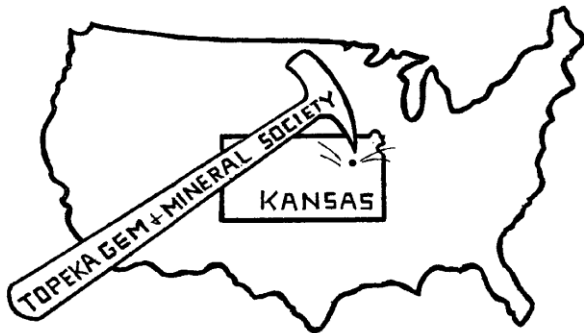


The Topeka Gem and Mineral Society, Inc.  
 1934 SW 30<sup>th</sup> St. Topeka, KS 66611  
 Rock2Plate@aol.com

# THE GLACIAL DRIFTER



www.TopekaGMS or  
 Facebook: Topeka Gem and Mineral Society Field Trips

The Topeka Gem & Mineral Society, Inc.  
 Organized December 3, 1948

Member of Rocky Mountain Federation of  
 Mineralogical Societies American Federation of  
 Mineralogical Societies



The Glacial Drifter, Vol. 61, No. 6, Jun., 2018

The Purpose of the Topeka Gem & Mineral Society shall be exclusively educational and scientific: (1) to promote interest in geology and the lapidary arts; (2) to encourage the collection and display of rocks, gems, and minerals; (3) to encourage field trips and excursions of a geological, or lapidary nature; and (4) to encourage greater public interest and education in gems and minerals, cooperating with the established institutions in such matters.

Meetings: 4<sup>th</sup> Friday of each month, September to May, 7:30 pm, Stoffer Science Hall, Room 138, Washburn University.  
 No meeting in December unless notified of a change. Picnic meetings are held June, July and August.

Dues: Individual, \$15.00; Couple, \$20.00; Junior (under 18 years of age), \$5.00. Dues are collected in December for the following year. Send dues to: **Millie Mowry, Treasurer, 1934 SW 30<sup>th</sup> St, Topeka, KS 66611.**

**www.TopekaGMS.org**

## 2018 OFFICERS AND CHAIRS

President	Mike Cote	220-3272	Cab of the Month	Debra Frantz/Fred Zeferjohn	862-8876
1 <sup>st</sup> Vice Pres.	Dave Dillon	272-7804	Field Trip Coord.	Will Gilliland	286-0905
2 <sup>nd</sup> Vice Pres.	Cinda Kunkler	286-1790	Publicity	TGMS Board	
Secretary	Lettie Thomas	409-7026	Welcome/Registration	Russ & Rhonda Miller	272-6408
Treasurer	Millie Mowry	267-2849	Property	M. Cote/D. Dillon	220-3272
Directors	Chuck Curtis	286-1790	AFMS Scholarship	Cinda Kunkler	286-1790
	Brad Davenport	379-8700	Editor/Exchange Editor	Millie Mowry	267-2849
	Will Gilliland	286-0905	Show Chairman	Dave Dillon	272-7804
Historian	Jessica Reedy	230-3445	Show Dealer Chairman	Dave Dillon	272-7804
Federation Rep	Harold Merrifield	633-9745	Show Secretary	Cinda Kunkler	286-1790
Corporation Agent	Millie Mowry	267-2849	Jr. Rockhound Leader	Jason Schulz	640-6617
Librarian	Millie Mowry	267-2849	Show Case Coordinator	Cinda Kunkler	286-1790
Web Master	Jason Schulz	640-6617			

Area Code for all numbers is (785).

## EXCHANGE BULLETINS WELCOME

For exchange newsletters contact the club via mailing address listed above or email at [rock2plate@aol.com](mailto:rock2plate@aol.com) .  
Permission is granted to reprint articles only if proper credit is given to the author, Glacial Drifter and the date.

## Words from Our Top Rock!



For the month of July when the weather gets to the high 90's to 100 degrees and the humidity is unbearable, then it will stop until it gets cooler. Weather will tell us whether or not to have classes. I will have my knee surgery the last of June so, I will let everyone know when it will reopen. Last month we had a record for new members coming to join our Club for lessons. That is great and Welcome! Enjoy their summer and we look forward to seeing everyone at the picnics! Don't be late as we eat at 6:30 p.m. Stay cool and safe.

Mike C. & Dave D.

### New Members

Laura Stein, Topeka, KS  
Pam Padgett, Holt, MO  
Mike & Betty Reading, Lawrence, KS  
Greg & Holly Walters, Lee's Summit, MO

*There is room at the bottom of page 3 for these new members—corrections—if you have a correction, please notify me so I can make the changes.* Millie

## PICNICS -- JUNE, JULY, & AUGUST

At Millie's house: 1934 SW 30<sup>th</sup> St, Topeka  
6:30 P.M.



Bring your favorite picnic food to share & your plates, silverware & a cup or glass to drink out of. Ice Tea and Coffee will be furnished.

We eat inside where it is cool or you can eat out on the patio.

Directions: From the east, 29<sup>th</sup> Street is under construction- so continue to 29<sup>th</sup> & Boswell, turn left for 2 blocks, turn right for 4 houses. From the west, pass Brookwood Shopping Center to MacVicar, turn right 2 blocks to 30<sup>th</sup> St, turn left and find my house. From I-470 take exit #5 Burlingame Rd. north. Follow it to 30<sup>th</sup> St, turn left about 4 blocks to my house.

FOOD FELLOWSHIP FUN



*TGMS Event Calendar*

# June 2018

1F	
2S	
3S	
4M	
5T	
6W	
7T	
8F	
9S	
10S	
11M	
12T	Lessons at the Barn 6-9 pm
13W	
14T	Wire Wrap Class @ Millie 1-3 p.m.
15F	
16S	
17S	
18M	
19T	Lessons at the Barn 6-9 pm
20W	
21T	Wire Wrap Class @ Millie 1-3 p.m.
22F	Pot Luck Picnic @ Millie's See page 2
23S	
24S	
25M	
26T	<b>NO LESSONS AT THE BARN</b>
27W	
28T	Wire Wrap Class @ Millie 1-3 p.m.
29F	
30S	

Any questions ask Millie at [rock2plate@aol.com](mailto:rock2plate@aol.com)

If you are interested in Wire Wrap Classes, contact Millie, 267-2849 or [rock2plate@aol.com](mailto:rock2plate@aol.com)

Lessons at the Barn: For Directions contact Mike Cote` or David Dillon or Millie Mowry.

# July 2018

1S	
2M	
3T	<b>NO LESSONS AT THE BARN IN JULY</b> Wire Wrap Class @ Millie 6-9 p.m.
4W	4 <sup>th</sup> of JULY Holiday
5T	Wire Wrap Class @ Millie 1-3 p.m. JR RHD'S – Marvin Auditorium Rm 101C
6F	
7S	
8S	
9M	
10T	Wire Wrap Class @ Millie 6-9 P.M.
11W	
12T	Wire Wrap Class @ Millie 1-3 p.m.
13F	
14S	
15S	
16M	Shawnee CO Fair-16 <sup>th</sup> – 21 <sup>st</sup> NEED VOLUNTEERS
17T	No Classes
18W	
19T	No Classes
20F	
21S	
22S	
23M	
24T	Wire Wrap Class @ Millie 6-9 P.M.
25W	
26T	Wire Wrap Class @ Millie 1-3 p.m.
27F	
28S	
29S	
30M	
31T	Wire Wrap Class @ Millie 6-9 P.M.

Check out the calendar on our web site

[www.TopekaGMS.org](http://www.TopekaGMS.org)

If you are interested in Wire Wrap Classes, contact Millie, 267-2849 or [rock2plate@aol.com](mailto:rock2plate@aol.com)

**NO LESSONS AT THE BARN IN JULY**

<https://www.facebook.com/TopekaGMSJuniorRockhounds>  
To register for the Junior Rockhounds or any of the classes, email:  
Jason Schulz at: Fleetcommander@att.net



## JR ROCKHOUND Classes & Reminders

Here are reminders of the next 3 months of classes: Topeka Shawnee CO Public Library sign in starting at 6:00pm and classes starting at 6:30pm. 1st Thursday of each month... **PLEASE watch for a new email for the new updated classrooms, classes, and instructors schedule starting with December 2017 to November 2018.**

- July 5<sup>th</sup> Brad Davenport, Minerals, Rm, 101C Marvin Auditorium
- August 2<sup>nd</sup> Brad Davenport, Rocks, Rm 101C Marvin Auditorium

Some of the Rockhounds were given notebooks for the Communication Patch. If you have written your story for the article in the Drifter, bring it in so that it can be counted, then published in the next Drifter. For those who do not have the note books, see Millie and she will give you one.

From the Coordinator, for June, 2018

Our next class is Minerals, led by Brad Davenport. It'll be at the Library on July 5<sup>th</sup>. Sign-in begins at 6pm, and class starts at 6:30 pm. We'll be in Marvin Auditorium 101C. Bring your rock collections in your boxes that you have made last month in Barbara's class even if they are not identified and we will try to help you identify them.

Jason Schulz



We need your **BEST CHOICE** UPC Labels --- Bring them to the monthly meeting,  
And give them to Cinda Kunkler



*Visitors are always WELCOME at our meetings!*

## Shawnee County Fair



Again this year we as a Club and the Junior Rockhounds are having a booth at the Shawnee County Fair from July 16 – 21<sup>st</sup>. We need help manning the booth. It is not hard, all you do is talk to people about the club and hand out brochures. We would like to see more of the Junior Rockhounds take part in this also. You do not have to stay all day, but would like to set up shifts of 2 to 3 hour at a time. We will be in the Kansas Expocentre, 1 Expocentre Dr, where it is air conditioned, from 10 a.m. to maybe 6 p.m. (I will check on the times). Sign-up sheets will be at the June picnic, then, we will be calling you.



### Topeka Gem and Mineral Society General Meeting – May 25, 2018 Minutes

**Attendance:** 26 members and 0 guests attended.

**Call to Order:** President Mike Cote` called the meeting to order.

**Approval of Minutes:** Lettie Thomas read the April minutes aloud. Brad Davenport moved to approve and Jason Schultz seconded. The April minutes were unanimously approved as presented.

**Treasury:** Millie Mowry reported the balance in checking and there were no bills. Dave Dillon moved to approve the report. Chuck Curtis seconded. The Treasury Report was unanimously approved.

**Correspondence:** Cinda Kunkler read aloud a letter of thanks from Larry Springer and noted that AMFS had received a total of \$14,449.40 from TGMS for scholarships. Millie Mowry said she had the plaque, which needed to be updated.

**Publicity:** Millie Mowry announced coupons and volunteer sign-up sheets were available. Jason Schultz reported he would be meeting with Kim Schultz next week to discuss getting the show on the Everything Topeka calendar and preparing a statement. TGMS had not received any invoices.

**Historian:** Dave Dillon reported that the materials needed to be sorted through. Debra said the materials could be picked up any time.

**Show:** Dave Dillon said he was working on securing a 19<sup>th</sup> dealer and fitting him into the floor plan. Volunteer sign-up sheets were available.

**Field trips:** Will Gilliland reported on the May field trip to the glacial quarry at Blue Rapids and the Stockdale Plug. He shared samples he collected on the trip. There were 16 members and 1 guest on the field trip. He asked for recommendations for future field trip locations.

**Junior Rockhounds:** Jason Schulz reported the May class on lapidary was well attended. Comments were positive and five families expressed interest in joining. The next class is on June 7<sup>th</sup> on Collecting with Barb Smith at the Topeka Shawnee County Library.

**Webmaster:** Jason Schulz reported that our website placed 2<sup>nd</sup> in the AMFS contest. He would review score sheets in an effort to improve the site. The TGMS Facebook page has 329 likes. The Jr. Rockhound Facebook page had 111 likes and 637 individual page views.

**New Business:** Dave Dillon announced that lapidary classes had begun at the barn on Tuesday nights from 6 pm to 9 pm. Jason Schultz reported on the Shawnee County Fair's open geology and lapidary classes and reviewed their display case requirements, noting the complete set of rules was on their website. Brad added that our cases were too large to use at the fair.

Mike Cote' reminded that this was the last regular meeting until September. Summer picnics would be held at Millie Mowry's. Details would be published in *The Drifter*.

**Old Business:** None.

**Adjournment:** Chuck Curtis moved to adjourn the general meeting. Brad Davenport seconded. The meeting was adjourned to convene the monthly program presented by Cinda Kunkler called Timeless Impressions.

**Cab, Jewelry & Wire Sculpture of the Month:**

Member Jewelry: Millie Mowry's earrings, Class Jewelry: Adam Smith's necklace

Member Cab: Brad Davenport's teddy bear cab

Respectfully submitted by Lettie Thomas, TGMS Secretary.

## Some Notes and Safety Tips on Using Oxalic Acid

by Duane Leavitt from Rocky Road

One often reads about and sees reference to oxalic acid (wood bleach) in publications such as our newsletter when the topic of cleaning minerals is discussed. Oxalic is used to dissolve the iron oxide (brown) stain on all minerals. This chemical, while an excellent cleaner for some types of minerals, poses some serious health risks which are not widely understood and can be confusing when considered in light of other acids that are sometimes used for cleaning purposes.

Oxalic acid, chemically  $H_2C_2O_4$ , is an organic acid, which means that it contains, among other things, the element carbon. At room temperature it is a white, crystalline, odorless, solid looking a lot like granular sugar in physical appearance.

When we look at oxalic acid we find that, as acids go, it is quite weak. Acid strength is measured by how much hydrogen acids give up in water solutions. It is obvious that oxalic acid is no where near as strong or as soluble in water as hydrochloric acid or nitric acid. These two acids, are also used in mineral cleaning. There is NO correlation between acid strength and how poisonous it is, its toxicity.

As an organic acid, oxalic acid, and/or its water solutions, can be absorbed directly through the skin into the bloodstream, powders from the dry acid and vapors from solutions can be absorbed into the body through the lungs this has serious implications for those who like to clean specimens in a crock pot of simmering oxalic acid solution in their basement; residues from improperly neutralized and rinsed specimens may be absorbed through later handling. Dust from the solid acid can damage the cornea of the eyes.

In the body, oxalic acid removes calcium from the blood, forming insoluble crystalline masses of calcium oxalate that eventually wind up in the kidneys where they will obstruct and abrade the kidney tubules causing the kidneys to bleed. They may block the kidneys and have to be removed surgically - kidney stones. In respiratory passages the material will cause severe irritation, possible hemorrhaging of these tissues and burns. When the material gets into the digestive tract it causes severe gastroenteritis and vomiting, shock and convulsions, cardiovascular collapse and/or kidney failure can lead to death. A lethal dose of oxalic acid is somewhere between 5-15 grams. Severe health problems occur at much smaller levels of exposure. OSHA recommends a threshold limit value (TLV) for airborne concentration of no more than 1 mg (that is one thousandth of a gram)/ cubic meter. For comparison, 1 restaurant packet of sugar contains about 1 gram of material or 1000 times the recommended exposure value!

Unlike neutralized hydrochloric, muriatic and nitric acids, the products of "neutralized" oxalic acid are STILL poisonous - they just are no longer acidic. Oxalate compounds of any nature are still a threat to your health. People wishing to use oxalic acid can do so successfully and safely provided they incorporate the following procedures into their mineral cleaning:

1. Always use long sleeved rubber gloves, a splash proof apron, and full eye/nose protection when handling either dry oxalic acid crystals or oxalic acid solutions.
2. Avoid heating solutions of oxalic acid.... it will work cold, it just takes longer.
3. Keep containers of soaking specimens covered so that acid vapors stay inside the container. Lids should NOT be airtight.
4. Rinse any specimens cleaned with oxalic acid with copious amounts of water and test with pH paper to ensure that all acid is gone. A post treatment bath in dilute (household) ammonia or sodium bicarbonate solution is a good idea.
5. In the event of a spill removed affected clothing immediately, rinse affected areas with copious amounts of water, rinse and wash affected clothing. If there is any doubt as to the severity of the exposure seek medical help immediately.
6. Small amounts of used solutions of oxalic acid can be disposed of by the following method:
  - A. Neutralize the solution with sodium bicarbonate or sodium hydroxide; TEST with pH paper to make sure it is neutral (or slightly basic).
  - B. Dilute the solution from step A above, 20 fold with water (example, to 1 pint of neutralized acid solution add 20 pints of water).
  - C. Pour solution B down the drain with plenty of cold water. This disposal technique is identical to Flynn Scientific disposal technique 24A (Flynn,2006).
7. Read up on cleaning techniques (*Cleaning and Preserving Minerals* by Richard Pearl is a good place to start) and educate yourself about techniques, materials and alternatives.

Summary: POISON! DANGER! MAY BE FATAL IF SWALLOWED. CORROSIVE. CAUSES SEVERE IRRITATION AND BURNS TO SKIN, EYES, AND RESPIRATORY TRACT. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. MAY CAUSE KIDNEY DAMAGE.

(Adapted from *Gem Cutter's News* Dec. 2008, via GLMSMC *The Rockhounder* June 2018)

# Malachite

By Chuck Gill

Malachite is one of the most colorful minerals. Its shading, banding, and bull's-eye patterns are some of the varieties displayed by this fantastic gem material.

What is Malachite? It is a copper mineral, mined extensively for its content of that metal. And, this material is used for gem settings in jewelry, as well as an ornamental stone.

The material used by gem cutters is compact and banded. Colors range from almost emerald green to blackish green to a very pale yellow green. This material occurs occasionally as botryoidal masses and sometimes as stalactites or stalagmites.



Picture from Wikipedia

How do you cut and polish malachite? Before we go into that, let me warn you that the dust from this material can be toxic, even in a small quantity. Perform all cutting operations WET and wear a face respirator at all times. Work in a well ventilated room and at your own risk, of course.

Because malachite is a fairly soft mineral (3-1/2 to 4 on the Mohs' scale) it is easy to work. Prior to cutting a prize piece, study it thoroughly, then work carefully so that you may produce an attractive stone.

Now, as to the actual grinding, sanding and polishing operations. I usually preform a cabochon on an 80 to 100 grit diamond grinding wheel. This is my personal method considering the softness and fragility of malachite, many gem cutters start on a 220 grit grinding wheel, either diamond or silicon carbide. Continuing with my personal method, I then smooth on a sanding drum, using plenty of water. Silicon carbide sanding cloth is used, starting with 100 grit and progressing through 220, 400 and 600 grits. For a final prepolish, I use a real worn 1200 grit diamond abrasive belt. For polishing I use ZAM on a muslin buff. Remember to wear your face respirator during pre-polishing to avoid inhaling dust. An old technique is to give a final polish by hand with a piece of soft leather and chrome oxide to which a small amount of detergent has been added.

A flat stone can be work one of two ways: 1. Cut, sand and polish much in the same was as a cabochon, only keeping the surface flat, not rounded. 2. Abrade and finish on a flat lap. The author polished a 97-pound piece, cut in halves, by this method.

For contour polishing, a flexible shaft unit, such as a Foredom, is indispensable. If you have a piece of material with several large lumps on it, try polishing a few flat areas to bring out some bull's-eye effects.

The main thing to do is to use your imagination. Malachite is particularly suitable for freeform cabochons. You can learn to control the evolving patterns and modify the final result. This is what is so fantastic about my favorite gem material.

(Reprint from the Drifter March 1986)

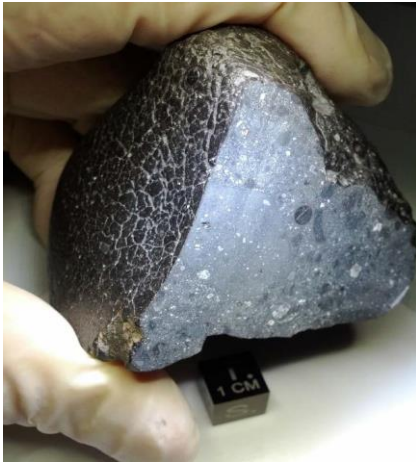


## Polishing Peridot

Having trouble polishing peridot? Some experienced faceters report that a drop of lemon juice or vinegar will speed thigs considerably. The slight acidity seems responsible for the improvement; just remember to rinse laps and splash pans with plain water when you are through.

(reprint from the Drifter Jan 1983)

## MARTIAN METEORITE



(Picture from Wikipedia, the free encyclopedia)

A Martian meteorite is a rock that formed on the planet Mars and was then ejected from Mars by the impact of an asteroid or comet, and finally landed on the Earth. Of over 61,000 meteorites that have been found on Earth, 132 were identified as Martian as of 3 March 2014. These meteorites are thought to be from Mars because they have elemental and isotopic compositions that are similar to rocks and atmosphere gases analyzed by spacecraft on Mars. On October 17, 2013, NASA reported, based on analysis of argon in the Martian atmosphere by the Mars Curiosity rover, that certain meteorites found on Earth thought to be from Mars were indeed from Mars.

The term does not refer to meteorites found on Mars, such as Heat Shield Rock.

On January 3, 2013, NASA reported that a meteorite, named *NWA 7034* (nicknamed "Black Beauty"), found in 2011 in the Sahara desert, was determined to be from Mars and found to contain ten times the water of other Mars meteorites found on Earth. The meteorite was determined to have formed 2.1 billion years ago during the Amazonian geologic period on Mars. (Stoney Statements Mar 2017)



## BLASTOIDS

Blastoids (class *Blastoidea*) are an extinct type of stemmed echinoderm.[1] Often called *sea buds*, blastoid fossils look like small hickory nuts. They first appear, along with many other echinoderm classes, in the Ordovician period, and reached their greatest diversity in the Mississippian subperiod of the Carboniferous period. However, blastoids may have originated in the Cambrian. Blastoids persisted until their extinction at the end of Permian, about 250 million years ago. Although never as diverse as their contemporary relatives, the crinoids, blastoids are common fossils, especially in many Mississippian-age rocks.

Like most echinoderms, blastoids were protected by a set of interlocking plates of [calcium carbonate](#), which formed the main body, or *theca*. In life, the theca of a typical blastoid was

attached to a stalk or column made up of stacked disc-shaped plates. The other end of the column was attached to the ocean floor by a holdfast, very much like stalked [crinoids](#). The stalk was usually relatively short, and in some species, was absent, with the holdfast being attached directly to the base of the theca.



The mouth was located at the summit of the theca. Radiating like flower petals from the center were five food grooves, or *ambulacra*. Each ambulacrum had many long, thin, fine structures called *brachioles*, which were used to trap food particles and bring them to the mouth. Brachioles were delicate structures, and in fossils are not usually preserved in place. A series of five spiracle plates surrounded the star-shaped mouth, which included the [anus](#), mouth and entrances to a set of five complex, folded [respiratory](#) organs known as *hydrospires*. These spiracles prevented mixing of the various fluids. Waste elimination was through the *anispiracle*, an opening formed by the fusing of anus and adjacent spiracles.

Like crinoids, blastoids were high-level, stalked suspension feeders (feeding mainly on [planktonic](#) organisms) that inhabited clear-to-silty, moderately agitated ocean waters from [shelf](#) to basin. The food gathering system of blastoids consisted of several types of ambulacra. Food entered the brachiolar ambulacra, was transferred to the side ambulacra through the brachiolar pit, then transferred to the main (median) ambulacra, and finally entered the mouth. Each of these ambulacra was roofed by cover plates. The cover plates of the brachiolar groove were movable and could open, allowing food to enter, or close as needed. Other cover plates may also have been movable.

(Stoney Statements Dec 2014)