



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: February 15, 2024

Program: Juniors: "Pouring a Plaster Cast" by Shane Tucker
Everyone: "Ashfall Fossil Beds" by Shane Tucker

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, March 7, 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

1st Vice-President: Corey Beer, 402.466.6628

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

Treasurer: Vera Lyman, 402.464.6089

Secretary: Sharon Marburger, 402.429.3323, lgmc.editor@outlook.com

Board Member: James Marburger, 402.430.6703, james.marburger@outlook.com

Board Member: Clyde Ogg, 402.326.8682, clydeogg55@gmail.com

Board Member: Mike Stiles, 402.890.1760, mcstiles72@outlook.com

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!!!!

We have a club member with a severe peanut allergy.
 Please bring peanut-free foods to Club functions.
 Please provide any nut information on your foods.

Follow us on Facebook:

<https://www.facebook.com/groups/223555904325876>

Omaha Rock Swap Saturday, February 24, 2024 11 a.m. - 4 p.m.

Grace Baptist Church
 205 E. Halleck St.
 Papillion, NE

Contact Tammy Jeanneret by February 1 at 402.873.6515 or
 tjeanneret@hughes.net to register as a vendor
 Vendor set up 10 a.m. - 11 a.m., tear down 4 p.m. - 5 p.m.

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>).

With the current increase of respiratory illnesses, it is suggested to wear a mask to protect yourself and others.



**Please continue to do your part.
 Wear a mask to meetings.**

Graphic borrowed from <https://dhhs.ne.gov/Pages/Coronavirus.aspx>

FEBRUARY BIRTHDAY GREETINGS

- Allan Gossman
- Donitte Stiles
- Charles Wooldridge



Special Birthday Wishes: Long-time member, Connie McCartney, will celebrate his 23rd birthday on the 29th! Connie is luckier than most of us - he has a birthday only once every four years!

FEBRUARY PROGRAM

Shane Tucker will join us for the Lincoln Gem and Mineral Club meeting on February 15, 2024. He plans to demonstrate to our youth members how to pour a plaster cast of a rhino tooth; and do a presentation for all members about Ashfall Fossil Beds. His talk will include information about why the fossils are so concentrated, the history and geology of the site, recent findings, ongoing activities, and what we might expect in the future.

Shane earned his B.S. and M.S. degrees at the University of Nebraska-Lincoln. He has served as the Highway Paleontologist and Coordinator for the Nebraska Highway Paleontology Program since 2007. Before that, he had been the Preparator and had an internship for the same program. As an undergraduate, he spent two years working as a curatorial assistant in the Division of Vertebrate Paleontology at the University of Nebraska State Museum (UNSM) and two seasons as a summer intern at Ashfall Fossil Beds.

PICK & SHOVEL STAFF

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- DEADLINE:**
 Last Sunday of the month.

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

**CLUB DUES ARE NOW DELINQUENT.
 RENEWAL NOW INCURS
 A \$5 LATE FEE PER PERSON.**

PRESIDENT'S MESSAGE

By Brett Jurgens



Hello. Well, another Mid-Winter Swap is in the books. We had made several changes this year: a week earlier to accommodate the Tucson show, a Sunday instead of a Saturday, no more swapper bucks, and preregistering for tables for vendors. All of these changes were made based off of feedback from club members, vendors, and the public. And the result? We had another amazing swap! There were times it was difficult to walk around due to the number of attendees. I was able to speak to a few swap-goers and they were pleased with both the variety and prices of items available. I was even able to find some petrified wood and limbcasts, and some small Mexican agates that Roger Pabian had polished. Most of the dealers also seemed pleased with their sales.

A big thank you to the club members who helped prepare for and help run the swap. If you missed the swap, or didn't get enough, the Omaha Club is having their swap on Saturday, February 24th. Details and address are on page 2 of this issue.

The completion of the Mid-Winter Swap means that our show is fast approaching. Please mark your calendars for April 6 and 7. In the past we have had certain members staff stations for nearly the entirety of the show. I am asking members to step forward and volunteer so that all members are able to see and enjoy the show. This will also help members from burning out. We will also need help with setup on Friday, April 5. There will be volunteer sign up sheets at upcoming meetings. In addition, please be thinking of what you would like to display at the show, and how many cases you will need. We have been highly complimented during previous shows, by both attendees and dealers, on the quality and quantity of our displays. I love the fact that we had to scramble to come up with enough cases last year to meet the demand. Make us scramble again! Please let me know how many cases you would like to sign up for by contacting me at 402-850-3256.

The juniors are looking for donations of tumbled stones to sell as a fundraiser at the show. If you have tumbled rock that you are willing to donate, please reach out to me at the above number. We would also be interested in tumbling rough.

Our next meeting features a program by Shane Tucker. Please join us for what I can guarantee will be an outstanding program.

2024 MID-WINTER SWAP PHOTOS



Newest LGMC member, Hanif, selling Lapis and other items
Photo by Jayne Beer



Mike and Donitte enjoying time with their customers
Photo by Jayne Beer



New vendors this year, Charlotte and James
Photo by Jayne Beer



Nycky showing dad and daughter how to wire wrap
Photo by Jayne Beer

Photos by the Marburgers



Corey and some interested juniors



Jon waiting to answer questions about his wares



MacNabb and son take a break between customers

There was a fantastic number of attendees at this year's Swap!



JANUARY GENERAL MEETING MINUTES

By Sharon Marburger, Secretary

The meeting was called to order by President Brett Jurgens at 6:26 p.m., following the Mid-Winter Swap and Pizza Supper.

The minutes of the November and December meetings were published in the Pick & Shovel. Vera Lyman moved to accept both sets of minutes, second by Jim Marburger. Motion carried.

No Treasurer’s Report was available, however, Treasurer Lyman said the club is doing great financially.

OLD BUSINESS:

Brett Jurgens stated that he has communicated with Way Too Cool lights regarding the new UV light bulbs. We require a special configuration that will be addressed following the Tucson Show. The lights are promised to be delivered well in advance of the show.

Jayne Beer reported that the November Rock Party was a hit. Many people attended.

Sharon Marburger reported that the December Rock Party was fun, even though only 7 people attended. The Prize Ball was a hit, as always.

Clyde Ogg is leading the search for a new Mid-Winter Swap venue. Members were encouraged to contact Clyde with ideas for a new venue. If the venue changes, table rental at the Swap will be higher to offset the increased venue rental cost.

The New Year’s Eve party at Hidden Gems was a lot of fun. Games and rock grinding were the activities of the night.

The Summer Gem Fest at the Beer Family Farm will be held June 22 and 23. There is a \$3 admission with free parking.

The Activity Night scheduled for January 27 is cancelled. The Beers will be in Tucson. Tentatively, an Activity Night will be scheduled to occur sometime after the Show.

The Omaha Rock Swap will be held February 24 from 11:00-4:00 at Grace Baptist Church, 205 E. Halleck St., Papillion.

Allan Gossman inquired about the change in the Silent Auction. Due to bidders not retrieving their wins, it was determined to change the Silent Auction to a Club Rock Pile. Instead of bidding on items, persons are allowed to purchase outright at what would have been the starting bid in an auction. This was implemented at the 2023 Summer Gem Fest. We did very well, making a lot of money. The Rock Pile at the 2024 Mid-Winter Swap did not do very well, but the Silent Auction never flourished at this event either.

NEW BUSINESS:

A Show Committee meeting to update the 2000 Recommended Operating Procedures is scheduled for February 17 at 6:00 p.m. at Hidden Gems. Anyone wanting input on Show procedures is encouraged to attend.

A Long-Range Planning and By-Laws Committee meeting will occur online via Facebook Messenger. Suggested changes to the by-laws will be presented, discussed, then taken to the rank and file for discussion, tweaking, and approval. More on this at the February meeting.

SHOW BUSINESS:

Sign up sheets for duty volunteers will be made available at the February meeting.

Omaha club members will be helping out. There has been reciprocal help between the clubs the past couple of years.

See Brett Jurgens regarding your display case needs. The Show theme is “Nebraska’s Geologic Treasures”, but displays do not necessarily need to follow the theme. If a person plans to have more than one case, they are encouraged to display Nebraska-found items in at least one case.

Vera Lyman said that the security deposit has been paid to the Event Center. All dealers have returned their contracts with booth rental; five demonstrators have submitted their contracts.

Jim Marburger moved to adjourn the meeting, second by Vera Lyman, Motion carried.

JANUARY BOARD MEETING MINUTES

by Sharon Marburger, Secretary
Thursday, January 4, 2024 at the Lyman Residence.

Meeting called to order at 6:41 p.m. by President Brett Jurgens.

Roll Call

President:	Brett Jurgens	Present	Board:	Charles Wooldridge	Absent
1st Vice Pres.:	Corey Beer	Absent		Mike Stiles	Present
2nd Vice Pres.:	Jayne Beer	(arrived late)		James Marburger	Present
Treasurer:	Vera Lyman	Present		Clyde Ogg	(via telephone)
Secretary:	Sharon Marburger	Present			

(Continued on page 5)

JANUARY BOARD MEETING MINUTES - CONTINUED

(Continued from page 4)

Guests: Donitte Stiles, Ed Ridge

The Minutes from last meeting were discussed. Jim moved to accept the minutes, second by Wooly. Motion passed.

Treasure's report was reviewed. All dealers have paid show booth rent. Jim moved to accept the Treasurer's report, second by Mike. Motion passed.

Old Business:

Clyde began researching larger venues in which to hold the Mid-Winter Swap. At this time, it looks like the Firefighters' Union Hall is our best choice. It costs \$1,000 per day to rent, which is quite a bit higher than what we pay for the use of Bethany Park Shelter House, but much lower than other spaces Clyde has checked into. We need a larger space to accommodate more vendors and a larger parking area. They will provide some tables and we would be allowed to bring in our own tables. So far, for varying reasons, the places ruled out are Extension Office Meeting Rooms, Cornhusker Hall, Auld Center, and Park Avenue Hall. Clyde will continue to research other locations and report back to the Board.

The Facebook ads for the Mid-Winter Swap cost \$50.00. We have had a ton of views to date. Jim will bump up the advertising the week before the Swap for another \$50.

All Mid-Winter Swap tables have been reserved. Sharon is maintaining a stand-by list in the event of cancellations.

The club will provide coffee, lemonade, crackers, and meat & cheese trays for the Swap. There will be a pizza supper after the Swap for those wishing to participate. There will be a cost of approximately \$10 per person for pizza (darned inflation!).

Brett and Clyde are still trying to get final answers on the configuration of new UV lights for the trailer fluorescent display. Brett is getting no response via e-mail so a phone call is in order. Clyde will assist as needed.

New Business:

On a motion by Clyde and a second by Mike, the Long-Range Planning and By-Laws Committee will be reviewing the current documents and make changes as needed. Proposed changes will be presented to the rank and file at a future meeting. Motion carried. One change in particular to be looked at is to eliminate Board approval of new members. Another is to review how a meeting quorum is determined.

A Show Committee Meeting for updating the 2000 Recommended Operating Guidelines for Shows has been scheduled for February 17, to be held at Hidden Gems at 6:00 p.m. Committee members are Chairman Jayne Beer, members Charles Wooldridge, Brett Jurgens, Clyde Ogg, Mike Stiles, Vera Lyman, James Marburger, and Sharon Marburger.

Show Business:

Vera said she has received payment from all dealers and five demonstrators so far. The \$700 security deposit has been paid to Sandhills Global.

Clyde continues to draft a poster or two describing the fluorescent trailer rocks and minerals.

The Silent Auction has been eliminated due to bidders not returning to claim their wins. The club will now have a "Rock Pile", using Silent Auction donations, for instant purchase.

Jim is building two new cases for displays. They will be similar to the "new" cases that Rowdy built.

Summer Gem Fest:

Summer Gem Fest will be held June 22-23, 2024 at the Beer Family Farm. Plans for that event will begin following the Mid-Winter Swap (tables, porta potties, food truck). Sharon will place regulations and advanced reservation form for barn booths on the website around February 1, with a June 1 advanced deadline. On-the-day vendors will be welcome. Admission will remain \$3 with free parking.

Wooly moved to adjourn the meeting, second by Jim. Meeting adjourned at 7:45 p.m.

THE MID-WINTER SWAP

By Sharon Marburger

The 2024 Mid-Winter Swap appears to have been a huge success. We did things a little differently this year, starting with allowing vendors to sign up online, thus eliminating the crush on the day to get a table. This worked very well, making the atmosphere quite calm. One vendor was not able to make it to the Swap, so that gave another vendor who wanted a full table the opportunity to claim that table. With a little rearranging, we were able to give two other vendors each a half table more since no one from the waiting list was on the premises.

The club was able to purchase a permit from the City to accept cash and credit cards this year, allowing elimination of "Swapper Bucks". The use of Swapper Bucks gave LGMC 10% of all sales, which money was set aside to support the Lapidary Class, including replacement equipment and consumable supplies. The club made up that money by charging \$3 for admission. The public and the vendors were happy to not have to hassle with Swapper Bucks, and those working the entrance booth were happy to not have to compute and log every sale. It was determined, after fears of losing money by not having Swapper Bucks, that we profited as much as we would have using the Bucks.

See KLKN TV's article under Tidbits by Wooly on page 6, and take the opportunity to view 2nd Vice President and Committee Chair, Jayne Beer's interview, using the link provided.

TIDBITS FROM WOOLY

Online article submitted by Charles “Wooly” Wooldridge

WOOLY: Sounds like there needs to be a helpline:
1-800-KICK-ROCKS

View the video at <https://www.klknv.com/it-leads-to-an-addiction-hundreds-of-lincoln-collectors-gather-to-swap-rocks/>

‘It leads to an addiction’: Hundreds of Lincoln collectors gather to swap rocks by Matthew Mittlieder

LINCOLN, Neb. (KLKN) – Rock hounds from around Lincoln met at Bethany Park on Sunday afternoon to trade and sell their stones.

The rock swap was hosted by the Lincoln Gem and Mineral Club and featured numerous collectors.

This was the 43rd year it’s been held, and several hundred people turned out to participate.

Jayne Beer, a vice president of the club, said you don’t have to bring your own rocks; you can also buy them from others at the swap.

“We’re just amazed so far with how many people are showing up,” she said. “The last few years, people have really gotten into the hobby, and we’re kind of feeling a boom right now.”

Beer said many of the rocks are native to Nebraska, including agates, fossils and minerals.

She said rock collecting is fun for anyone, young or old.

“You can go out and find stones and cut and polish those, but almost always that leads to bigger, fancier stones,” Beer said. “Usually, it starts with things you found in landscape or in the rivers, but it leads to an addiction, I’m afraid.”

She said some of the less valuable rocks sell for as low as a quarter, but rare ones can reach up to \$1,000.

Members of the club also teach classes in Lincoln, where people can learn how to cut stones and make jewelry.

Editor’s Note: A big thank you to Matthew Mittlieder of KLKN TV for his interest in the event.



COLLECTING THE ZIM 120

By Eric Fritzsch

For minerals collectors there is almost an endless number of minerals to collect. The International Mineralogical Association (“IMA”) currently recognizes about 6,000 mineral species, so where do you start? Most of these are too rare and small for most collections.

I suggest starting with the basics. Start with a basic book, like Herbert S. Zim’s “Golden Guide to Rocks and Minerals” for kids or “A Guide to Field Identification Minerals of the World” by Charles Sorrell (advanced kids and adults). The Golden Guide was updated and is now listed as being authored by Schaffer and Zim, but is basically the same book.

Both of these used books are currently available from abebooks.com for \$5-\$7 and contain more information in them than a typical geologist knows about minerals. The reading is easy and informative. Sorrell took the information in Zim’s book and expanded on it. The artwork is often the same in both books and the minerals are paintings. I like these better than the photographs in other books because it focuses the reader to look for the properties of the mineral, rather than trying to match up a photograph.

There are, of course, other beginner field guides, but these two books really capture the beginning interests of a collector. Fred Pough’s “A Field Guide to Rocks and Minerals” is also excellent, but probably has too much information for the beginning collector. It would make an excellent second book, but after that, the beginning collector probably wants to ween off the field guides and start focusing on more specific targeting books.

As far as collecting minerals, I would recommend collecting the Zim 120; the 120 mineral species listed and described in the earlier book (see below). I’ve put a little check box next to each species to check off as you collect it. The letter at the end of each mineral describes if it is easy (e) or hard (h) to get. Most of these minerals can be found at larger gem and mineral shows, museums, and many rock shops. It isn’t necessary to have all of them in your collection. For instance, bentonite is a clay that is rather ugly and dries out. You probably have it if you have a cat (kitty litter). Having perhaps 100 of these means you have a good systematic collection started.

When you select one of these minerals for your collection, look for a sample which exhibits the species properties (crystal shape, luster, cleavage, specific gravity, etc). Polished samples often don’t show the species’ physical property, so avoid those. Keep your collection neat, organized, and labeled. In Nebraska it might be hard to collect more than a half dozen of these minerals *in situ*. Perhaps another half dozen can be found in glaciated rock. You’ll have to travel or attend shows to acquire the rest of the list.

Read what you can about these species and start learning the environments they are found in. Learn if they have uses or are ores. You may find, along the way, other minerals that interest you which aren’t on the list. They are okay to collect too.

(Continued on page 7)

COLLECTING THE ZIM 120 - CONTINUED*Continued from page 6)*The Zim 120 Checklist

- Actinolite (e)
- Albite (e)
- Almandine (e)
- Andradite (e)
- Anglesite (h)
- Anhydrite (h)
- Aragonite (e)
- Argentite (h)
- Arsenic (h)
- Arsenopyrite (e)
- Augite
- Autunite (h)
- Azurite (e)
- Barite (e)
- Bauxite (rock)
- Bentonite (e)
- Beryl (e)
- Biotite (e)
- Bornite (e)
- Calcite (e)
- Carnotite
- Cassiterite (h)
- Cerussite
- Chabazite
- Chalcocite (h)
- Chalcopyrite (e)
- Chlorite (e)
- Chromite (h)
- Chrysoberyl (h)
- Cinnabar (h)
- Cobalite (h)
- Colemanite
- Columbite (h)
- Copper (e)
- Corundum
- Covellite (h)
- Crocoite (h)
- Cryolite (h)
- Cuprite
- Diamond (h)
- Diopside
- Dolomite (e)
- Enstatite
- Epidote
- Fluorapatite
- Fluorite (e)
- Franklinite (e)
- Galena (e)
- Glauberite
- Goethite (e)
- Gold (h)
- Graphite
- Gypsum (e)
- Halite (e)
- Hematite (e)
- Hemimorphite (e)
- Hornblende
- Ilmenite
- Kaolinite (e)
- Kyanite (e)
- Labradorite (e)
- Lepidolite (e)
- Magnesite
- Magnetite
- Malachite
- Manganite
- Marcasite
- Microcline (e)
- Millerite (h)
- Molybdenite
- Monazite (h)
- Muscovite (e)
- Natrolite
- Niccolite (h)
- Olivine (F-F series)
- Orpiment
- Orthoclase (e)
- Pectolite
- Pentlandite (h)
- Phlogopite
- Prehnite
- Psilomelane
- Pyrite (e)
- Pyrolusite (e)
- Pyrope (e)
- Pyrrhotite (e)
- Quartz (e)
- Realgar
- Rhodochrosite
- Rhodonite
- Rutile
- Samarskite (h)
- Scheelite (h)
- Siderite (e)
- Skutterudite (h)
- Smithsonite
- Spessartine
- Spinel
- Spodumene (e)
- Staurolite (e)
- Stibnite
- Stilbite
- Sulfur
- Talc (e)
- Tantalite (h)
- Tellurium (h)
- Topaz
- Tourmaline (group)
- Tremolite
- Turquoise
- Uraninite (h)
- Uranophane (h)
- Uvarovite (h)
- Vanadinite (e)
- Vermiculite (e)
- Willemite (e)
- Wolframite (group)
- Zeolite (group)
- Zincite
- Zircon

WORKING OBSIDIAN AND OTHER FRAGILE STONES

By Noel and Deb Runyan
 Santa Clara Valley Gem and Mineral Society Breccia
 San Jose, CA September 2023
 Via Backbender's Gazette, October 2023

In this article we talk about working with brittle, glassy stones, Obsidian, Volcano Glass, Rhyolite, etc. and answer the question, why do so many people try tumbling Obsidian only once?

Because it is difficult to avoid getting an ugly rash on the curved portions of the stones. The big secret to polishing Obsidian and other fragile stones is that they are fragile, so Be Gentle!

The cavities trap dirt, grit, or polish that gives the stone a speckled appearance, especially when the particles are of a color different from the stone. The cavities also trap calcified scale when wet stones are allowed to dry out without rinsing in distilled water.

Mitigating Rash and Bruising

- Consider using grit and polish of the same color as the stone.
- Clean stones with a combination of:
 - ◆ Use a pin or needle to clear the holes
 - ◆ Burnish in soapy water with lots of cushioning media
 - ◆ Soak in vinegar or muriatic acid to dissolve any calcium scale
 - ◆ Use an upholstery pressure sprayer
 - ◆ Use a dental water pick
 - ◆ Use an ultrasonic bath

It is best to avoid the rash by being gentle and not getting the micro cavities in the first place!

How to Work Rocks Gently

Be prepared to be patient; being gentle means it will take longer to get nice results.

Especially after coarse grinding, you want your stones rubbing each other, not banging into each other, so use lots of media and water to cushion them. Over-fill your barrels to cushion the stones. Cushioning with extra water helps and does not present dissolving problems for glassy stones.

Vibrating tumblers can be more gentle than rotating tumblers, but they can still let stones rap against each other too hard if you do not have enough media and water to cushion them. If you hear stones rattling against each other, it is not gentle enough.

Cushioning Stones with Thickened Liquid

Especially when doing stone-on-stone burnishing, you need cushioning. Thickened solutions for cushioning may include:

- Concentrated soap
- Mineral oil
- Antifreeze (ethylene glycol)

- Apple sauce
- Molasses
- Sorghum
- Cane sugar
- Honey

A rockhound friend who was also a beekeeper tried using honey as a tumbling thickener, because he knew that honey did not ferment easily. However, when supplied with the necessary nutrients from the dissolving rocks, his unattended tumbler exploded from fermentation, leaving a horrible mess of sticky and hardened tumbler cement.

Media Types to Use and to Not Use

To Use:

- Ceramic pellets
- Glass craft marbles (cheaper than game marbles)
- Small obsidian stones
- Chunks of broken glass (not quartz glass)
- Plastic beads (work well, but destroyed quickly by coarse grit; can't be reused with finer grit stages)
- Sand (not quartz sand)

Avoid After Coarse Grind:

- Ceramic micro beads
- Chunks of broken quartz glass
- Quartz half inch gardening stones
- Gravel may have hard scratchy bits
- Quartz sand.

It is best to pre-polish any hard media to smooth its surfaces before using with fragile stones.

Dry Tumbling Media (generally not needed for glassy stones because they don't dissolve easily):

- Crushed corncobs
- Crushed walnuts
- Roasted garbanzo beans
- Rice
- Soft media should not be reused for finer runs.

Thermal Stress

Repeated heating and cooling cause stress in glassy stones. You should cut or grind slowly to prevent overheating. You can anneal the stones in a furnace or self-cleaning oven at 850 to 900 °F.

Single Stone Tumbling

If you are trying to tumble a single stone, you need lots of small stones, sand, and/or other media to rub against and to cushion the stone. When tumbling a single stone, you may get less grit breakdown than you are used to, so you may need to use a range of grits, both for coarse and fine grits. A range of several finer and finer polish may also be needed, if there are not multiple rocks to grind the polish finer and finer.

(Continued on page 9)

WORKING OBSIDIAN AND OTHER FRAGILE STONES

(Continued from page 8)

Grinding and Polishing

Our best results come from using Silicon Carbide grit for 80, 220 and 500 grit, then Aluminum Oxide for 1,100 pre-polish and polish. Silicon Carbide particles have jagged edges that gouge groves in stone surfaces, and Aluminum Oxide has flat edges that tend to shave rock surfaces flat. Some of the available cheaper Aluminum Oxide polish is more like 2,000 grit. TXP or other 3-micron polishes work well. Rapid Polish 61 gives a good shine in vibrating tumblers, but is not recommended for soft stones like turquoise.

In general, people are starting to find that using only a quarter the normal amount of polish may work better than the traditional recommended amount; probably because the limited amount of polish quickly breaks down more thoroughly into a consistently very fine polish. We've tried all types of polish and found that using the proper polishing procedure is more important than the type of polish used.

Buffing Wheel Polishing

I improved the polish on a large obsidian stone by hand buffing. However, when I washed it, the nice finish washed off. The buffing compound had left a layer of wax, and that is what buffed into a shine. This wax surface may be the cause of some buffed finishes dulling or yellowing with time. To avoid this, you could buff with polishing powder mixed with water, or you could also use a non-oxidizing oil mixed with the polishing powder.

Apache or Indian Tears

Apache tears are found in perlite in Arizona. There are also tears found in pumice in New Mexico, and in tuff in Nevada. In the Jemez, NM, mountains, we found another type of Indian Tears, ejecta, or Sky Tears, which were from outgassed hot pools of glass that were blown up to 20,000 feet high in the atmosphere and cooled into small blobs, as they fell back to Earth. Despite the popular misconception, rain drops and ejecta obsidian drops are not actually tear shaped. Although a liquid droplet forming under a faucet or spout will start as a tapered tear drop, it will reshape into a spheroidal blob after breaking off and falling free. Obsidian tears must be tumbled gently, even though they are small. You may get flattened sides when tumbling tears, if they slide along the side of a roller barrel without turning and tumbling. We use a thick O-ring placed side wise in the barrel to prevent the tears sliding

With a Mohs hardness of 5 to 5.5, obsidian saws and grinds pretty easily. Sometimes it is better to break or cleave obsidian, rather than sawing it. Gentle tapping can chip off edges, and pressure knapping also works, if you avoid high impact knapping or smashing. You can also squeeze obsidian in a vise. A nibbler tool, pliers, and vise grips can be handy for breaking edges. You can also dress knife edges by directly tapping with a hammer.

Summary

Be gentle. Cushion fragile stones with lots of small stones and/or media, or thickened liquid. Avoid tumbling harder stones with obsidian.

JUNIORS

by Brett Jurgens, Junior Leader



Hello Juniors.

We have a great program coming up for our February meeting. Shane Tucker, a paleontologist, will give a demo during our juniors meeting. Shane will show us how to create a cast of a rhino tooth. He will start the cast, and then allow it to cure during our regular business meeting, and then finish it during his program. Please make plans to attend both the junior meeting and the adult meeting to see the entire program.

Bring your specimen boxes as I will have a Nebraska fossil for you to take home.

Our annual show is quickly approaching. Please make plans to attend and volunteer at our show on April 6 and 7. We will have volunteer sign up sheets at the upcoming meetings. The juniors main fundraiser occurs during the show with our Gem Dig. Our junior booth is also a great way for others interested in the hobby to see that we have a junior club, and members of all ages.

I will see you at the meeting

2024 MID-WINTER SWAP PHOTOS - CONTINUED

Photos by Jayne Beer



Rowdy brought a nice selection of items



Dick and Donna Farlow



Tammy and Allan



Gene Mulinex



Randy and the rest of the room



Kenny

April 6 & 7, 2024

Nebraska's Geologic Treasures

Lincoln Gem & Mineral Club's 64th Annual Show!

<http://www.lincolngemmineralclub.org>

FUN FOR THE WHOLE FAMILY

Youth Booth

Dealers

Exhibits

Demonstrators

Nebraska Gem Dig (outside)

Fluorescent Display

Club Rock Pile (inside)

Mineral Identification



Admission:

\$6 per adult

\$11 2-day pass

Children 11 and under

free with paid adult

**\$1 off paid admission
with a can donation to
the Food Bank!**



April 6 & 7, 2024

Sandhills Global Event Center

Ag Society Hall

84th & Havelock

Lincoln, Nebraska

Saturday, 9 a.m. to 5 p.m.

Sunday, 10 a.m. to 4 p.m.

You may pick up Show post cards (to distribute to friends and businesses) at Hidden Gems, 3227 S. 13th St., Lincoln (Indian Village Shopping Center) or contact Jim Marburger, 402.430.6703.

We have lots of post cards and need your help in distributing them. Remember, advertising is what makes our show a success!

2025 MID-WINTER SWAP COMMITTEE

Chairmen:..... Jayne Beer, Sharon Marburger
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

2024 SHOW COMMITTEE

Theme: Nebraska’s Geologic Treasures
Chairman: Jayne Beer
Dealers & Demonstrators: Vera Lyman
Displays: Brett Jurgens
Event Center Liaison Vera Lyman
Finance/Ticket Sales: Jim Atkins, Vera Lyman
Floor Chairman: Corey Beer, Jayne Beer
Fluorescent Booth: Clyde Ogg
Forms Sharon Marburger
Indoor Rock Pile: Jim & Sharon Marburger
LGMC Club Booth: Charles Wooldridge
Nebraska Gem Dig: Charles Wooldridge
Plants: Ed Ridge
Publicity & Promotion: Jim Marburger
Raffle Gene Mulinix
Ribbons & Recognitions: Sharon Marburger
Security: Vera Lyman
Show Flyer & Printed Program Sharon Marburger
Youth Activities: Brett Jurgens

2024 SUMMER GEM FEST COMMITTEE

Chairmen:..... Corey Beer, Jayne Beer
Advanced Reservations:..... Sharon Marburger
Finance & Ticket Sales: Vera Lyman, Gene Mulinix
Floor Chairmen: Corey Beer, Jayne Beer
Insurance Vera Lyman, James Marburger
LGMC Rock Pile:..... Sharon Marburger
Publicity & Promotion: Jayne Beer, Jim Marburger
Web Master: Sharon Marburger
Youth Activities: Brett Jurgens

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.

STANDING COMMITTEES

Audio/Visual:
Clyde Ogg
Audit:
Jayne Beer, Ed Dvorak, James Marburger
Christmas Party:
Edward Ridge
Door Prizes:
Corey Beer, Brett Jurgens, Charles Wooldridge
Facebook:
James Marburger, Jayne Beer, Brett Jurgens
Field Trips:
James Marburger
Gem Fest (Summer) 2024:
Jayne Beer & Corey Beer
Historian:
Sharon Marburger
Legislative Liaison:

Membership Record:
Edward Ridge
MWF Liaison:
Vera Lyman
Programs:
Clyde Ogg (Wooly & Brett assisting)
Property:
James Marburger
Recognition/Awards:
Vera Lyman, Sharon Marburger
Refreshments:
Vera Lyman
Show - 2024:
Jayne Beer
Swap (Mid-Winter) 2025:
Jayne Beer & Sharon Marburger
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