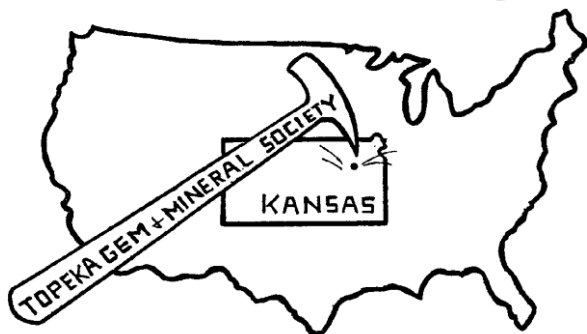


The Topeka Gem and Mineral Society, Inc.  
 1934 SW 30<sup>th</sup> St. Topeka, KS 66611  
 Rock2Plate@aol.com

# THE GLACIAL DRIFTER



[www.TopekaGMS.org](http://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. 11  
 November 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:** 4<sup>th</sup> 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 30<sup>th</sup> St, Topeka, KS 66611.**

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

## 2021 OFFICERS AND CHAIRS

President	Brad Davenport	379-8700	Cab of the Month	Debra Frantz/Fred Zeferjohn	862-8876
1 <sup>st</sup> Vice Pres.	Will Gilliland	286-0905	Field Trip Coord.	Will Gilliland	286-0905
2 <sup>nd</sup> 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](mailto:rock2plate@aol.com).  
Permission is granted to reprint articles only if proper credit is given to the author, Glacial Drifter and the date.

Fodder from your president.

November 2021

Howdy all.

Fall is in full swing both in my yard and on my calendar. Lots of things to make note of.

First off is for you and I to remember that this month's general meeting will be held one week early. The fourth Friday is the day after Thanksgiving and everybody will be out doing their Black Friday shopping. Chuckles abound. So, mark your calendar for November 19<sup>th</sup> for our meeting. If you read my emails & I hope you did, you will know that we will be holding club elections that night. Nominations can still be made the night of the elections or drop one of your board members an email or call us up. My cell is 785-845-6624. Please show up and show your support for the future of your club.

Next up is that the next Junior Rockhound meeting is set for Dec. 2<sup>nd</sup>. I am also pleased to introduce to you, Beth & Lauren Gerstner. Lauren attended her first Juniors class last night. I hope she had a good time.

Then on Dec. 3<sup>rd</sup>, We will have our Xmas dinner at the "Viking Grille" at 6:30 PM in Hunters Ridge on N 75 highway at 46<sup>th</sup> St. Installation of officers will happen. Everyone will order from their menu and pay for their own meal. This will replace our regular 4<sup>th</sup> Friday meeting for December.

Tuesday night "Shop time" is still being held each week. The lapidary portion is well attended and there are some beautiful stones being produced. But on the Wire Wrapping and Silversmithing end of the game we have some issues. Miss Millie shows up every week to teach Wrapping and no one has showed up for her classes for weeks. She is a valuable asset going to waste. So, from now forward, there is no point in her driving out here each night for nothing. If you are interested in taking her classes, you need to let her know your desire a week in advance.

This is pretty much the same with Dave & Jim's Silversmithing classes. There were lots of folks expressing their desire for classes to resume. Where are you now? They have taught about a dozen members the basics of silversmithing. But now no one else seems interested. A few of the folks that took the beginners class are now producing items of their own designs. But Dave and Jim are there every week ready, willing & able to teach others this craft. You may not be aware of what an incredible offer this is. Other clubs are charging from \$115-\$125 for these same classes. Your charge is a paltry \$5 a night. Come on people hop on this opportunity while it is still available. There are a few people making some fantastic Christmas presents. Get your name in the hat to be next in line to learn. For our new members information, all you have to do is let us know that you want to take any of the classes and we can put your name in the hat. Right now, the hat is empty.

The latest rains have uncovered lots of new material around NE KS. The rivers and streams have settled back down and should provide some great hunting. With the crops coming out of the fields here too are some real opportunities. Agates, Jaspers, Petrified wood, Fossils and artifacts are abundant in our neck of the woods. Take a nice day and get out there and find some.

I hope everyone has great plans for the holidays. But don't forget us.

Be safe and active.

Bradford



THANK YOU FOR YOUR SERVICE

# TGMS Event Calendar

NOV. 2021			DEC. 2021		
1	M		1	W	
2	T		2	T	Jr Rockhounds UUMC 6 pm
3	W		3	F	Annual Christmas Dinner at The Viking Grille, Hunters Ridge 6:30 pm
4	T		4	S	
5	F		5	S	
6	S		6	M	
7	S		7	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
8	M		8	W	
9	T	Brad's Shop OPEN 6 PM Wear Masks, have shots	9	T	
10	W		10	F	
11	T	Veterans Day	11	S	
12	F		12	S	
13	S		13	M	
14	S		14	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
15	M		15	W	
16	T	Brad's Shop OPEN 6 PM Wear Masks, have shots	16	T	
17	W		17	F	
18	T		18	S	
19	F	General Mtg. 7:30 p.m. UUMC	19	S	
20	S		20	M	
21	S		21	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
22	M		22	W	
23	T	Brad's Shop OPEN 6 PM Wear Masks, have shots	23	T	
24	W		24	F	Christmas Eve—NO GENERAL MTG
25	T	<b>THANKSGIVING</b>	25	S	<b>Christmas</b>
26	F		26	S	
27	S		27	M	
28	S		28	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
29	M		29	W	
30	T	Brad's Shop OPEN 6 PM Wear Masks, have shots	30	T	
31	W		31	F	New Year's Eve

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

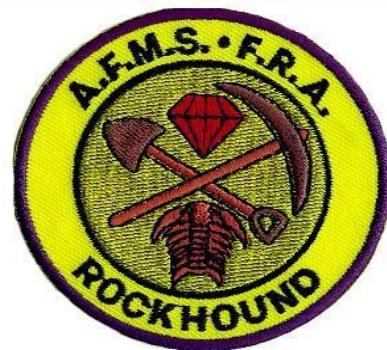
Check out the calendar on our web site [www.TopekaGMS.org](http://www.TopekaGMS.org)

## 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](mailto:Fleetcommander@att.net)



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

Next Class: Dec. 2 - Lapidary

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

The November program; Video. We hope that everyone will enjoy it.

Thank you all - Cinda Kunkler [cindakunkler@att.net](mailto:cindakunkler@att.net)

A warm  
welcome...

To our new members

Chris & Deandra Anderson  
Alexandra \* Anderson  
Michael and Vicky Swann  
Talon \* Blair  
Easton \* Blair  
Beth Gerstner  
Lauren \* Gerstner

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



Kansas State University Foundation  
Scholarship Recipient Report for  
Topeka Gem & Mineral Society, Inc. Scholarship Fund

This report contains the most current information as of October 6, 2021. In many cases, the student will receive the same amount during the spring semester as received during the fall semester; however, due to graduation, change in major, or other circumstances, the awards could be different.

July 1, 2020 through June 30, 2021 Recipients:

Ethan Seene  
Junior, McFarland, KS  
College of Arts and Sciences, Major: Geology  
Fall 2020 Award: \$250.00 Spring 2021 award: \$250.00

Fall 2021 Recipients:

Jade Mountain  
Senior, Silver Lake, Ks  
College of Arts and Sciences, Major: Geology  
Fall 2021 award: \$250.00

Save this date for:

The Annual TGMS Christmas Dinner, December 3,  
2021, 6:30 P.M.

Where: Vikings Grille, 4731 NW Hunters Ridge Circle,  
Suite G.

Topeka, KS 66618

Their menu can be seen at

[www.ordervikingsgrille.com/#1](http://www.ordervikingsgrille.com/#1)



Everyone is welcome and bring your spouse, or significant other, you will be responsible for your own meal. Join us in the party room which is on the west side of the Vikings Grille.



## Evidence of ancient life found in **RUBY** for the first time!

By Jonathan Chadwick for Mailonline 10/25/21

Evidence of ancient life has been found in a **ruby** for the first time, a new study claims.

Researchers in Canada say they've discovered carbon residue that was once ancient life, encased in a **2.5 billion-year-old ruby**.

During this time in Earth's history, oxygen was not abundant in the atmosphere, and life existed only as microorganisms and algae films. The ancient gemstone, described as 'really unique', was taken from the North Atlantic Craton portion that covers southern Greenland. The North Atlantic Craton is an ancient part of Earth's continental crust that reaches around the top of the northern hemisphere, from Scotland to the

Canadian region of Labrador, deep underground.

The research was led by Chris Yakymchuk, professor of Earth and Environmental Sciences at University of Waterloo in Ontario, Canada.

Greenland, where the sample was found, contains the oldest known deposits of **rubies** in the world. This particular sample contained **graphite**, a mineral made of pure carbon. 'The **graphite** inside this **ruby** is really unique,' said Yakymchuk. 'It's the first time we've seen evidence of ancient life in **ruby**-bearing rocks. 'The presence of **graphite** also gives us more clues to determine how **rubies** formed at this location, something that is impossible to do directly based on a **ruby's** colour and chemical composition.'

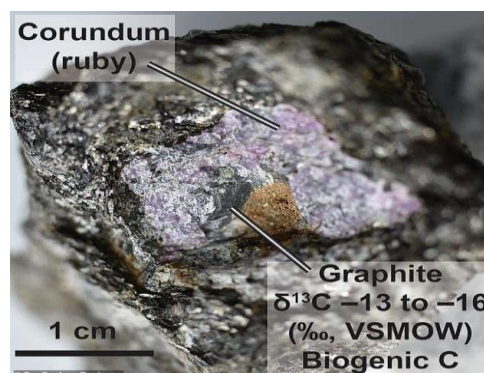
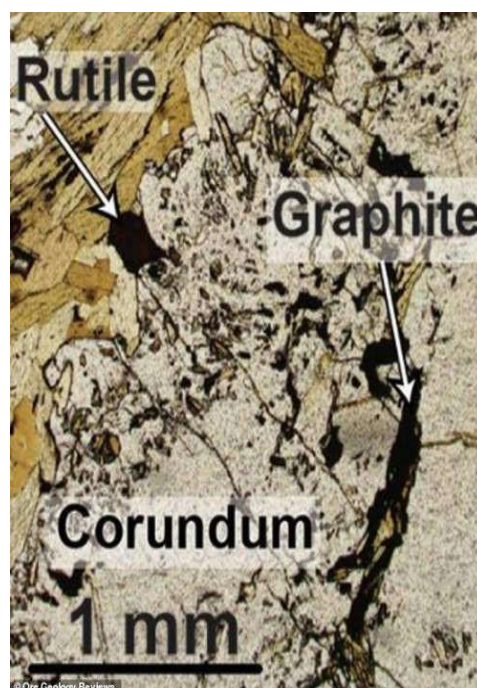
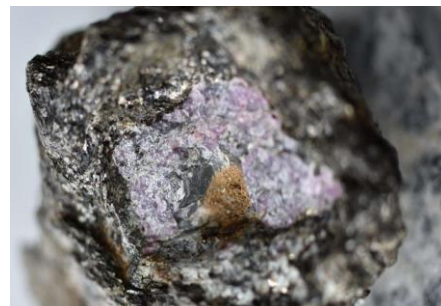
**Rubies** are part of the corundum family of gemstones ( $Al_2O_3$ ). Chromium is the trace element that causes **ruby's red**, which ranges from an orangy-red to a purplish-red. The strength of **ruby's red** depends on how much chromium is present, the Gemological Institute of America explains. The more chromium, the stronger the **red** colour. The presence of **graphite** in this sample allowed the researchers to analyze isotopic composition of the carbon atoms, which measures the relative amounts of different carbon atoms. More than 98 per cent of all carbon atoms have a mass of 12 atomic mass units, but a few carbon atoms are heavier, with a mass of 13 or 14 atomic mass units.

'Living matter preferentially consists of the lighter carbon atoms because they take less energy to incorporate into cells,' said Yakymchuk. 'Based on the in-creased amount of carbon-12 in this **graphite**, we concluded that the carbon atoms were once ancient life, most likely dead microorganisms such as cyano-bacteria.'

Cyanobacteria are photosynthesizing bacteria that may produce cyanotoxins that can cause illness in animals. Also known as 'blue-green algae', they form mats on the surface of water.

During this study, Yakymchuk's team discovered that this **graphite not only links the gemstone to ancient life but was also likely necessary for this ruby to exist at all. The graphite changed the chemistry of the surrounding rocks to create favourable conditions for ruby growth. Without it, the team's models showed that it would not have been possible to form rubies in this location.**

The study has been published in the journal Ore Geology Reviews. Via: Tips & Chips Nov. 2021



## Jet

by Mary Sue Bucher

In the year 1861, Prince Albert, husband to Her Royal Majesty Queen Victoria of England, died of typhoid fever. For the remainder of her life, which numbered forty years, she remained in mourning and dressed only in black. Back then, mourning attire included beads fashioned from jet - a strange but beautiful gemstone which is a form of Lignite ... coal. Jet is a fossil mineraloid, sometimes called Black Amber, Agstein, Scorpion Stone, and Witch's Amber. Most jet originated in the Jurassic period, approximately 182 million years ago from the remains of Araucaria conifer trees whose living relatives we call Monkey Puzzle trees. It's lightweight, has a distinctive "coal" smell to it, is known to be flammable, and like amber, it takes on a static charge when rubbed. It is soft, with a Mohs hardness of 2-4 and is known to polish to a luster resembling black velvet.



Victorian mourning jewelry has a distinct "look" to it; the beads are, of course, black and are usually faceted. Long ropes of these faceted jet beads were common, and they remained popular well into the 1920s when they were adopted by young "Flappers" to wear with their short, straight dresses. After jet beads became popular, there were, of course, imitators such as Ebonite, also called Vulcanite (hardened rubber). Unlike jet, Vulcanite was molded rather than cut and if heated, smelled like rubber instead of coal. It also bleached out with age to an olive-brown color. "French Jet, Paris Jet, or Faux Jet," is glass, and is the most common imitator of jet; it's easy to distinguish from real jet as it's heavy and has a cold feel to it.

Bakelite is a type of vintage plastic that was sometimes tinted black to resemble jet. Bakelite, in its own right, has become valuable. About ten years ago, a friend asked me to pick up a Bakelite bracelet for her at an antique show. Turns out most of the good ones that I saw were being offered for around five hundred dollars and needless to say, she didn't get her bracelet. Jet has been imitated by Bog Oak, a type of black wood found in Irish peat bogs, and jewelry makers have also used Cannel Coal, Shale, Horn, and a few things that aren't around anymore. Then, of course, there's onyx, or black chalcedony, obsidian, coral, and any stone that's been dyed or enhanced with dye. Naturally, Queen Victoria could afford the real thing, and the only jewelry that was allowed at court during the mourning period was real jet - preferably, mined from Whitby England, a town on the Yorkshire coast that was and still is known to have the finest jet in the world.

From SFGMS Mineralog, 8/10, via Gem Cutter News, 9/10, via The Rollin' Rock, 8/16; via WGMS The Rockhounder 09-2016

## Benitoite

**Benitoite** (*Barium titanium silicate*) is yet another new gemstone. It was first discovered in 1906 in San Beni-to County, California (can you see how it got its name?!) by James M. Couch who was camping in the hills. The story goes that he woke up to find the sunshine bouncing off of the faces of benitoite crystals that were on the ground around his campsite. Not only is benitoite a rare mineral but gem-quality crystals are even rarer. It is only found at this locality in California - it has never been found anywhere else in the world. Because of this fact, California adopted **benitoite** as its official state gem on October 1, 1985.

Via; Ore-Cutts 7/16; WGMS 09-16



A single benitoite crystal from San Benito County, California.

## Isomorphs, Polymorphs, and Pseudomorphs – oh my!

Every discipline has its own jargon and terminology and geology is no exception. At first it may seem overwhelming, akin to learning a new language. But these words allow us to speak and write with greater precision – if the words are used correctly. Let's have a look at the three terms above: isomorphs, polymorphs, and pseudomorphs.

**Isomorphs:** Two or more substances with analogous formulas in which the cations (+ charged ions) and anions (- charged ions) are similar in size and which thus have closely similar crystal structures and properties. An example of this occurs in the carbonate family. Witherite  $\text{BaCO}_3$ , cerussite  $\text{PbCO}_3$ , strontianite  $\text{SrCO}_3$ , and aragonite  $\text{CaCO}_3$  all form similar shaped crystals and exhibit similar properties. Hence they are all isomorphs. Many other examples exist including within the garnet and amphibole families. The roots of his word come from the Greek and translate as „iso“ meaning „equal“; and „morph“ meaning „shape or form“.

**Polymorphs:** An element or compound that can exist in two or more crystal forms. Perhaps the most familiar examples of this are diamonds and graphite. Both minerals are pure carbon, but the carbon atoms are stacked up differently. This creates two different minerals with - in this case - greatly differing properties. Polymorphs of the same substance occur because the minerals formed under different pressure and temperatures. In a lab we can determine the conditions needed for a particular polymorph to form. So when a particular mineral occurs in a rock, we can the conditions in which that rock formed. Another common polymorph pair are calcite and aragonite, both have the same composition of  $\text{CaCO}_3$ , but different stacking of the atoms. The roots in this case are again Greek and are „poly“ meaning „many“ and „morph“ meaning „shape or form“.

**Pseudomorphs:** A mineral that has replaced another mineral with no change in its external form. Pseudomorphs can form if a constituent element is gained or lost; or by the entire replacement of the mineral composition. As an example, fluorite crystals might be replaced entirely by quartz crystals. So the quartz crystals have all the proper properties of quartz (hardness, luster, density, etc.), but exhibit the cubic shape of fluorite crystals. So a mineral ends up having the „wrong“ shape. Geologists would refer to this as „quartz after fluorite“. Because crystal shape is one of the properties we commonly use to identify a mineral, it is easy to make a mistake in the identification of a pseudomorph. Pseudomorphs form because the original mineral was no longer stable under the new conditions. From the Greek „pseudo“ meaning „false“ and „morph“ meaning „shape or form“.

*The Agateer 10/11; via WGMS 11-11*

## Did you know?

- A bicycle can't stand on its own because it is two-tired.
- What's the definition of a will? (It's a dead giveaway).
- She had a boyfriend with a wooden leg, but broke it off.
- A chicken crossing the road is poultry in motion.
- With her marriage she got a new name and a dress.
- Show me a piano falling down a mineshaft and I'll show you A-flat minor.
- Marathon runners with bad footwear suffer the agony of defeat.
- When a clock is hungry it goes back four seconds.
- The man who fell into an upholstery factory is now fully recovered.
- You feel stuck with your debt if you can't budge it.
- He often broke into song because he couldn't find the key.
- Every calendar's days are numbered.
- A lot of money is tainted. It taint yours and it taint mine.
- Santa's helpers are subordinate clauses.
- Bakers trade bread recipes on a knead to know basis.

*Fossick Gossip 12/13 via WGMS 05-15*