

# **Fort Worth Gem and Mineral Club**

Fort Worth, Texas

## ***The Cowtown Cutter***



### **Officers and Chair positions for 2017.**

**President:** Pam Nolen  
[pamsnolen@gmail.com](mailto:pamsnolen@gmail.com)

**1<sup>st</sup> VP of Field Trips:**  
CJ Wright  
[cjzwright@icloud.com](mailto:cjzwright@icloud.com)

**2<sup>nd</sup> VP of Programs:**  
Vacant

**Secretary:** Dora Hale  
[Campmaeent@aol.com](mailto:Campmaeent@aol.com)

**Treasurer:** Schuyler Bullock  
682.365.0517; [sbbr@cirranet.net](mailto:sbbr@cirranet.net)  
657 Deer Valley Rd  
Weatherford, TX 76085

**Sunshine Chair:** Fran Loyd  
817.822.6954  
[Fran.loyd@att.net](mailto:Fran.loyd@att.net)

**Show Chair/Vendor Chair:**  
Janice Craddock  
[jmc2356@gmail.com](mailto:jmc2356@gmail.com)

**Website Manager:**  
Stephanie Moran  
[Fwgmcc.webmaster@gmail.com](mailto:Fwgmcc.webmaster@gmail.com)

**Shop Foreman:** David Nolen  
[dnolen49@verizon.net](mailto:dnolen49@verizon.net)

### **March 26 Meeting:**

A presentation on their West Texas field trip to collect minerals will be presented by Janice and CJ



**Potluck begins at 7 pm (bring something green for fun – rock or food) Meeting/Program at 7:30**



#### ***NEW DEADLINE: PLEASE NOTE***

This newsletter is distributed the 3<sup>rd</sup> week of each month. Send articles, announcements, & editorial corrections by the 15<sup>th</sup> of the month. Permission is granted to reprint material from other sources provided credit is properly cited.

*Jacque Brock*  
Newsletter Editor

[fwgmc.editor@gmail.com](mailto:fwgmc.editor@gmail.com)

## *President's Note*

I begin rock collecting when I was a kid. To this day, I still have several pieces of that collection. I consider it my special collection-not valuable minerals, agates or gemstones. Just rocks that bring back special memories. My Granny always brought me back rocks from her travels with labels where they came from. Although they were mostly granites, when I look at them I always smile. My Dad brought me rocks his friends provided for my collection, pieces of petrified wood and assorted quartzes. My favorite rock from my folks, was a geode that my parents brought back from Mexico. My dad always said that when they walked back across, the border patrol could not believe they were carrying back that big rock. I remember sitting in the driveway, watching my dad trying to saw it open and it would not budge. Then we tapped it with a hammer a few times and it fell right open. That is still my most "valuable rock". Then there is a small collection in a plastic box, a red striped pebble from a stream from my summer after high school, a mini geode from a longtime friend, shark teeth and mini shells from a costal trip. Though no monetary value, they make me happy when I look at them.

These days, I am lucky enough on occasion to spend time with my husband and friends in creek beds, mountain tops, in pastures and Gem & Mineral shows looking for rocks. Field trips are a wonderful way to meet people that share your interest, have fun with your family and make some happy memories. Be on the lookout for field trips coming up this spring and summer. I hope to see you there.

Until then- Peace, Love & Rocks Pam

## *Membership News*

Dues are \$20 for single membership and \$30 for a family membership. Please mail your check and the attached form in this newsletter email to Schuyler Bullock, 657 Dear Valley Rd., Weatherford, TX 76085 or bring to the meeting.

## *Shop News*

Now that it is warming up, we will be open most Thursday nights. We are still working on the big saw and hope to have it back up and running soon. We have been sorting rocks for the silent auction and the silversmithing classes with CJ are wrapping up.

Janice and Pam have been working out the details on using the recently repaired lapidary machine and will it will be ready for training members on soon. Keep an eye out, there will be new classes coming soon.

# HAPPY BIRTHDAY

## March:

23 – Pam Nolen

29-Mark Bishop

## April

9 – Alayna Frost

21-Dora Hale

*Members: Join us on Facebook and share photos and your creations*



## *Field Trips*

We had a fun Saturday in Keller, TX, seeing Josh Shatley's crystal, fossil, and mineral collection and buying some special rough material for our lapidary work on March 3rd.

Thank you, Josh, for allowing us to visit and sharing your beautiful collection with our local clubs.





## *Gem & Mineral Show*

Save the date: May 26 and 27 to help at the annual show. We will need lots of help so sign up to help for a few hours or all day. Remember we will need also help Thursday, the 24th in the pm and Friday, the 25th in the morning. I could use a couple of key people to help coordinate different area. See me if you can help in April and May.

## *Minutes from January*

Meeting on February 27, 2018 was called to order by President, Pam Nolen at 7:35 p. m.

Guests & new members included Curtis Cannell, and Carmen Sorensen with 20 people in attendance.

Pam read a poem about minerals which the author is unknown.

Membership: reminder to pay dues and update all paperwork. Information in newsletter needs updating as per dues amounts have changed.

Minutes were printed in newsletter, moved to accept by Ira, seconded by David; motion passed.

The treasury report was given.

David reported on shop happenings that silversmithing classes were ongoing. The large saw is being worked on. Janice wants to change lapidary night. A new diamond grinder requires training.

A thank you card for Neal Immega was circulated for members to sign.

C. J. spoke about ongoing silversmithing class with 10 students learning about torch safety and fire extinguisher usage. They are learning the art of soldering with copper and silver. Practicing on copper back plates fusing and soldering different types of pieces, soldering silver pendants with bezel and bail, and a silver ring. Touching on finishing and sawing practices. There is a waiting list of about 14 for this class.

CJ reported that we are working on a field trip to Keller to visit Tex-Art Stone owned by Mr. Josh Shatley. His business is in gravel, but he has acquired a collection of fossils, rocks, minerals and faceted stones over the years. Members went to help price items for a trip on March 3<sup>rd</sup> to see his collection and buy available minerals.

This past week members went to TCU to see the Monnig Meteorite museum and see the collection in their vault.

She is working on a possible turitella trip to McGregor near Waco on April 28<sup>th</sup>, and arranging with Arlington Club on a fall trip to Eagle Pass.

She needs input on setting up possible trip to crystal mines in Arkansas.

Pam & David went to Tucson and got a raffle prize for our Annual Gem and Mineral show. Flyers to come out next month and we have 4 T-shirt designs to vote on for printing. The design Peace, Love and Rocks and Fossils with pictures and an ammonite was chosen after several votes. We need to advertise the show wherever possible due to cost of ads. Thursday nights we will sort rocks for the show and do other preparation needed.

There was no old business

New business: Ira would like to obtain samples of cinnabar (mercury sulfide) to show how old buttons were made.

The club building needs several repairs and Glenn Hilliard is willing to work on this. We need to get sheetrock, metal for roof, etc. with the expenses estimated to be about \$1300.

Dora asked for a substitute secretary for March and April. Linda Marlin volunteered with a big thank you for stepping in to help.

Door prize was drawn and awarded to Little Bear.

Felice M., Don R., Mary H. selected from donations for Red tickets.

Our own Steve & Mary Hilliard presented a program on the rock cycle similar to the ones they present to school students. Included was information on the size and structure of the earth, how different rocks undergo changes, the Mohr scale of hardness, and characteristics of various rocks and minerals.

Respectfully submitted, Dora M. Hale, secretary

## *March Birthstone*

Excerpt from the American Gem Society

For the lucky individuals born in March, two birthstones are associated with this early spring month: aquamarine and bloodstone. Both stones are very different from one another in appearance, but each share a similar symbolism of preserving or enhancing the health of the wearer.



The serenely colored aquamarine invokes the tranquility of its namesake, the sea. In fact, the name aquamarine is derived from the Latin word aqua, meaning water, and marina, meaning the sea.

Aquamarine is most often light in tone and ranges from greenish blue to blue-green; the color usually is more intense in larger stones, and darker blue stones are very valuable. This gemstone is mined mainly in Brazil, but also is found in Nigeria, Madagascar, Zambia, Pakistan, and Mozambique.

Like emeralds, this gemstone is actually a variety of a mineral called beryl. Large stones have been found all over the world, including one stone found in Brazil that weighed over 240 pounds. Aquamarine grows in large, six-sided crystals that can be up to a foot long, making it a great gem to be cut and polished in larger carats for statement pieces.

This gemstone was believed to protect sailors, as well as to guarantee a safe voyage. The serene blue or blue-green color of aquamarine is said to cool the temper, allowing the wearer to remain calm and levelheaded.

In the Middle Ages, many believed that the simple act of wearing aquamarine was a literal antidote to poisoning. The Romans believed that if you carved a frog into a piece of aquamarine jewelry, it would help to reconcile differences between enemies and make new friends.

Still other historical groups took this lore even further, using aquamarine as gifts to the bride at a wedding in order to symbolize long unity and love. Some even believed it could re-awaken love between two people.

The Sumerians, Egyptians, and Hebrews all admired aquamarine and many warriors would wear it into battle to bring about victory. Many ancient medicines used powder from aquamarine to help cure all manner of infection, but it was said to be particularly good for eye ailments.

The stone is also considered to be a great addition to mental health and is used widely as a symbol in Tarot as well as a meditation aid and is said to help one cultivate more inner tranquility. It is also considered by some to be a great aligner of the spiritual and the physical, for those who feel out of harmony or alignment with oneself.

The second birthstone for March is bloodstone, a dark-green stone flecked with vivid red spots of iron oxide. Generally found embedded in rocks or in riverbeds as pebbles, primary sources for this stone are India, Brazil, and Australia.



Bloodstone is also called heliotrope, a word from the ancient Greek that means “to turn the sun.” Many believe it was probably named such because of ancient ideas about how minerals reflect light. In fact, some believed that the sun itself would turn red if this stone was put into water.

Bloodstone is sometimes also known as another name, Blood Jasper. But really these stones are chalcedony, a crypto crystalline quartz. There are two forms of bloodstone: one is more transparent (heliotrope) with red spots while the other is more opaque (plasma) and has little or no red spots.

For those looking for a good quality bloodstone, it is generally considered that a solid green color with visible veins of red is best. It also comes in many shapes and cuts including traditional cuts like emerald, oval, and cushion.

This ancient stone was used by the Babylonians to make seals and amulets and was believed to have healing powers — especially for blood disorders. It is sometimes called the martyr's stone as legend tells that it was created when drops of Christ's blood stained some jasper at the foot of the cross.

Many other ancient cultures believed bloodstone had magical powers, with some references to its ability to heal dating back to 5000 BC.

The Babylonians used bloodstone in their divination. The Egyptians prized bloodstone because they believed it helped them to magically defeat their enemies. They also believed it increased their strength or made them invisible.

Still others believed that bloodstone could help control or change the weather, win legal battles, or give the gift of prophecy. It was so loved for its properties, many used the stone in jewelry, signet rings and even small cups or statues.

Today, many still cherish bloodstone as a lucky charm or amulet and is prized by athletes or those who wish to increase their personal strength. Some believe it helps with mental clarity or increasing creativity or even boosting overall energy.

### *Upcoming Events*

**Mar 30-Apr 1:** Chihuahuan Desert Gem & Mineral Club Show and Sale at Alpine Civic Center 801 W. Holland Ave., Alpine, TX. Free admission.

**APR 14-15:** Central Texas Gem & Mineral Society Show, Abilene Convention Center, N. 6th & Pine, Abilene.

**Apr 20-22:** International Gem & Jewelry Show Inc., (IGEM) Market Hall, Dallas.

**APR 27-29:** Texas Fine Minerals Show, Holiday Inn & Suites, The Woodlands, TX.

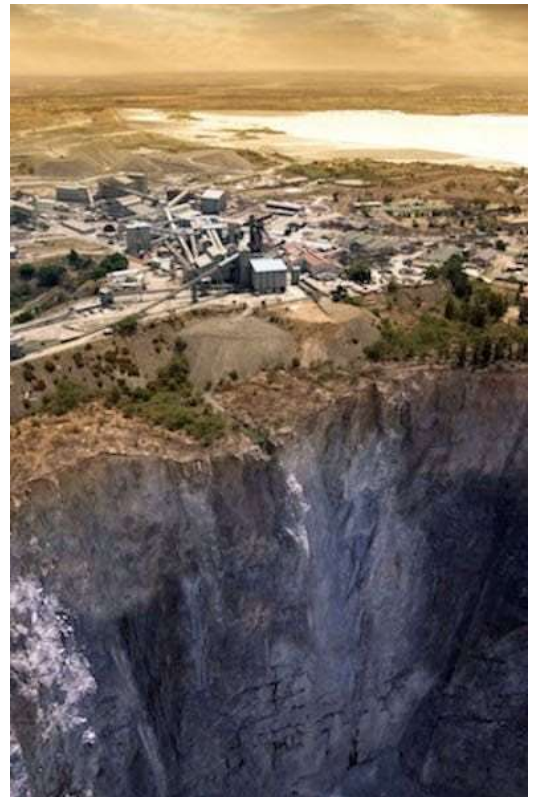
### *Mineral Tidbits*

#### **Newly Discovered 'Super-Deep Diamond' Reveals a Rare Earth Mineral Inside**

Article from *Inverse* March 7, 2018 by Sarah Sloat, photos by Graham Pearson, Petra Diamonds

The Cullinan mine, located on a diamond-bearing kimberlite pipe in the Gauteng Province of South Africa, is the world's richest source of rare blue diamonds and has produced more than a quarter of the world's diamonds that are greater than 400 carats. The massive mine is also a scientific treasure trove. As scientists report in *Nature* on Wednesday, the Cullinan mine's massive diamonds are not just a luxury item but a clue to what is happening at the deep core of the Earth.

In the paper, a team of international researchers report the rare scientific discovery they found in the mine: a "super-deep" diamond encasing the mineral calcium silicate perovskite ( $\text{CaSiO}_3$ ), which is the fourth-most abundant mineral in the Earth but has never been found in nature until now. Super-deep diamonds, the researchers tell *Inverse*, are a classification reserved for those rare diamonds formed between 200 to 1,000 kilometers into the lower mantle, so they are super rare too.

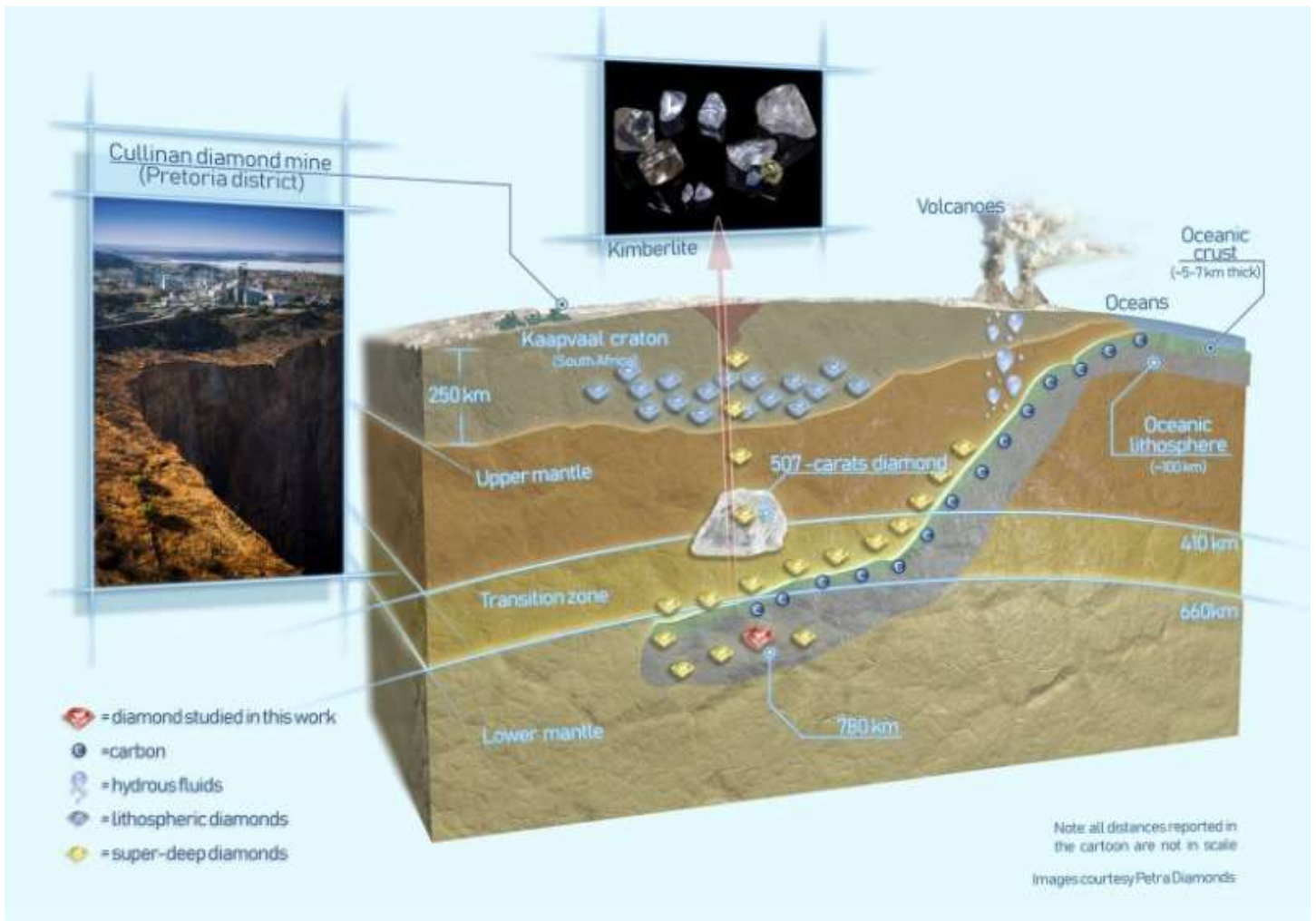




This was very special because this mineral had been theoretically predicted but it was not thought possible to see it preserved at the Earth's surface for observation and measurement," University of Alberta researcher and study co-author Graham Pearson, Ph.D. told *Inverse*. Pearson is well known as one of the world's leading diamond researchers. "Finding a natural object that has never been seen by anyone before is always exhilarating! It's what most natural scientists dream about."

Pearson and his team determined that the super-deep diamond originated around 760 kilometers below Earth's surface — much deeper than most diamonds, which on average form between 150 to 200 kilometers below ground. Natural diamonds are formed when carbon molecules form highly organized "lattices" at high temperatures and pressure. Because this particular diamond was formed so far below the surface, Pearson estimates, would have sustained more than 24 billion pascals of pressure. It was likely there that it was able to incorporate the precious  $\text{CaSiO}_3$ , which can only exist at the very high pressures close to the Earth's crust. The inclusion of the precious  $\text{CaSiO}_3$  inside the diamond was confirmed by X-ray measurements made by the paper's primary author, University of Padova professor of geoscience Fabrizio Nestola, Ph.D.

It is very energetically difficult for minerals to re-arrange their atoms to other structures, Pearson explains. Once a diamond becomes a diamond, it's not going to suddenly switch up its carbon lattice to



Earth's surface. This was a good thing for Pearson and his co-authors, because  $\text{CaSiO}_3$  is only stable at the extremely high pressure that exists over 500 kilometers below the Earth's surface. There, it's extremely abundant — the scientists estimate there could be 1,021 tons of perovskite in deep Earth — but in order for it to rise up to the surface, it needs a vehicle. Fortunately, it found one far closer to its home — the extremely hard, protective containers we know as diamonds.

“Only the super-strong nature of the diamond, and the particular nature of the fast eruption of the host kimberlite, in this case, provided a favorable set of circumstances that led to the preservation of this mineral,” says Pearson. “Many people predicted that we would never actually see a natural version of this mineral at the Earth's surface, because it is so unstable.”

While the diamonds of the Cullinan mine are considered the world's most commercially valuable, they're also the most scientifically valuable. Diamonds, in general, are valued among geoscientists because they “provide access to the deepest intact material from the Earth's interior through the minerals contained within their volumes,” the authors write.

In turn, the super-deep diamonds of Cullinan are so precious because they are some of the deepest physical samples of Earth's interior ever found. Here the perovskite structure within the diamond “very clearly” provides proof that as oceanic plates are pulled into Earth's lower mantle, that crust transitions into a new mineral.

Next up for this diamond is further analysis by scientists at the University of British Columbia who will attempt to learn more about its age and origin. Understanding how the formation of super-deep diamonds differs from diamonds created at more shallow depths will help scientists paint a better picture of the dynamics and chemistry of the molten mess of minerals found deeply embedded in the planet's mantle.

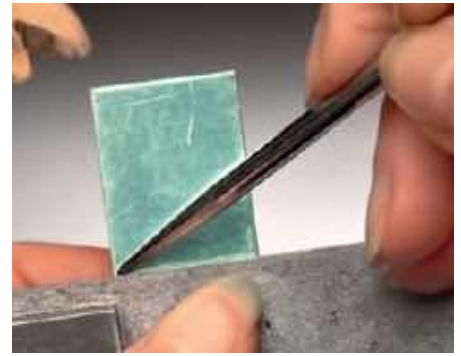
## *Metal Tidbits*

Excerpt from Jeff Fulkerson:



1. **Metal on File vs File on Metal:** It is not always easy to get an edge that is straight, not to mention a long edge that is flat, straight, and square, when using a jeweler's file. Try the opposite of what you have learned: bring the metal to the file and not the file to the metal. Using a large 14" fine-cut file, sold as a Formica file for smoothing the edges of countertops, place the file flat on the bench and then, holding the metal in a vertical position, pull it along the cutting surface of the file. This method creates a long, flat, square edge in a fraction of the time of the traditional method.

**2. File Straight, Flat Edges:** When filing flat edges, mark a straight line on your metal using a square and scribe for you to work toward. Make sure your file does not "dip" or slope up or down at the beginning and end of your cutting stroke, because that will create an uneven or rounded edge.



**3. Recycling Charcoal Soldering Blocks:** You probably know that soldering and fusing on a charcoal block generates a reducing atmosphere that diminishes silver oxidation and produces stronger soldered joints. However, charcoal blocks deteriorate rapidly, so you might end up with unusable chunks of charcoal. These blocks are expensive to replace, too. Try rubbing broken charcoal into the surface of a white firebrick to create the same effect.



**4. Smooth Sawing from the Start:** Begin sawing with the blade tilted at a slight angle; then return to a vertical position to continue sawing sheet silver.

**5. Oversized Sawing Solution:** Have you ever attempted to cut a piece of silver sheet that's longer than your saw frame and come to a screeching halt when you realized it won't fit? One solution is to use your pliers to twist your saw's blade 90 degrees so that the saw frame is perpendicular to the axis of the saw cut. With the saw frame to the side, you can make cuts of unlimited length as long as the width of the silver sheet is not greater than the saw frame depth.

**6. Pickle-Safe Strainers:** Sometimes it can be a challenge to fish out small pieces in your pickle pot. Look for nylon-screened or plastic strainers to use as "dipping baskets" in your pickle pot: Cool the soldered piece in water first, place it in your metal-free strainer, and then place the strainer in the pickle pot. It can be easily retrieved and then rinsed right in the strainer, too. Do not use metal strainers in your pickle pot or you'll risk copper plating all the metal pieces in the pickle.



**7. Protect Textured Metal While Dapping:** Cover textured metal with a couple layers of masking tape while dapping, or you can place a layer of thin craft foam between the dapping block and the textured metal to protect the texture during forming. Craft foam can also help protect the wood from

being marred by the texture on your metal if you are dapping with wooden blocks. If you are texturing both sides of a metal piece, use craft foam or a couple layers of masking tape to protect one textured side against the bench block while you texture the other side.



**8. Form Perfectly Round Rings on Tapered Mandrels:** When forming rings and bangles on tapered mandrels, keep turning the metal around the mandrel to counteract its tapered shape and to ensure that both edges become the same size.

**9. Control Your Liver of Sulfur:** The longer you leave metal in liver of sulfur (LoS), the less control you have over the color. Dip your metal into the LoS and rinse it off with water. Repeat this process until you achieve the color you are looking for. Darkening in layers will also give you a more durable patina. Remember that copper can affect the chemical balance of your LoS, so if you put silver into LoS that has already had copper dipped in it, you will see that it turns a yellowish color. Either make a separate liver of sulfur solution for your silver, or dip copper after you have finished with your silver pieces.

**10. Quiet Pounding:** Ever notice how loud the sound is when pounding on your steel bench block while it is sitting on a wooden bench top? The bench top reverberates like a drum, amplifying the sound. To correct this, simply place your steel bench block on an old computer mouse pad to help absorb some of the shock and noise. You will still have the benefit of the bench block's hardness.



**The Fort Worth Gem and Mineral Club** was founded in 1950. It is a member of the [American Federation of Mineralogical Societies](#) and the [South Central Federation of Mineralogical Societies](#).

**PURPOSE:** The purpose of this club is to promote the study of geology, mineralogy, and the lapidary arts. We also strive to stimulate the interest in the searching, and collecting, of minerals and fossils.

**MEETINGS:** Every 4th Tuesday @ 3545 Bryan Avenue, Fort Worth, TX 76110  
3545 Bryan Avenue, Fort Worth, TX 76110. **Visitors Welcome**

**MEMBERSHIP:** Membership shall be open to anyone interested in the purpose described above. \$20.00 per person, per year. \$30.00 per family, per year.

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*The Cowtown Cutter*

**Fort Worth Gem and Mineral Club**  
**P. O Box 123975**  
**Fort Worth, TX 76121**

**To:**

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**MAILING ADDRESS:** Schuyler Bullock, Treasurer, 657 Deer Valley Rd,  
Weatherford, TX 76085

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