



The Official Publication of the Lincoln Gem & Mineral Club, Inc.

THE PICK & SHOVEL

In association with



The Midwest Federation of
Mineralogical and
Geological Societies



The American
Federation of
Mineralogical Societies

The purpose of this corporation shall be to study, promote an interest in, and disseminate knowledge of lapidary and various Earth Sciences including but not necessarily limited to Geology, Paleontology and Mineralogy. It shall be a particular purpose of the corporation to provide education in these fields to its members and the general public, especially to youth and student groups.

Current club by-laws can be found at [www.lincolngemmineralclub.org/About/General Information](http://www.lincolngemmineralclub.org/About/General%20Information).

GENERAL MEETINGS

Third Thursday of the Month, except for January (3rd Sunday), December (1st Sunday), and summer break (June, July, August).

Meeting Times: Juniors meet at 6:15 p.m.
Adults meet at 7:00 p.m.

Next meeting: September 19, 2024

Program: Fossils on the Floor: Mosaics of Fossils on the
Nebraska Capitol Rotunda Floor
by Bob Diffendal

BOARD MEETINGS

Until further notice, Board Meetings will be held at 6:30 p.m. on the first Thursday of each month.

Next Board Meeting:
Thursday, September 5, 2024 at 6:30 p.m.
Vera Lyman's Residence

Persons of general membership are invited to attend Board meetings and offer agenda items.

2024 BOARD OF DIRECTORS

President: Brett Jurgens, 402.850.3256, quartz89@aol.com

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2nd Vice-President: Jayne Beer, 402.890.3307, JBeer60070@aol.com

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Board Member: Charles Wooldridge, 402.975.0416, charles.wooldridgeii@gmail.com

2024 LONG RANGE PLANNING & BY-LAWS COMMITTEE

Jayne Beer, Chairman

1 year: Jayne Beer & Brett Jurgens
2 years: Sharon Marburger & Clyde Ogg
3 years: Vera Lyman & Jim Marburger

2024 NOMINATING COMMITTEE

Jayne Beer, Chairman

1 year: Jeff Kubitz & Vera Lyman
2 years: Jayne Beer & Brett Jurgens
3 years: Charles Wooldridge & Donitte Stiles

ANNOUNCEMENTS & CLUB FUN

Attention New Members!

(and old members if you haven't yet provided the information)

Please let Editor Sharon know your birth month so your special day can be acknowledged in the newsletter.

You may send it in an email (lgmc.editor@outlook.com), text (402.429.3323), or let me know at any meeting.

ACTIVITY NIGHT & POTLUCK

SUNDAY, JULY 14

HIDDEN GEMS

**DROP OFF FOOD NO LATER THAN 4:45 PM
MEET AT ROBBERS CAVE NO LATER THAN**

4:55 FOR 5:00 TOUR

**TOUR COST \$20 FOR ADULTS
\$9 FOR KIDS 6-12 YEARS**

JULY BIRTHDAY GREETINGS

Leahh Anderson
Tammy Jeanneret
Tammy Kubitz
Sharon Marburger
John Moss



CAMP CREEK THRESHERS

JULY 20 & 21

**SATURDAY 8-5, SUNDAY 8-4
IF INTERESTED IN HELPING,**

**CONTACT BRETT AT
quartz89@aol.com**

See president's message for details

**CRAWFORD ROCK SWAP
LABOR DAY WEEKEND
SEE INFO ON PAGE 10**

Follow us on Facebook:
<https://www.facebook.com/groups/223555904325876>

ADVERTISING INFORMATION

Advertising by rock / hobby business or interest is permitted with the approval of the Board of Directors. Contact the Editor with your proposed ad. The rate is set at \$20.00 per full page; \$10.00 per 1/2 page; \$5.00 per 1/4 page (minimum) per issue, paid in advance to the Club treasurer. Ads will be placed throughout the newsletter as space permits.

Please send your hobby-related photos with captions or explanations for publication in the Pick & Shovel. Field trips, lapidary projects, fossil projects, metal projects, wire wrapping, tumbling, or any other activity of interest to the club. Your project may inspire someone else. Send via email (lgmc.editor@outlook.com) or via Facebook Messenger to Sharon Marburger (<https://www.facebook.com/mamamar7880>).

All articles, tidbits, and photos not individually identified as being contributed to this publication are provided by the Editor.

PICK & SHOVEL STAFF

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DEADLINE:

Last Sunday of the month.

PRESIDENT'S MESSAGE

By Brett Jurgens

Hello LGMC.

A big shout out to the Beer family for once again hosting our Summer Gem Fest. We lucked out with weather once again; the forecasted rain happened overnight. Saturday was a bit of a hot and humid day; bottles of water were the big seller at the Junior Drink Booth. Pim's Thai was our food truck for the weekend and the food was amazingly fast and delicious. I heard many rave reviews of it over the weekend. There were over 30 dealers in attendance, the largest number yet. We are always looking for recommendations on how to draw more attendees. I would also like to see more club member participation, either volunteering or attending. If you haven't attended before, you are truly missing out. The Beers and other club members have put in a lot of effort to make it a family friendly and fun event for both attendees and vendors. Vendors came as far as Arizona and said they don't plan to ever miss one. If you come on Saturday you can stay for the grill out and potluck for club members and vendors. Or come early on Sunday for a free breakfast (this year was pancakes). It's such a fun place, and the amount and variety of material there was fantastic!

Don't forget Sunday, July 14th. We are combining a tour of Robber's Cave, a potluck, and an activity night. The cave tour is at 5:00 p.m. (925 Robber's Cave road, just behind the Subway off of Nebraska Parkway/south 9th Street). Meet in the parking lot no later than 4:55 p.m. If you have food you want to drop off at Hidden Gems beforehand, have it there by 4:45 p.m. as they are closing up to attend the tour. If you are not going on the tour, we should be back from the tour between 6:00 and 6:15 p.m. Tour cost is \$20 for adults, \$9 for kids 6-12. We had a wonderful time last year and many have requested to go back. After the potluck, try your hand at polishing a rock or stay for great conversation. This is a great opportunity for junior members or anyone interested to get some instruction and practice at rock polishing. We had multiple people cut and polish their first cab at this event last year.

The Camp Creek Threshers Show is Saturday, July 20th 8 a.m. to 5:00 p.m. and Sunday 8:00 a.m. to 4:00 p.m. Last year was the first year club members helped staff the Rock and Saddle Building. We had a touch table, free gem dig,



fluorescent display, equipment demo, and displays of both Nebraska material and petrified wood from different localities. It was great exposure for the hobby and the club; over 900 people come through our building. Volunteering gets you into the show for free, and there is a lot to see there. Antique tractors and farm equipment are the main feature, but there is also the historic jail, depot, post office, country store, drugstore, sawmill, print press, steam crane, butter churning, and the list goes on. If interested in volunteering, please email me at quartz89@aol.com.

The Crawford Rock Swap this year is advertised as Friday, August 30th to Monday, September 2nd. From experience, most dealers are set up and dealing on Thursday, and many pack up on Sunday. We had over a dozen club members attend last year and I know multiple are planning to attend again. It is about a seven hour drive from Lincoln, but well worth it. The Crawford Club leads field trips Friday, Saturday, and Sunday morning. We typically have coffee and pancakes every morning for club members and friends. If you have questions, or are interested, please let me know.

JUNIORS

by Brett Jurgens, Junior Leader

Hello Juniors.

I hope your summer is going well. It seems to be flying by.

Our Summer Gem Fest went well; it was a great opportunity learn more about rocks and to add to your collection. We had over 30 vendors with a wide variety of material. I did see a couple of you there. As always, I'd like to see more of you. Gem Fest was Jayne Beer's idea to bring a multi-day outdoor swap closer to home (many of us enthusiastically drive the seven hour trek to the Crawford Swap). We strive to continue to grow the Gem Fest, and give you opportunities to add to both your knowledge and collection. Please take us up on these opportunities.

Our next club event is on Sunday, July 14th. We are doing a tour of Robber's Cave followed by a potluck and activity night at Hidden Gems. This is a great opportunity to learn to polish a rock.

July 21 and 22 is the Camp Creek Threshing show. Our club helps staff a rock display; we have a touch table, free gem dig, fluorescent display, equipment demo, and displays of Nebraska material and petrified wood. It is a great opportunity to hang out with fellow club members and learn more about our hobby. We had great feedback from parents last year whose kids were burning out at the other exhibits and were excited to see rocks and the hands-on activities. Volunteering also gets you into the show for free, and there is a lot of other stuff to see.

See my president's message for details on both events. I hope to see you July 14th.

ROCK BAGS

11/1962 Carny Hound via The Backbender's Gazette, November 2010

To make a good rock bag, take a pair of old jeans. Cut off one of the legs (about 24" is a good length) and sew one end closed. Of course, you can cut off more or less, depending on how much you think you can carry. Put in a draw string. (Editor's Note: You can make a shoulder strap or handle using other parts of the jeans, such as the waistband.)

BENCH TIPS BY BRAD

By Brad Smith
BradSmithJewelry@gmail.com

See Other Tips in my Smart Solutions for Jewelry Making Series,
<http://amazon.com/dp/B0BQ8YVLTJ>

SANDING DISKS

One of the flexshaft tools that saves so much time is the snap-on sanding disk. I mainly use the medium and fine grits but sometimes like the very fine ones that are sold for working with platinum.

Ordinarily, you'd think of placing the disk on the mandrel with the grit side facing away from your hand, but notice that you end up with your elbow up in the air. Instead, try flipping the disk so that the grit side is towards your hand. It's a much more comfortable position because the elbow is down near your side, and it lets you hold the work up close where you have a better view of what you're sanding.

I use these snap-on disks so frequently that I keep multiple mandrels with different grits already mounted in the bur stand. Some mandrels have the grit facing out and some facing in.

**EASIER PRONG SETTING**

When setting stones in a prong mount, the tool is less likely to slip off the prong if you grind a shallow groove into its face or rough up the face a bit with sandpaper. Some folks prefer a prong pusher for doing this, and others like a set of pliers with a slight groove on one jaw.

The easiest way to create a slot on the pusher is with a file, and the quickest way to create a slot on one jaw of your pliers is with a separating disc. Then do a rough polish on the slot with a medium grit, knife-edge silicone wheel.

GEOLOGY 365.COM

Printed in Mini Miners Monthly, June 2024, Volume 16, Number 6
(a Diamond Dan publication)

You have to use Geology365! It is a free web-based software package that lets you make a record of the specimens in your mineral collection.

Go to the website and create your own profile. The program will let you record up to 365 mineral specimens **FREE OF CHARGE**. After that there are small fees to pay.

Geology365 was created by, and is managed by, Ryan Klochner. We all know that mineral collectors need to keep all the information about every specimen that they have. Where it came from, how much it cost, a description of the specimen, who owned it before, and more.

You can record all of this information on Geology365. You can also take pictures of your specimens and add them to the record of each specimen.

You can also design and create mineral specimen labels for each of your specimens.



Hungry vendors and club members wait in line for the Saturday night supper at Gem Fest. Brats, hot dogs, potato salad, cole slaw, macaroni salad, chips, 7 layer dip, hamburger cheese dip, baked beans, cookies, brownies, and much more!

YUMMY!

TODAY'S RANDOM FACT:

By Ed Wengerd, Gem Cutter's News (no date given), previously published in the Pick & Shovel

Many pieces of petrified wood, especially those from the Northwest, have a center that looks like wood, but with a layer of chalcedony or pumice between the center and the outside.

This indicates that the tree was green when it was buried in hot ash. The water in the green wood evaporated, making the wood shrink. The outside was made into a cast by the heat, so the areas left between the cast and the wood were filled with chalcedony, making beautiful pieces of petrified wood.

GEM FEST 2024

By Jayne Beer, Chairman



The fourth annual gathering at the Beer Family Farm is in the books. We had a pretty warm weekend this year and a little rain! But we had the most vendors that we have had to date. Every available spot in the barn was filled and I had to get creative to find everyone a good spot in the shaded area outside. There is another large area where I can add more outside booths, but I didn't want to put only 1 or 2 vendors back there. So start considering adding your booth to our festival next summer. With more vendors, we can open up the secondary area.

The quality of merchandise provided by our vendors for your shopping pleasure is shockingly fantastic. I would say that the rough rock vendors brought out for us was unprecedented in this area. I also heard this from customers. In my opinion, the next closest show with this amount of quality rough is in Crawford, Nebraska. That swap is scheduled for Labor day weekend. (See ad on page 10.) Like at Crawford, I noticed many vendors trading material and buying from each other.

We also had many artisans who create wonderful finished pieces of art for you to wear or display. This year we had several folks who incorporated plants for sale. These things all beautify our lives. Another thing I noticed was several people selling UV reactive minerals. I have noticed a surge in UV reactive materials on the market as technology has made handheld UV lights increase in quality and come down in price.

There were a little under 400 folks that came out as customers. As much as I would love to see those numbers increased many times, I think most people were happy with sales. I know that Corey and I were happy. I am always looking for ways to make this event bigger and better. If you have ideas, please share them with me! This is an area where I could use help. If you excel at promotion, please consider helping with this event.

Brett Jurgens and family make this event even more fun by feeding this crazy crew. It was Brett's idea to have a Saturday evening meal. He put a lot of time and effort into preparing sides to go along with the hot dogs and brats. Many of the vendors brought sides to add to the meal, making for a very nice spread of food. This year Brett also made pancakes on Sunday morning. They were delicious!

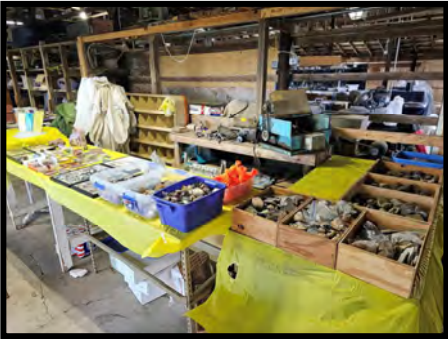
And don't forget about Pim's Thai Food, the food truck that sold lunch and snacks. The food tasted great and the smell of it cooking made many mouths water.

Sharon puts so much time and effort into organizing all of the sign-up and registration. Also, both Jim and Sharon are the people behind the club's Rock Pile booth. This is the club's fund raising booth. These proceeds are divided between the juniors and the lapidary class fund. Sharon was very happy to have sold many \$5 bags of rocks.

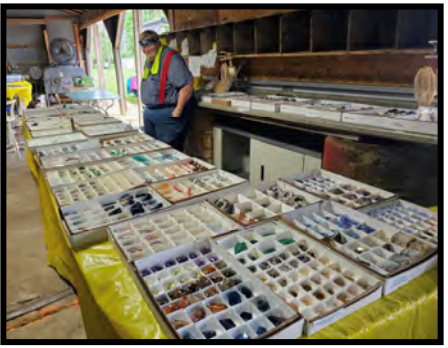
If you were out at the Gem Fest, you were greeted at the entry gate by Vera. She sat there the entire time that Gem Fest was open, collecting entry fees.

Now I must thank my family! Everyone put in countless hours cleaning out the barn, mowing, and making the farm look nice for our event. My daughter, Kelly, and her boyfriend, Justin, were out at the farm the entire time helping with setup and parking cars and keeping Vera company at the entrance, and then they stuck around and helped with clean up on Sunday evening.

I appreciate all of the effort put into making the Gem Fest a fun weekend. I look forward to seeing it grow each year! Cheers!



The Club Rock Pile where people could fill a paper lunch bag with anything on the right end table, for the minimal price of \$5. Rocks, minerals, fossils, and findings.



OMAHA AUCTION

By Sharon Marburger (photos by Marburgers)

On Sunday, June 9, the Nebraska Mineral and Gem Club (Omaha club) held its third annual rock auction at Zorinsky Lake Park. Omaha club members and a select few non-members took an array of rocks, fossils, and minerals to this live auction. A percentage of each sale was allocated to the club; 20% of member sales and 25% of non-member sales, with the proceeds going toward the development and upkeep of Omaha's new workshop. Some items generated vigorous, good-natured bidding.

It was a beautiful day and everyone seemed to be having a good time. It was an opportunity to spend time with like-minded people who love the hobby, and to purchase some items to add to one's collection. It was a great way to spend a Sunday morning.



NYKKY'S WIRE WRAP CLASS

By Sharon Marburger (photos by Marburgers & Jayne Beer)

The June class was held on the 27th at Hidden Gems. We turned Vera Cruz Amethyst crystals into pendants. This was a very large class, with 17 students. Everyone started out with the same basic pattern for the back bracket. Then came the wire weaving. As the crystals were then secured in the mounting, individual creativity struck. As you can see in the photos, each student put their own spin on how to complete the piece. The class was fun and frustrating. By the time our pieces were done, it was fun again. Arthritic fingers have a hard time holding onto the stone, but persistence wins. Consider attending the next class, to be announced.



SPHERE MAKING BY HAND

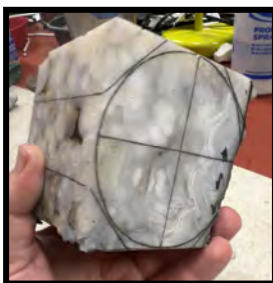
By Corey Beer

I started by measuring this Luna agate from the shortest of the three dimensions to see what the maximum possible sphere size would be, and it came out to exactly $3\frac{1}{2}$ inches. The other two dimensions were larger, so I picked the best spot from the center and roughly drew my cutting lines so I'd know what area to keep outside of. It didn't matter if my cuts were perfect because the final surface of the sphere is completely enclosed within this block, so I've got a lot of leeway on how I chop it up.

Once I had gotten the big block cut down into more or less a perfect cube, the first step was to measure out and find the center on four edges of one of the six faces so that I could draw that "X" across the face and find the exact center. Once I found that point, I drew the $3\frac{1}{2}$ inch circle centered on it. I then drew four 45 degree angles on each corner of the cube that got as close to the circle as I could get them. Then using a ruler, at the points where that 45 degree angle came to the corner of the cube, I continued that line straight down the other 4 sides of the cube so I had could see exactly where I was cutting. Once I was happy how that was all laid out, I traced it all in a fine point Sharpie so it wouldn't just wash off in the oil.

The first cut was one of the harder ones because I had to cut that corner off in the vertical position, and it was just at the very top edge of my 10" saw. Once that cut was made, I could then lay it on that face, and make the next corner cut because it was 90 degrees to the 2 corners left to it. Then just rinse and repeat, and once I'm done, I have an octagon with all 8 sides about the same length. These corner cuts are great for cabbing by the way, so don't just chuck them out.

The next step was to start by rotating the shape 90 degrees from the side I first drew the circle on and repeat those same steps by finding the center, drawing a circle centered on that point, then drawing 45 degree angles on the corners and extending those lines down to show where my cuts would go. Once I sliced those 4 corners off, I rotated it 90 degrees one



last time and just freehand guessed as to where to cut those last four corners were, using the other cuts as references on how deep to make those last four.

With all the planning and trimming done, I could finally start grinding the sphere to shape using one of the 8" grinding wheels. The first step is to take down any of the major corners on the sphere by using the diamond on the edge of the wheel to carve it away much quicker than it would be possible to do using just the front face of the wheel.

I ground on the piece for quite a while until I had the final sphere mostly isolated from where it started. All that was left were those four corners which, after using the edges of the wheels to lower the area around them, ground away pretty quickly. After that it was just a while of refining the shape, slowly removing material and getting it closer to where I wanted.

Once I was mostly happy with the shape, I moved over to the 220 grit wheel on my Genie where I kept smoothing it out further, getting it nearly perfect. The third wheel (280 grit) was by far the most grueling step of this whole process because there were still MANY small flat spots and scratches and bumps that weren't visible unless I looked closely, but they would have been major flaws in the finished piece if not sanded out. To remove them, I inspected the sphere with a strong raking light source and circled each scratch I could see with a sharpie, and then spent probably three hours just very slowly working the sphere down, getting rid of each and every one of those scratches.

Once that step was done, the 600, 1200, and 3000 grit wheels were a breeze, only eight to ten minutes apiece. The sphere was then finished off to a high polish using cerium oxide on a leather wheel.

Before I started this project, the rough was 6+ pounds and the maximum possible size of sphere I could have made was $3\frac{1}{2}$ inches. After all the trimming and grinding, it finished out at 1.83 pounds and $3\frac{1}{4}$ inches in diameter, which I'd say is really quite a good outcome, considering it was all done by hand and the inaccuracies that come from that.



LARGE ANTIMONY SPECIMEN

By Eric Fritsch



The 2024 Summer Gem Fest at the Beer Family Farm was a success and I want to thank the Beer's for hosting it. They put in a lot of hard work getting everything right. Lots of others to thank for their work, too, collecting for entrance/parking, making pancakes, removing trash, to name a few; all a monumental effort.

I like to think I'm an active collector, so when I sell minerals I also like to buy minerals. After the swap, I had some extra cash and I bought a particular specimen that I've had my eyes on for several months - a large antimony from the Tom Moore Mine, Lake Isabella, Kern County, California. How do I know that this is large and not a dealer putting a descriptor in front of the specimen?

The specimen that I've had my eyes on for a while was in a dealer's inventory. I know this dealer and his material is generally very good. I have 14 antimony specimens in my collection, including two from the same mine. What made me want this specimen was its size. My other two specimens from this mine are much smaller.

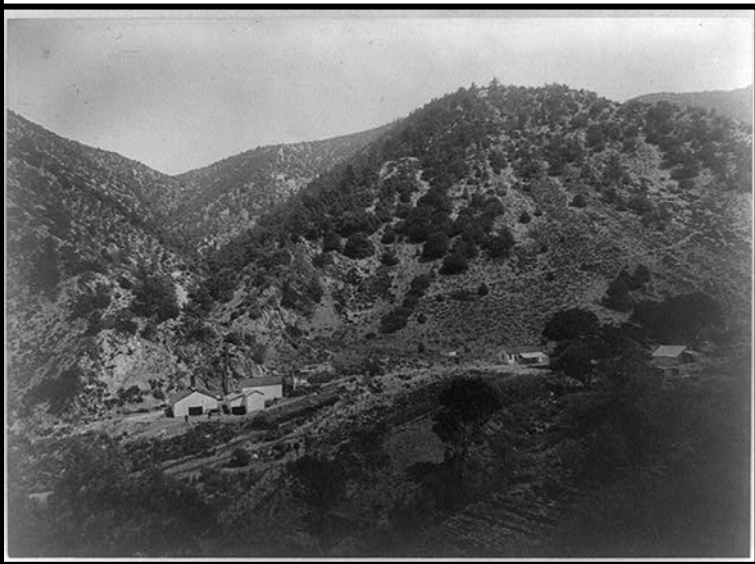
I talk a lot about the website Mindat.org. It is a good reference for basic information on minerals, but one of the things about the website is the ability to compare specimens. If I go to the Tom Moore Mine webpage on Mindat, I can find about 15 photographs of antimony from this mine in other people's collections and dealer's inventory. I can compare how the mineral I want to buy compares to others. The Tom Moore Mine specimens all do look pretty similar in that the native antimony formed in veins and is bound by white valentinite and other minerals.

The Mindat photographs are not an all-inclusive list of known antimony specimens from the Tom Moore Mine, but it

is a good reference. Here I see that the largest specimen is rough 336 grams, whereas the one I will purchase is 556 grams. I have also seen dozens of these specimens for sale at mineral shows over the years and cannot remember one that exceeds 1 pound in size. Sharron Cisneros (Mineralogical Research Inc.) bought up a large collection of these in the 1970s, many in the 50-200 gram size. A potential risk to specimens this size is that dealers will chop them up into several smaller specimens, extracting a smaller price from dozens of specimens. I want to keep this specimen intact, whole.

A little more digging online and I find photographs of Kern County antimony mines going back to 1888 in the Library of Congress. In 1921, Charles Behre writes a firsthand account about the antimony mines and native antimony from Kern County. He describes the maximum thickness of the veins to 10 cm (compared to 6 cm of the specimen I am looking at). I read the description of the occurrence in Minerals of California (Pemberton (1983)) and the descriptions are similar to Behre's.

If you are going to spend money on minerals, you should have a good idea of what is out there to compare. Researching and comparisons are good tools to gauge how rare something is. I find it best to work with good dealers you can trust and who are honest. Impulse can be a good thing but also buy with knowledge. There is no "Carfax" for specimens; you've got to do the research on your own. Going to large shows and seeing tons of material gives one a good idea of what is out there, how much it costs, what is unusual, etc. Yes, there might be some specimens with 10 cm veins out there, but I haven't seen them yet.



Picture of Antimony Mines in Kern County, California circa 1888. Photographer Carelton Watkins (Library of Congress)



Photograph of what is described as a large specimen of antimony, from the Tom Moore Mine, Kern County, California. The native antimony is silver colored, the white to tan crust is valentinite. Red is kermesite

EXCERPT OF ARTICLE FROM MAY 1980 PICK & SHOVEL

By Marilyn R. Smits, Ph.D., Education Chair

Malachite

The rock Malachite is hydrated copper carbonate. The name malachite comes from the Greek “malache” because of the attractive green color of the mineral and the green color of the leaf of the plant. Its chemical formula is found in several forms: as small needle-like crystals in the monoclinic system which terminate as wedge-shapes atop 8-sided prisms (Sinkankas, 1964); as compact masses with a radially fibrous structure; and as compact masses that are earthy and not crystalline (Bauer, 1969). Bauer reports that the finest quality malachite most “suitable for ornamental purposes occurs as nodular masses often of considerable size, the surface of which may be rounded, reniform (kidney-shaped), botryoidal (grapes-like), or stalactitic ... with a radially fibrous structure ... built up of concentric shells” (p.525). The external black and dull surface is contrasted by the beautiful green on the inside, with narrow bands that follow the external outlines of the stone. The Specific Gravity ranges from 3.5 - 4.05, and is high because of the copper content (57.4%). Mohs Scale hardness is 3.5 - 4; it may be scratched by fluor spar. Although brittle the massive material with interlocking crystals can be quite tough. Fracture is uneven to splintery.

Coloring ranges from intense emerald-green of the crystals to banded dark and pale green in the compact massive material. Luster is described as vitreous, adamantine, and sub-adamantine for the crystals, silky in the fibrous type material, and dull in the earthy type. Refraction is biaxial with a negative optical sign; refractive indices are described as 1.66 (1.77 in massive material) and 1.91. Tests for this mineral include placing a piece of it in cold dilute hydrochloric acid and observing the release of carbon dioxide with brisk effervescence plus the production of a green solution. This solution turns deep blue with an excess of ammonia. In the blowpipe, malachite readily fuses yielding an emerald-green colored flame. When fluxed with borax on charcoal, the mineral turns black and eventually becomes a malleable bead of copper.

Sinkankas (1964) describes the formation of malachite crystals in more detail. Malachite

develops acicular crystals which, though sometimes developed as cottony tufts of brilliant green color, prefer to form as compact masses coating cavity walls in banded layers, from a fraction to several inches or more in thickness. ... Close examination shows that the seemingly solid layers are composed of multitudes of tiny crystals, all growing away from the walls. All crystals are locked closely together in nearly parallel positions. Malachite begins growth in the same manner as drusy quartz, and again only those crystals which happen to be pointed upright continue to grow while others are suppressed. The result is near-parallelism, with crystals oriented at right angles to cavity walls, and grown to about the same length. One may say a malachite cavity lining is a druse

carried to its ultimate conclusion (p.93).

Malachite occurs as a

secondary mineral in oxidized portions of deposits in which copper sulfides are available for alteration. (It is) abundant in sulfide vein deposits but also is (*sic*) disseminated deposits, as in the so-called “porphyry coppers” of southwestern United States. (The mineral) forms crusts and stainage, usually with azurite, in practically all classes of rocks at or near the surface, providing some copper-bearing species, or native copper, azurite, but more abundant than that mineral; also associated with cuprite, tenorite, limonite, calcite, and other secondary copper species. (Malachite) commonly alters from azurite crystals, partly or wholly replacing same. (Sinkankas, 1964, p. 378).

When malachite samples are polished while retaining some of the gangue or worthless material associated with the original source ore, they are termed malachite matrix.

Malachite is more stable than azurite and has more water content (8.2% versus 5.2% in azurite). The pseudomorphism that occurs between these two minerals is noted by Hurlbut (1968):

Azurite and malachite are so alike chemically that a small variation in the surrounding moisture is sufficient to make one change to the other. Thus if azurite is bound in botryoidal masses, it may be assumed that it has been altered from malachite. Unlike malachite, azurite often occurs in crystals of characteristic shape, some as large as three to four inches across. When therefore, one sees malachite in the crystal form of azurite, it is a pseudomorph, that is, azurite altered to malachite. At one time, finely ground azurite was used by artists as a pain pigment but it was most unsatisfactory, for the blues of the painting would frequently turn green after a few years as azurite altered to malachite (p. 172).

The term azurmalachite is applied to material consisting of malachite and azurite in intimate association.

Bauer, M. Precious Stones: Their Characters and Occurrence. Rutland, VT Charles E. Tuttle, 1969

Hurlbut, C.S., Jr. Minerals and Man. New York: Random House, 1968.

Sinkankas, J. Minerology for Amateurs. New York; Van Nostrand, 1964.

Read the full article in the May 1980 issue of the Pick & Shovel, which can be found on the LGMC website: lincolngemmineralclub.org/newsletters/archived/1980.

38th Annual CRAWFORD ROCK SHOW 2024

CRAWFORD CITY PARK - CRAWFORD NEBRASKA



LABOR DAY WEEKEND AUG. 30 - SEPT 2

NWNRC
PO Box 569
Chadron, NE 69337



Northwest Nebraska Rock Club
Welcomes You To The

38th Annual Crawford Rock Swap
26th Annual Fairburn Agate Collectors Gathering

Public Welcome - Open 8 a.m. - FREE ADMISSION

EVENTS :

Daily - 8 a.m. Friday, Saturday and Sunday
Field Trips to Agate Gravel Beds -
Meet at Information Booth

Saturday - 2 p.m. Agate Collectors Meeting
with guest speakers at the
Cameco Pavilion

- 7 p.m. Rock Auction - Cameco Pavilion

Labor Day Weekend

For more information, contact:

Aug. 30, 31 - Sept 1 & 2

Valerie - (308) 430-4404

Wade - (308) 430-1399 - wadebeins87@gmail.com

Check us out on Facebook at Crawford Rockswap

2025 MID-WINTER SWAP COMMITTEE

Chairmen:.....Jayne Beer
Advanced Reservations:.....Sharon Marburger
Club Booth/Rock Pile
Finance & Admissions: Vera Lyman, Sharon Marburger
Floor Chairman:Jayne Beer
Insurance Vera Lyman, Jim Marburger
Publicity & Promotion:Jayne Beer, Jim Marburger
Web Master:Sharon Marburger
Youth Activities: Brett Jurgens

2025 SHOW COMMITTEE

Theme: Petrified Woods of America
Chairman:.....Charles Wooldridge
Dealers & Demonstrators:..... Vera Lyman
Displays:Brett Jurgens
Event Center Liaison..... Vera Lyman
Finance/Ticket Sales:Jim Atkins, Vera Lyman
Floor Chairman:Clyde Ogg
Fluorescent Booth:Clyde Ogg
FormsSharon Marburger
LGMC Club Booth:Charles Wooldridge
MWF ConventionSharon Marburger
Outside Rock Pile.....Charles Wooldridge
Plants:.....Ed Ridge
Publicity & Promotion: Jim Marburger
Raffle.....Gene Mulnix
Ribbons & Recognitions:Sharon Marburger
Security: Vera Lyman
Show Flyer & Printed Program.....Sharon Marburger
Youth Activities:Brett Jurgens

2025 MWF CONVENTION PLANNING COMMITTEE

Chairman:.....Sharon Marburger
Area Hotels..... Donitte Stiles
Area Restaurants Brett Jurgens
BanquetSharon Marburger/Vera Lyman
Competitive Displays Brett Jurgens
Field Trips Charles Wooldridge/James Marburger
Finance: Vera Lyman
Forms:Sharon Marburger
Ground TransportationSharon Marburger
Host HotelSharon Marburger
Meeting RoomsSharon Marburger
Publicity & Promotion: Jim Marburger
Web Master:Sharon Marburger

STANDING COMMITTEES

Audio/Visual:
Clyde Ogg
Audit:
Jayne Beer, James Marburger, Clyde Ogg
Christmas Party:
Edward Ridge
Door Prizes:
Corey Beer, Brett Jurgens, Charles Wooldridge
Facebook:
James Marburger, Jayne Beer, Brett Jurgens
Field Trips:
James Marburger
Historian:
Sharon Marburger
Membership Record:
Edward Ridge
Mid-Winter Swap
Jayne Beer
MWF Liaison:
Vera Lyman
Programs:
Clyde Ogg
Property:
James Marburger
Recognition/Awards:
Vera Lyman, Sharon Marburger
Refreshments:
Vera Lyman
Show - 2025:
Charles Wooldridge
Summer Gem Fest:
Jayne Beer
Website:
Sharon Marburger
Youth Activities:
Brett Jurgens

MEMBERSHIP INFORMATION

Membership dues for the Lincoln Gem & Mineral Club are as follows:

- Adults (age 16 and over) - \$20 per year or \$30 per couple (within the same household)
 - Juniors - \$3 per year (with a responsible adult)
- All new memberships must be accompanied by a written application. Prospective members must gain Board approval and attend one regular meeting or club event before paying dues. Applications are available on the website:
<https://www.lincolngemmineralclub.org/about/membership>, or you may contact Treasurer Vera Lyman for a printed copy.

Mail Exchange Newsletters to:
Lincoln Gem & Mineral Club, Inc.
P.O. Box 5342
Lincoln, NE 68505-0342



Or e-mail newsletters to:

A color version of the Pick & Shovel is available at:

<http://www.lincolngemmineralclub.org/index.php/newsletters/current>

PICK & SHOVEL

Hidden Gems by The Jewelry Connection Ltd.

Indian Village Shopping Ctr.

3227 S. 13th St., Lincoln (next to LAUNDROMAT)

Corey Beer - Lapidary
402.890.9155

Jayne Beer - Jeweler
402.890.3307

Lapidary Classes

(Stone Cutting)

\$75 for 5 3-hour classes

Choice of session:

Saturday 1 p.m. - 4 p.m.

Sunday 1 p.m. - 4 p.m.

If you can't attend a session,
let us know by Friday noon, or
you will be charged as if you
were there.

Drop-in students welcome
when openings are available,
\$15 for 3 hours.

Check Lincoln Gem and
Mineral Club Facebook page
for openings.

Silversmithing Classes

Tuition: \$150 plus \$30 supply deposit

Choice of Tuesday or Wednesday

7:00 p.m. - 10:00 p.m.

Tuesdays

Session 1: Jan 9—Feb 27

Session 2: Mar 5—Apr 23

Session 3: Apr 30—Jun 18

Session 4: Jun 25—Aug 13

Session 5: Aug 20—Oct 8

Session 6: Oct 15—Dec 3

Wednesdays

Session 1: Jan 10—Feb 28

Session 2: Mar 6—Apr 24

Session 3: May 1—Jun 19

Session 4: Jun 26—Aug 14

Session 5: Aug 21—Oct 9

Session 6: Oct 16—Dec 4

Contact: Jayne Beer 402-890-3307 or look up "Hidden Gems by The Jewelry Connection LTD" in Facebook and send message