupational Safety and Health (NIOSH) approved respirator with replaceable cartridges & dust filters.

Some cartridges today combine a prefilter with the cartridge, which makes things simpler. Respirators provide a wide variety of protection against dusts, solvents, fumes and mists. They are designated N, R and P, depending on the cartridge's ability to filter out oil; N stands for "no protection", R for "resistant to oil", and P for "oil-proof". The number that follows the initial tells you what percentage of the particulates is filtered out by the cloth prefilter. For example, an N-95 respirator will not keep out oil spray, but will screen out 95% of airborne dust particles.

NEVER DO THIS!



ALWAYS WEAR THIS!



2. Avoid cheap dust masks; they don't fit tightly and they filter poorly.

If you can, try on several different respirators at the store to get the best fit. Shave your beard, if you have one, to get an airtight seal. Store the mask in a closed container or plastic bag when it's not in use, and occasionally wash it with warm soap and water, both inside and out.

Try this simple negative pressure test on your respirator: Block up the air inlets, breathe in, and hold your breath for 20 seconds. If the mask is still held airtight against your face, it fits. **Cartridges should be changed after about eight hours of use.**

3. An open window or air conditioner does not provide adequate ventilation for the lapidary workplace.

The simplest solution is to work outside. This keeps most contaminants out of your workshop and costs nothing, but it is not always possible. If inside is your preference, consider setting up a local exhaust ventilation system. This would include a dust hood to collect contaminants, ducts to carry them outside, and a suction fan to power the system.

Continued...

3. continued...

Adjustable blast gates would allow a dust hood to be placed next to each appliance. Ducts should be circular, with as few bends as possible, and should exit the shop. If you have close neighbors or are processing a lot of rock, provide a dust collector to remove contaminants from the vented air.

4. Some woodworking tool suppliers have come up with an ingenious air filtration system. There is no reason this system should not work for rock dust, as well.

They have adapted a wet/dry-type vacuum cleaner with a High Efficiency Particulate Absorbing or Arresting (HEPA) filter to collect shop dust using a little extra pipe and some suction nozzles. The vacuum should be placed outside the house because the dust-laden air sucked into the intake will be blown out the vacuum's exhaust port. Even HEPA filters fail or become clogged, and some dust will always slip through. It's far better for it to be blasted outside than into the shop or another enclosed area. Kits, diagrams, pipe, and suction nozzles available on the internet. Search for "dust collection" and "dust collection network".

REMEMBER: Fossils can pose a surprising hazard: radioactivity from natural elements.

5. Always use WATER OR OIL as a lubricant when cutting, drilling, polishing or faceting, but be aware there are problems with both fluids.

When water evaporates, it stops holding the dust down, allowing it to become airborne.

A fine oil mist laden with toxic dust can be kept out your lungs with a good respirator, but it will settle on skin surfaces and stick like glue. Also, most lapidary oils are highly irritating or downright poisonous to breathe.

Some, like old-fashioned kerosene, are dangerously flammable, as well. Everyone has their favorite method, but I work outside using mineral oil and a P (oil-proof) respirator cartridge with a built-in 100% particulate filter.

6. Always wear a head covering and apron and/or coveralls when grinding, and change clothes after you have finished.

Rock dust loves to stick to clothing and hair, and if you don't change, you will carry it around the house and breathe it all day long (as will your family).

Take a shower after your lapidary work, shampooing your hair and using lots of soap. Launder coveralls, aprons, gloves and work clothes frequently. Disposable clothing, coveralls, and an apron might also be an option.

7. Never dry sweep the workshop. Most of the dust will just become airborne and migrate elsewhere. Use a vacuum cleaner with a HEPA filter instead. Use a wet mop on the floor and a wet rag with a water bucket on other surfaces.

Here's to Happy Healthy Polishing!

AUGUST 2021

SUN	MON	TUES	WED	THURS	FRI	SAT
1	2	3	4	5	6	7 SHOP 10-2
8	9	10	11	12	13	14 SHOP 10-2
15 Meet-Greet 11 a.m. POTLUCK at NOON	16	17	18	19	20	21 SHOP 10-2
22	23	24	25	26	27	28 SHOP 10-2
29	30	31				

AUG. BIRTHDAYS	~ UPCOMING EVENTS													
<h2 style="margin: 0;">HAPPY BIRTHDAY!</h2> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr><td>Pat Gulyas</td><td style="text-align: center;">2</td></tr> <tr><td>Carolyn McCrea</td><td style="text-align: center;">5</td></tr> <tr><td>Lynn Becker</td><td style="text-align: center;">10</td></tr> <tr><td>Rich Roesner</td><td style="text-align: center;">14</td></tr> <tr><td>Kate Young</td><td style="text-align: center;">17</td></tr> <tr><td>Veda Scherer</td><td style="text-align: center;">28</td></tr> </table> 	Pat Gulyas	2	Carolyn McCrea	5	Lynn Becker	10	Rich Roesner	14	Kate Young	17	Veda Scherer	28	<p>October 2nd, 2021 Murphys, CA</p> <p style="font-size: 1.2em; font-weight: bold; color: yellow;">30th Annual Murphys Gold Rush Main Street Faire & Grape Stomp</p> <p>Main Street, Murphys One Day Only Saturday 10 am – 5 pm</p> <p>Plan now to attend this great event & come visit your fellow club members in their booths!</p>	<p>October 30-31, 2021 Mariposa CA</p> <p>Mariposa Gem and Mineral Club Mountains of Minerals Show Mariposa Co. Fairgrounds</p> <p>5007 Fairgrounds Rd. Mariposa CA</p> <p>Saturday 10 am - 5 pm, Sunday 10 am - 4 Ppm</p> <p>Contact: Meredith Meehan, mgmc@sti.net</p> <p>Website: http://mariposagemclub.org</p>
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