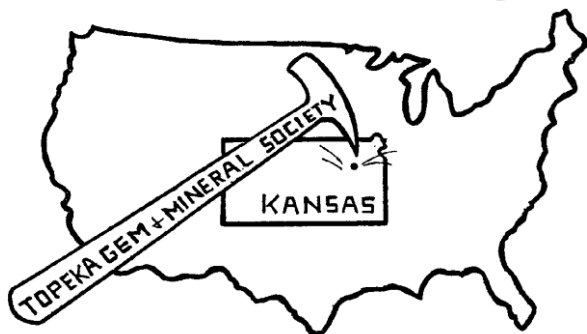


The Topeka Gem and Mineral Society, Inc.
 1934 SW 30th St. Topeka, KS 66611
 Rock2Plate@aol.com

THE GLACIAL DRIFTER



www.TopekaGMS.org 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. 64, No. 10
 October 2021



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: 4th Friday of each month, September to May, 7:30 pm, University United Methodist Church, 1621 SW College, Topeka, KS 66604. 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 30th St, Topeka, KS 66611.**

www.TopekaGMS.org

2021 OFFICERS AND CHAIRS

President	Brad Davenport	379-8700	Cab of the Month	Debra Frantz/Fred Zeferjohm	862-8876
1 st Vice Pres.	Will Gilliland	286-0905	Field Trip Coord.	Will Gilliland	286-0905
2 nd Vice Pres.	Cinda Kunkler	286-1790	Publicity	TGMS Board	
Secretary	Stacy Haug	1-857-3350	Welcome/Registration	Harold Merrifield	633-9745
Treasurer	Millie Mowry	267-2849	Property	M. Cote/D. Dillon	220-3272
Directors	Chuck Curtis	286-1790	AFMS Scholarship	Cinda Kunkler	286-1790
	Francis Stockton	913-645-7677	Editor/Exchange Editor	Millie Mowry	267-2849
	Dave Dillon	272-7804	Show Chairman	Dave Dillon	272-7804
Historian	Open		Show Dealer Chairman	Dave Dillon	272-7804
Federation Rep	Chuck Curtis	286-1790	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 .
Permission is granted to reprint articles only if proper credit is given to the author, Glacial Drifter and the date.

Howdy one and all.

With this year's show behind us now, we need to move on to other things.

First off, I would like to extend a warm welcome to the eleven new members who joined us this weekend. I hope you feel comfortable with us and that you will jump in and take advantage of what your club has to offer.

On that note, if any of you are still wanting to take the basic SilverSmithing classes, we need you to hop on the opportunity right now. The last two weeks our teachers have been sitting idle. This should not be the case.

For the new members and all the others, the way it works is that you put your name in the hat. When drawn, you are notified and expected to attend class for the next three Tuesdays out at the shop. If you can not make this work, we need to know pronto so we can get the next person notified and your name goes back into the hat.

As it is, if we do not get someone scheduled, those of you that have been through the classes will be able to work on projects you have had in mind. We would like to have an idea of who wants to do this as you know, room is limited.

We have also had lapidary machines sitting idle and our Wrapping instructor has the time to help those wanting to learn how. There has been a lot of opportunities missed.

Come on out and get involved. Feel free to contact me at this email address if you have questions. Brad



TGMS Event Calendar

OCT. 2021			NOV. 2021		
1	F		1	M	
2	S		2	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
3	S		3	W	
4	M		4	T	Junior Rock Hounds, UUMC 6 p.m.
5	T		5	F	
6	W		6	S	
7	T		7	S	
8	F		8	M	
9	S		9	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
10	S		10	W	
11	M		11	T	
12	T		12	F	
13	W		13	S	
14	T		14	S	
15	F		15	M	
16	S		16	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
17	S		17	W	
18	M		18	T	
19	T	Brad's Shop OPEN 6 PM Wear Masks, have shots	19	F	General Mtg. 7:30 p.m. UUMC
20	W		20	S	
21	T		21	S	
22	F	General Mtg. 7:30 p.m. UUMC	22	M	
23	S		23	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
24	S		24	W	
25	M		25	T	THANKSGIVING
26	T	Brad's Shop OPEN 6 PM Wear Masks, have shots	26	F	
27	W		27	S	
28	T		28	S	
29	F		29	M	
30	S		30	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
31	S	HALLOWEEN			



If you are interested in Wire Wrap Classes, contact Millie, 267-2849 or rock2plate@aol.com

Check out the calendar on our web site www.TopekaGMS.org

JR ROCKHOUND Classes & Reminders

Here are reminders of the next few months of classes: **University United Methodist Church, 1621 SW College Ave., Topeka, KS.** Sign in starting at 6:00 pm and classes starting at 6:30pm. 1st Thursday of each month.



<https://www.facebook.com/TopekaGMSJuniorRockhounds>

To register for the Junior Rockhounds or any of the classes, email:

Jason Schulz at: Fleetcommander@att.net



---**Everyone must wear masks!**

Next Class: Nov. 4, Gemstones Lore & Legend, Pat & Will Gilliland

Reminder: If you want to earn the patches from the classes that you have attended you need to turn in your homework assignments.

The October program is titled, "This is what Is happening at the shop:. Put on by, Brad, David, and Millie. We hope that every one will enjoy it.

Thank you all - Cinda Kunkler cindakunkler@att.net

Welcome New Member:

Robin Campbell, Topeka, KS
Paige Clarke & Dmitri Antone, Topeka, KS
Mark Wells & Elaine Rangel, Leon, IA
Phillip Schwindt, LaCrosse, KS
Michael Granberg, Topeka, KS
Dustin Kuntz, Harveyville, KS
Carlos Schwindt, LaCrosse, KS
Vince Fiorentino, Topeka, KS
Zachary Goyer, Oklahoma City, OK

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



TIGER EYE HISTORY & FACTS:

First of all, tiger's eye, tigereye, tiger eye and tiger-eye are all accepted ways to write this name.



Tiger's Eye is a durable quartz composite with the usual quartz hardness of 7. It begins as the fibrous blue mineral called crocidolite, which is comprised of iron & sodium. Most of us know crocidolite as asbestos. The transformation begins when quartz becomes imbedded between the fibers of crocidolite. This process will result in one of two gemstones. A blue stone is called Hawk's Eye or the golden brown stone called

Tiger's Eye.

During the process, the asbestos is completely dissolved. But the quartz takes on the fibrous formations and the blue color of crocidolite. This creates the parallel lines within the gem which gives it that ever shifting play of light and movement the stone is so loved for. This is also known as chatoyancy, the gleam that rolls across its surface, much like the eyes of a cat.

Even though the iron & sodium dissolve, traces of hydrated oxide of iron deposit between the crocidolite and quartz, creating the golden color that is common to Tiger's Eye. How much of this hydrated mineral is deposited will determine how Golden brown, red, green or blue, Tiger's Eye and Hawk's Eye will be. The rarer blue Hawk's Eye will have only the slightest amounts. The varying amounts of hydrated oxide of iron, actually cause several colors and mixes of color. When the color is a greenish gray, it is called cat's-eye quartz. A golden yellow reflection on a brown stone, is called Tiger's Eye. If the stone is blue gray or bluish, it's known as Hawk's Eye. Reddish brown, or mahogany colored stones, are known as bull's-eye or ox-eye.



Up until recently tiger eye has been considered to be pseudomorph but new evidence proves otherwise. It has long been thought that the crocidolite fibers were replaced with quartz much like the replacement that happens in petrified wood. New evidence proves this may not be the case and that quartz and the crocidolite co-exist.

Tiger eye has a fibrous structure and in the lapidary shop must be oriented properly to get the chatoyancy and/or the "cats eye" effect. Cuts must be exactly parallel to the length of the fibers to get the full chatoyancy. If the saw cut is perpendicular, or 90% to the fibers, you end up with a lifeless, dark brown to black stone with no chatoyancy or light play at all. Orientation of cutting is critical to getting good chatoyancy and color out of tiger eye. These fibers in Tiger Eye may be up to about two inches long and very thin. Most are only 0.001 millimeters, or 0.000039 inches in diameter and are not always straight making it even harder at times to cut good chatoyant stones.

TREATMENTS:



In most cases, but not always, red tiger eye is not a natural occurrence. It is usually the result of heating and can be done using the kitchen oven. Here's a basic recipe for heat treating tiger eye.

To protect the tiger-eye from thermal shock during heating, cover slabs of ordinary, gold tiger eye in fine clean silica sand, at least 3"

All around the slab.

Place the metal container in a cold oven and increase the temperature by 50 degrees every hour until it reaches 400 degrees. Then turn the oven off and **DO NOT OPEN THE DOOR**. Allow plenty of time for the container to cool all the way through. (If you heat treat tiger eye to sell

BE SURE you let it be known it has been treated, it's only right and it's the law.)

There are natural occurrences that tiger eye can be found with red color. And other known ways have been from brush fires where the deposits are found and also when miners would build fires next to the seams to help crack it up into smaller pieces, remember most of these miners had nothing but hand tools to work with.

Not long after tiger eye was first discovered for lapidary, the world famous Idar-Oberstein lapidaries discovered by using hydrochloric or oxalic acid they could bleach tiger eye to an evenly colored light, translucent yellow. When cut properly they produced "cats eye" stones that look much like the rare variety of chrysoberyl but can be distinguished very easily between the two by gemologists.

Other treatments but not usually done, never by me, but some do it. In pietersite and bighamite stones especially, it is very common to run into pits, cracks, or voids called vugs. These are some-times filled with wax, super glue or opticon in the last steps of has been done by others.

There are many other types of stones that display a "cats eye" or shimmering chatoyancy. The word "Chatoyant" comes from the French word for "cat" or to glow like a cat's eye. Tigereye is the anniversary gemstone for the 9th year of marriage

Editors Note: Remember tigereye has asbestos, so always use a face mask and/or keep tigereye under water when sanding and polishing.

Article Provided by Top Gems, via The Palomar Gem 2/05 with additions from the internet, Via Chips 'N Splinters 5/16 Via: The Rockhounder June 2016; Via The Glacial Drifter, Vol. 59, No. 07, July 2016, via Stony Statements Aug 2016.

Topeka Gem & Mineral Society
General Meeting, September 24, 2021

President Brad Davenport calls the meeting to order at 7:31 p.m. There are 18 members & guests present.

Treasurer's Report: The report was given by Millie Mowry. There are currently no outstanding bills.

Communications: We received a letter from AFMS Scholarship Foundation detailing & thanking our club for donations that have been made. AFMS awards twelve \$4000 scholarships each year to Earth Sciences students around the country.

Received correspondence from IRS regarding non-profit. There may be some issues we need to address. After the show & before the end of the year, we need to revisit changing our corporate status from a 501(c)(7) to a 501(c)(3). We may have to pay money to an attorney to do this unless someone knows of somebody willing to help pro bono.

Show Report: We have 15 confirmed dealers with contracts & confirmed payments; we may hear from 2 more. Review of the member sign-up sheets (for helping with the show) at the last Board meeting revealed participation is sadly low. We are going to try to get people to show the public what classes we offer, what we're about, what's available, etc. Planned activities are good on the show front; we just need more help from people in the club. We may be filling work positions as per needed, not necessarily just what people signed up for as we have to make due with what we have for volunteers.

Chuck has a moving company meeting us at the storage unit at 8:00 a.m. on the morning of October 8th. We will need more people there to help them. We have not heard back yet from WIBW Red Couch.

We have a few more plywood signs that could be painted if anyone knows where we could put them. Otherwise, they don't need to be painted at this time. Cinda, Donna, and Cole spent a lot of time painting & re-lettering these old signs to get them ready for the show.

Advertising - The Topeka Capital Journal will run 4 spots - Sunday, Wednesday, Friday & Saturday - before the show. We will also have the digital ads that will run for 2 weeks starting on the 26th of September through October 10th. All is set up and ready to go. \$609.58 for the advertising exposure.

Lamar put up 3 billboards - north end of Topeka Blvd bridge, 17th & Topeka in front of Expocentre, and 20th & Gage outside of Cook's. Magnetic car signs have been updated & are on vehicles.

Webmaster: Jason has a list of tasks he is working on. The information from rockngem.com has been updated. We get 2 free postings that we will probably use this week.

Junior Rockhounds: Next class is October 7th.

Field trips: Will & Cole will sit down and come up with ideas of places to visit. Cole knows some locations where we might be able to take small groups out. Will asks the group if there is interest in revisiting the Kansas River sandbar that we went to last year - several people raised their hands.

Old Business:

Every year there is a member of the year award presented, but we were not able to do this last year. The 2020 member of the year goes to Brad Davenport for his dedication & many selfless contributions to the club. He has agreed to be our President; he has agreed to give up a substantial portion of his shop & has paid for heating/air-conditioning out-of-pocket. He has also agreed to be RMFMS State Director for Kansas.

Chuck, Cinda & Brad attended the RMFMS annual meeting in June held at Big Piney, WY. Tonight, they present a Certificate of Achievement awarded by RMFMS to Millie Mowry. She was voted into the AFMS Bulletin Editors' Hall of Fame for the work she has done on The Drifter for many years. The next annual meeting is scheduled for June 17-19, 2022 in Las Vegas; Cinda has flyers for those interested.

With nothing further to discuss, Chuck moves to adjourn the meeting; Harold seconds. Motion passes & meeting is adjourned to a silent auction.

Submitted by Stacy Haug, Secretary

The Archaeology and History of Bitumen

By K. Kris Hirst for ThoughtCo

Updated January 30, 2019

Bitumen—also known as asphaltum or tar—is a black, oily, viscous form of petroleum, a naturally-occurring organic byproduct of decomposed plants. It is waterproof and flammable, and this remarkable natural substance has been used by humans for a wide variety of tasks and tools for at least the past 40,000 years. There are a number of processed types of bitumen used in the modern world, designed for paving streets and roofing houses, as well as additives to diesel or other gas oils. The pronunciation of bitumen is "BICH-eh-men" in British English and "by-TOO-men" in North America.

What Bitumen Is

Natural bitumen is the thickest form of petroleum there is, made up of 83% carbon, 10% hydrogen and lesser amounts of oxygen, nitrogen, sulfur, and other elements. It is a natural polymer of low molecular weight with a remarkable ability to change with temperature variations: at lower temperatures, it is rigid and brittle, at room temperature it is flexible, at higher temperatures bitumen flows.

Bitumen deposits occur naturally throughout the world--the best known are Trinidad's Pitch Lake and the La Brea Tar Pit in California, but significant deposits are found in the Dead Sea, Venezuela, Switzerland, and northeastern Alberta, Canada. The chemical composition and consistency of these deposits vary significantly. In some places, bitumen extrudes naturally from terrestrial sources, in others it appears in liquid pools which can harden into mounds, and in still others it oozes from underwater seeps, washing up as tarballs along sandy beaches and rocky shorelines.

Uses and Processing

In ancient times, bitumen was used for a huge number of things: as a sealant or adhesive, as building mortar, as incense, and as decorative pigment and texture on pots, buildings, or human skin. The material was also useful in waterproofing canoes and other water transport, and in the mummification process toward the end of the New Kingdom of ancient Egypt.

The method of processing bitumen was nearly universal: heat it until the gasses condense and it melts, then add tempering materials to tweak the recipe to the proper consistency. Adding minerals such as ochre makes bitumen thicker; grasses and other vegetable matter add stability; waxy/oily elements such as pine resin or beeswax make it more viscous. Processed bitumen was more expensive as a trade item than unprocessed, because of the cost of the fuel consumption.

The earliest known use of bitumen was by Middle Paleolithic Neanderthals some 40,000 years ago. At Neanderthal sites such as Gura Cheii Cave (Romania) and Hummal and Umm El Tlel in Syria, bitumen was found adhering to stone tools, probably to fasten a wooden or ivory haft to the sharp-edged tools.

In Mesopotamia, during the late Uruk and Chalcolithic periods at sites such as Hacinebi Tepe in Syria, bitumen was used for the construction of buildings and water-proofing of reed boats, with among other uses.

This article continues at <https://www.thoughtco.com/bitumen-history-of-black-goo-170085>

Source: Central IA Nuggets Oct 2021

