

THE PICK & SHOVEL



In association with

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



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.

Check upcoming issues of the Pick & Shovel, the website, and the LGMC Facebook Group for news about upcoming meetings and activities.

2020 BOARD OF DIRECTORS**President**

Charles Wooldridge, 402.975.0416, charles.wooldridgeii@gmail.com

1st Vice-President

Jayne Beer, 402.890.3307, JBeer60070@aol.com

2nd Vice-President

Brett Jurgens, 402.850.3256, quartz89@aol.com

Treasurer

Vera Lyman, 402.464.6089

Secretary

James Marburger, 402.430.6703, james.marburger@outlook.com

Board Member

Corey Beer, 402.466.6628

Board Member

Jeff Kubitz, 402.540.9395, jkubitz@neb.rr.com

Board Member

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

Board Member

Ed Ridge, 402.805.8248

LONG RANGE PLANNING & BY-LAWS COMMITTEE

Jayne Beer, Chairman

- 1 year: Pat Dvorak
Robert Gruit
- 2 years: Charles Wooldridge
Sharon Marburger
- 3 years: Vera Lyman
Jim Marburger

NOMINATING COMMITTEE

Jayne Beer, Chairman

- 1 year: Linda Guenter
Vera Lyman
- 2 years: Brett Jurgens
Sharon Marburger
- 3 years: Jim Atkins
Open

PICK & SHOVEL STAFF**PUBLISHER:**

Lincoln Gem & Mineral Club, Inc.
P.O. Box 5342
Lincoln, Nebraska 68505-0342

EDITOR:

Sharon Marburger
E-mail: lgmc.editor@outlook.com

CIRCULATION:

Vera Lyman
402-464-6089
Sharon Marburger
402.429.3323

DEADLINE:

Date of Board Meeting, usually 1st Wednesday of the month.

STANDING COMMITTEES**Audio/Visual:**

Jayne Beer

Audit:

Ed Dvorak, Jayne Beer
James Marburger

Christmas Party:

Edward Ridge

Door Prizes:

Corey Beer, Brett Jurgens, Charles Wooldridge

Facebook:

James Marburger, Jayne Beer

Field Trips:

James Marburger

Historian:

Sharon Marburger

Legislative Liaison:

Susy McMahan

Membership Record:

Edward Ridge

MWF Liaison:

Vera Lyman

Programs:

Charles Wooldridge, Brett Jurgens

Property:

James Marburger

Recognition/Awards:

Ed Dvorak, Jayne Beer, Charles Wooldridge

Refreshments:

Vera Lyman

Show—2021:**Swap—2021:**

Brett Jurgens

Website:

Jim & Sharon Marburger

Youth Activities:

Brett Jurgens, Corey Beer, Sampson Bayer

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.

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 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.

GENERAL MEETINGS:

THERE WILL NOT BE ANY IN-PERSON MEETINGS UNTIL FURTHER NOTICE. LINCOLN PARKS & RECREATION HAS CLOSED DOWN BETHANY PARK SHELTER HOUSE FOR THE REMAINDER OF THE YEAR DUE TO COVID-19.

We are working on some Facebook Live presentations. The first one is tentatively scheduled in place of the General Meeting on September 17, 2020 at 7:00 p.m.

**“Gemstone Drilling”
Presentation by Jim Marburger**

Watch the LGMC Group Facebook page for more information. Please send a request to the Administrator if you are not yet a member of the Facebook group.

BOARD MEETINGS:

**Next Board Meeting:
October 7, 2020 at 6:30 p.m.
(via Zoom)**



**September: Brett Jurgens
Vera Lyman
Brad Nielsen**



Please send your birth month to the editor so the Club can recognize you and offer birthday wishes in this publication.

FIELD TRIPS, ROCK PARTIES, OTHER ACTIVITIES:

September 26, 1:00 to 4:00 p.m.: Field trip to the Marburgers’ back yard. Petrified wood, stromatolite, and agates from the 2019 Wyoming field trip. All you can fit into a brown paper lunch bag (provided). Assorted other rocks available. Larger items available for a nominal fee.

Face masks required. No food. Bring your own beverage for hydration.

Due to the South Beltway construction, the easiest way to get to Hickman is via U.S. 77 to Hickman Road.

SHOWS:

~~MWF Convention: Howell, Michigan
September 18-20, 2020~~

~~AFMS Convention: Knoxville, Tennessee
October 16-18, 2020~~

September 26-27, 2020

Omaha Show: Ramada Plaza by Wyndham,
3321 S. 72nd St., Omaha, Nebraska

MEMBER NEWS



photo from Butherus Maser Love website

Long time LGMC member, Shirley Rockel, passed away on August 20, 2020. She was 91 years old.

In her younger days, Shirley worked tirelessly at the Juniors’ Booth and helped with setup and teardown at the annual shows. She enjoyed the camaraderie at club meetings and events. She usually had a pleasant and cheerful demeanor, and always had a story to tell. Although current memory does not know if Shirley ever held office in the club, she was a wonderful support person.

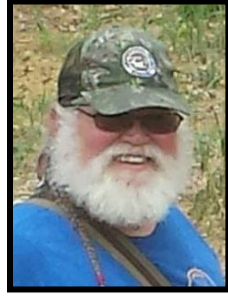
She and her late husband, Bill, were awarded Life Memberships in 2012.

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

PRESIDENT'S MESSAGE

by Charles "Wooly" Wooldridge

I drove to Long Pine, Nebraska last Sunday to relax for a couple days before moving on to Crawford, Nebraska for the annual Rock Swap. It is held outdoors in the City Park. The vendors are spread out throughout the park providing opportunities for safe distancing.



On the way, I pulled into the Buffalo County Recreation Area near Ravena, to join a meeting of the LGMC Board via ZOOM. The meeting went as expected with some technical glitches as we all tried to adjust to the process. A synopsis of the meeting is printed elsewhere in this issue.

We all need to be flexible and open to new ways of doing things as a result of the pandemic. I really could use some advice and assistance as I try to organize virtual speaker programs. Just because we are physically isolated does not mean we have to be virtually isolated. Reach out and call other members to see how they are coping. I have been going into the field by myself or with one other rock hound and have made some exciting finds (pictures below). My friend, Tom, and I discovered two logs weighing hundreds of pounds. I almost missed them because they looked like modern-day logs that had been partially burned. Unfortunately, they are in the middle of a remote area and I can't think of any way to collect them.

By the way, the Buffalo County Recreation Area is a nice quiet place with a fishing lake. A good place to picnic or camp.



A juvenile mammoth tooth found near Humboldt, Nebraska in the Nemaha River.

SYNOPSIS OF BOARD MEETING

- This synopsis is in lieu of the General meeting scheduled for September 17.
- Lincoln Parks and Recreation has cancelled all reservations for the shelter house through the end of 2020. The closures will probably continue into 2021.
- Until further notice, we will try to hold meetings virtually, either through ZOOM or Facebook Live.
- On September 17 at 7:00 p.m., Jim Marburger will attempt to do a virtual presentation on gemstone drilling using the Facebook Live forum.
- The Juniors have received specimens from other clubs in other states. We need to reciprocate. Crawford area petrified wood and Nebraska Blue Agate have been donated so far. Please consider donating other Nebraska specimens. Brett needs 12 to 15 pieces of each.
- To our knowledge, the Lapidary Class equipment is still at the Auld Center.
- Sharon has nearly completed scanning and archiving the history files. All that remains are the photo scrapbooks. The Board granted permission to disassemble the scrapbooks for scanning purposes. Everything has been uploaded to the website for redundant backup. Certain items are not for the public eye, so they are uploaded but not made available for viewing.
- Because of the pandemic, the January Swap will probably be cancelled. Subject tabled until the November Board meeting.
- The 2021 Annual Show will probably be cancelled due to the pandemic and financial instability of the Event Center. The subject was tabled until the November meeting.
- Discussed possibility of an outdoor summer swap to replace the January swap and show, if cancelled.
- Field trip on September 26 from 1:00 - 4:00 at the Marburgers' back yard. See information on page 3.



An ice-age bison jaw found in the Little Blue River near Fairbury.

ROCK TUMBLING

Ultimate Beginners Guide to Rock Tumbling

by Marc McDermott, February 5, 2020

Excerpted from <https://1.facebook.com/1.php?u=https%3A%2F%2Fwww.smarterhobby.com>

Rock tumbling is the hobby of collecting a wide range of rocks and turning them into beautiful gemstones you can use to make jewelry, crafts, decorations, or just to collect for fun. It's a pretty simple hobby that can be enjoyed at home by the entire family. All you need is a tumbler, some rocks, and a few other inexpensive materials.

Have you ever picked up a rock on the beach or a river bed that was perfectly rounded and smooth to the touch? That's a rock that has been 'tumbled' by mother nature (water and sand) over the course of hundreds and even thousands of years.

Rock tumbling as a hobby is the exact same process. The thousand years it would take nature to tumble a rock can easily be done at home in a matter of weeks. Now that's pretty neat!

A rock tumbler is a very simple device. It's a small machine that turns a barrel round and round non-stop for weeks at a time. Inside the barrel are your rocks, water, and grit. The grit is what makes your rocks smooth and acts as the sand that nature uses to smooth and polish your rocks.

Grit comes in several levels of coarseness. Think of it like sandpaper. When you start your project, you'll want to use a very coarse grit to knock down the sharp edges of your rocks. Then every couple of weeks, you'll move on to a slightly finer grit until you reach the final stage where the grit is almost like a fine powder.

What to do with tumbled rocks

You'll find that people love rock tumbling for a number of reasons. While many folks just love collecting a wide range of rocks to hold and display

proudly, there are lots of other reasons why people get into rock tumbling. Here are some of the more common uses for tumbled rocks: Jewelry making; various craft making; vase/planter filler; holiday decorations; keychains; magnets; and paperweights.

Where to find rocks to tumble

Now that you know the basics of rock tumbling and what you can do with tumbled stones, let's talk about how and where to find rocks.

What makes a rock good for tumbling? It should be very hard, nonporous, and have a somewhat smooth surface (i.e., not gritty). Some of the more popular types of rocks that fit these characteristics are agate and jasper – both common forms of quartz. While you can buy any of these rocks online or at your local rock shop, I personally find it way more exciting to find them in nature (although not always realistic). For me, the thrill of the hunt is a big part of rock tumbling.

Agate is probably the most popular rock to work with because it's translucent and has so many unique patterns and designs. Jasper is another form of quartz that's quite popular and easy to find. As with any rock hunting, your best bet will be to pick up a guidebook for your area to see what's abundant, and how best to find them.

Which rocks NOT to tumble

As I talked about above, you want to pick rocks based on their hardness according to the Mohs scale. The Mohs scale was formed in 1812 by Friedrich Mohs (a German geologist). In a nutshell, it's a scale from 1-10 that measures a rock's scratch resistance (or hardness). The lower the number, the softer the rock. For tumbling, it's best to stay in the seven range. This is where quartz falls.

(Continued on page 6)

J J & L Rocks & Minerals

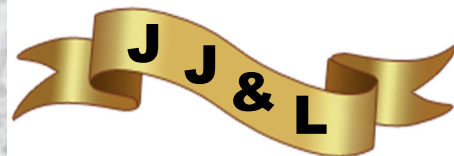
P.O. Box 68
Hickman, NE 68372

Lee Harrison
Eric Harrison
402.792.2337

330 Locust
Hickman, NE 68372

James Marburger
Sharon Marburger
402.430.6703

jimandjohn@jjlrocksandminerals.com
www.jjlrocksandminerals.com
jjlrocksmin - Ebay Username



Proudly serving
the hobby for
44 years

ROCK TUMBLING - CONTINUED

(Continued from page 5)

Types of rock tumblers

There are two different types of rock tumblers – rotary and vibratory. Rotary tumblers are much more common and best for beginners. When most people picture a rock tumbler, they're thinking of a rotary. This is the type of tumbler that will knock off the edges, shape, and smooth out rough rocks during the coarse grind stage. Rocks tumbled in a rotary tumbler will change shape and become rounded.

Vibratory tumblers are less common with beginners and are typically used for fine polishing rocks you've already shaped. A vibratory tumbler will not shape your rocks like a rotary tumbler. If you just want to polish your rocks and maintain the same shape and angles, then a vibratory tumbler may be for you. The main advantage of a vibratory tumbler is that it dramatically speeds up the tumbling process for stages AFTER your rocks have been shaped (i.e., medium grind, fine grind, and polish). So while each of the four stages in a rotary tumbler can take a week on average, stages 2-4 can all be done in only one week. An ideal setup would be to buy both a rotary and vibratory tumbler. This way you can do your coarse grind and shaping during the first week in your rotary, then switch over to your vibratory the next week to handle the other stages. If you're buying a rock tumbler for the first time, go with a rotary.

Best rotary tumblers

Rotary tumblers range in size and price depending on how many rocks you want to tumble at the same time. Sizing is expressed in pounds. A three-pound tumbler will hold about two pounds of rock (and one pound of water and grit).

Supplies

Once you've picked out your tumbler, you'll need a few more supplies. Grit: When you're first starting out, stick to the simple four-step process (coarse, medium/fine, pre-polish, and polish). The four stages of grit you'll want to use are: 60/90 silicon carbide for initial grinding and shaping of rocks; 120/220 silicon carbide for smoothing surface after initial shaping; pre-polish aluminum oxide (600 and above) for preparing rocks for the final polish; and aluminum oxide for the final polish. The exact type of grit may differ depending on which tumbler you're using so always refer to the instruction manual that comes with your machine. You can buy all four levels of grit as a kit from your local rock shop or on Amazon.

(Continued on page 7)

Silversmithing classes 2020 Schedule

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

**The Jewelry Connection Ltd.
Indian Village Shopping Ctr.
13th & Arapahoe, Lincoln**

Tuition: \$150 plus \$30 supply deposit

~~Session 1: Jan 8 – Feb 26~~

~~Session 2: Mar 5 – Apr 23~~

~~Session 3: Apr 30 – Jun 18~~

Session 4: Aug 13 - Oct 1

Session 5: Oct 8 - Nov 26

Contact: Jayne Beer 402-890-3307
Judith Bay 402-423-7058
jbeer60070@aol.com

NOMINATIONS AND ELECTION

It is time for nominations for the 2021 officers and board. Please send your nominations to Committee Chair Jayne Beer.

The Board did not discuss elections at the September meeting. Election and voting logistics will be discussed at the October Board meeting.

Positions to be filled are President, 1st Vice President, 2nd Vice President, Secretary, Treasurer, and four Board of Directors.

Long Range Planning and By-Laws Committee and Nominating Committee members will rotate as usual. Nominations for two 3-year positions are needed for each committee.

Jayne is looking forward to hearing from you.

call for
NOMINATIONS

ROCK TUMBLING - CONTINUED

(Continued from page 6)

Plastic pellets

You'll want to have these on hand for small tumble loads when you don't have enough rocks to fill the entire barrel. These are great for taking up the empty space in the tumbler and help to deliver more of the polish to your rocks. Pellets also help to 'cushion' the impact of rocks in your tumbler, and can even speed up the process since they encourage more tumbling and less sliding in the barrel. One batch of these is all you need to last quite a while as they can be reused. Also, pellets should only be used in rotary tumblers – never in vibratory. As an alternative to plastic pellets, some folks like to use other materials like corn or walnut shells.

Four stage tumbling process

Now that you have your tumbler and all the supplies you'll need, let's go into more detail about each of the four stages of rock tumbling.

Stage 1 – Shaping

As I've mentioned a few times already, the first step of the process is shaping with coarse grit. This will remove the rough edges from your rocks and give them a round shape. To start, fill your barrel about half to two-thirds of the way full. For best results, you should try to use various size rocks. If you don't have enough rocks to fill the barrel, be sure to add your plastic pellets after adding the rocks. You should also add pellets at this stage if your rocks are fragile or have a flat shape.

The next step is to add your coarse grit (about two tablespoons per pound of rock) followed by water to nearly the top edge of your rocks. Close the barrel firmly and clean up any water or debris. Put the barrel on the tumbler, plug her in, and get going!

I should mention here that tumblers can be noisy so you should probably set up in either your garage or basement – or even a shed if it has electricity.

After a few days, you'll want to check the progress to make sure the edges are being knocked down. Then after your rocks have been tumbling for about a full week, and they are the shape you want them to be, remove your rocks from the barrel and rinse in a clean bucket of water.

Note that your time may vary depending on the type of rocks you're tumbling. Harder rocks and rocks with strong angles will take longer to shape than softer, smoother rocks. If your rocks aren't the desired shape after the first week, just put them back in for as long as it takes. Just be sure to check on them every day or so.

At this stage, you'll also want to clean out the barrel with soap and water as you prepare the rocks for stage two of the process. You'll want to make sure all of the coarse grit is cleaned out of the barrel. You want to be 100% sure all of the grit is out of the barrel, so you're not mixing coarse grit with the fine.

At all stages of cleaning, don't ever dump your waste products (slurry) down the drain – unless you happen to be a plumber and like repairing pipes. Once clean, it's time to move on to the finer grit.

Stage 2 – Medium/fine grit

Follow the same process as before, again adding pellets if needed. Be sure to clean the pellets good because grit will stick to them. Sometimes it's easier just to use a new batch of pellets.

Stage two should take about the same amount of time as stage one. What you're looking for here is to remove any visible scratches/cracks/pits and to create a dull glow on the rocks when they're dry. Since time here will vary, you should check on your rocks every day or so to see how they're progressing. After another full cleaning, stage three is the pre-polish stage.

Stage 3 – Pre-polish

The purpose here is to make your rocks silky smooth and start to bring out a bit of luster. This stage should also take about a week, but mileage may vary. One last full cleaning and we're on to the final stage – polish!

Stage 4 – Polish

This stage is going to use a grit that looks like a fine powder. After another week in this stage, your rocks should come out with a bright shine and look absolutely stunning. During the polish stage, you should consider using some plastic pellets to protect your rocks from hitting each other. There's nothing worse than ruining a batch of rocks after a month of processing! Finally, there's a bonus stage that's not necessary but can boost the brightness of your rocks – especially with agates and jaspers. It's called burnishing and is considered an additional stage of polish.

Burnishing

Burnishing is the fifth stage of tumbling, but instead of using grit, you're using some form of soap or powdered laundry detergent. This will put even more shine on your rocks, brighten them up, and remove any haze and residue from the slurry.

(Continued on page 8)

Mail Exchange Newsletters to:

Lincoln Gem & Mineral Club, Inc.
P.O. Box 5342
Lincoln, NE 68505-0342



Or e-mail newsletters to:
lgmc.editor@outlook.com

A color version of the Pick & Shovel is available at:
<http://www.lincolngemmineralclub.org/index.php/newsletters/current>

PICK & SHOVEL

ROCK TUMBLING - CONTINUED

(Continued from page 7)

If you're not sure whether the burnish stage will add more brightness to your rocks, a simple test can be done. Take one of your rocks and buff one side with a very soft cloth for 10-20 seconds. If the side you buffed is shinier than the other sides, it will benefit from a burnishing stage. Most people will either use borax or shaved layers of ivory bar soap. Whatever you use, make sure there are no additives in the soap that will harm your rocks. Also, be sure to add your plastic pellets for protection.

The ratios here are the same as in the grit stages. About two tbsp per pound of rock is recommended. All you need is 24 hours in a rotary tumbling during this stage. But the longer, the better! Tip: during both the polish and burnish stage, you may want to batch your rock types. Since you'll mostly be tumbling types of quartz as a beginner, group them all together for these last two stages. Remove all other families of rock.

So there you have it. The complete process for tumbling rocks in your rotary tumbler. Expect to wait 3-6 weeks on average to complete the entire process.

Remember, patience is a virtue!

JUNIORS

by Brett Jurgens, Junior Co-leader

I am currently at the Crawford Rock Swap in Crawford, Nebraska. This swap is held outdoors in Crawford City Park every year over Labor Day weekend. Many of my rock collecting trips planned this year have been cancelled, so with this swap being held outdoors and fairly spread out, I decided I could attend and still practice social distancing and wear a mask.

Crawford is in the very northwestern corner of the state. The geography around Crawford is very different from southeastern Nebraska. The Oglala National Grasslands is north of town and the local group hosts daily field trips there to collect. The treasured find is Fairburn agates, but they are elusive! More easily found are Nebraska Blue chalcedony (typically not blue), prairie agates, and petrified wood.

I am picking up some specimens for you to add to your collection. These will be part of a care package being put together for you, which will contain some different specimens and a few printouts from the Future Rockhounds of America program. In the future, we will have some of those activities posted on the club's website so we can start working on earning badges.

I look forward to the day we can meet up. Be compassionate to others and stay safe.