The Topeka Gem and Mineral Society, Inc.
1934 SW 30th 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. 65, No. 1
January 2022

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

2022 OFFICERS AND CHAIRS

President	Brad Davenport	379-8700	Cab of the Month	Debra Frantz/Fred Zeferjohn	862-8876
1st Vice Pres.	Will Gilliland	286-0905	Field Trip Coord.	Will Gilliland	286-0905
2nd 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	D. Dillon	272-7804
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	Jim Baer	785-256-2432	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
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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.

Fodder from the president. Jan/22

A belated Happy New Years as we approach two thirds of the way through January. I hope everyone is staying healthy, wealthy and wise.

After a strange miserable December, we seem better than we had been. Donna is good. I am still having some Long Covid issues that may or may not go away. Real shortness of breath and what still feels like traces of pneumonia are the two that bother me most but they are not the only ones lingering.

Fortunately, those who I know that have also contracted the virus have only been having the mild version associated with the Omicron version. Let's hope this could be the new normal.

Last Friday your board had a meeting on a new format of an online meeting place. I don't think anyone likes it. Except perhaps Stacy who saves a lot in gas and travel time. We covered several topics. I'll touch on a few.

We as a club are going to continue to stay in the "Shut down" mode for now. Infections are higher than ever and there is no reason for us to gather in mass just to socialize with one another. Yes, I very much miss this. The shop will probably remain closed until we can have some doors open and some fresh air circulating.

Because of our large meeting hall and the small numbers of junior rockhounds, we will hold classes unless posted otherwise.

I hope you took a good look at the RMFMS newsletter that was linked to your mail last week.

On page 8, our Millie & Jason both receiver some nice Kudos for their work.

I hope you look and see how many different ways there are to enter and win. There is a competition that just fits your personality. Hop on board.

As far as our Juniors go and for the rest of you, I hope you are aware of a Tyrannus Rex that will be visiting us in the next couple of months. We feel that it is really important for our youth to get out and see her.

So, with some money earned for our junior's program, we want to make an event to get together and visit her. We will pay for the kid's admittance. We would love to see the parents attend as well. But you will have to buy your own tickets.

We are looking at going the first part of March on a Saturday in the morning. There are lots of scheduling details to work out but keep your eyes peeled to Emails from me when we get some details nailed down, I'll let you know. If you are a parent, and know of conflicts that are pending, let me know pronto.

All club dues are now due! Even though we are not meeting right now, we do have bills to pay.

Remember that any and all club activities require Full vaccination and masks from those that are old enough to have your shots and boosters.

Brad

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

DUES ARE DUE

TGMS Event Calendar

JAN 2022			FEB 2022		
1	S		1	T	
2	S		2	W	
3	M		3	T	Jr Rockhounds, UUMC 6 p.m. sign in
4	T		4	F	
5	W		5	S	
6	T		6	S	
7	F		7	M	
8	S		8	T	
9	S		9	W	
10	M		10	T	
11	T		11	F	Board & Show Meeting 7 pm Zoom
12	W		12	S	
13	T		13	S	
14	F		14	M	
15	S		15	T	
16	S		16	W	
17	M		17	T	
18	T		18	F	
19	W		19	S	
20	T		20	S	
21	F		21	M	
22	S		22	T	
23	S		23	W	
24	M		24	T	
25	T		25	F	
26	W		26	S	
27	T		27	S	
28	F		28	M	
29	S				
30	S				
31	M				

All Classes and Meetings Cancelled for January 2022 due to COVID until March 1, 2022.

No General Meeting in February…. Classes resume on March 1, 2022….

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

DUES ARE DUE

Letter to general membership on classes.

The classes we teach on Stone-cutting, wire-wrapping and silversmithing are given every Tuesday night from 6:00 to 9:00 at Brad's house, address as follows; 8049 SE 29th Street, Tecumseh, Kansas. We have been doing these classes for about two years now and in the last part of 2021 from October-December we have not had many students coming other than the regulars which has not been many. A lot of times the instructors go out and nobody shows up and we go home. We need to know why the new and other regulars' members are not coming out for lessons. It has been pretty slow. I know we have had covid issues and all but before that our attendance has been slowing down. We will be starting classes again on March 1st, 2022. We look forward to seeing you all again. Let us know if you have any questions on classes. The instructors are Brad Davenport for Stone-cutting, Millie Mowry on Wire-wrapping and Dave Dillon and Jim Baer for Silversmithing. You can reach us at, **brad7254@gmail.com,** davidd5124@aol.com, jimbaer@gmail.com, or **rock2plate@aol.com.**

The Silent Auction scheduled for January will be held at the March Meeting. This gives you another few days to keep cleaning out those shelves and boxes. We need the Best Choice labels turned in also so we can get our rebate.

Cinda Kunkler

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: Feb 3, Earth Processes

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

EARTHQUAKES IN KANSAS! WHERE?

By William Gilliland

In the last few months Kansas has had a rash of earthquakes. Kansans who have not felt the earthquakes tend to ask where or when they occurred? The Kansas Geological Survey provides this information on their welcome page at https://www.kgs.ku.edu. The bottom of the welcome page is "Recent Earthquakes from the Survey Network". On the left side is a map of Kansas with the recent earthquakes plotted as circles indicating the magnitude and location of the epicenter. On the right side is listed the twelve most recent events detected. Clicking on "View event" gives a detailed map of the location.

As you look across Kansas note the pockets of earthquakes southeast of Salina, in Riley County southeast of Manhattan, and Sumner County. These are the most recent concentrations. In past years there were concentrations in Jewel County, on the east side of Wichita, and most of south-central Kansas. Earthquake activity shifts around over time.

Now take a closer look at the concentration of earthquakes southeast of Salina using the +/- control. You may have to adjust the area viewed as you zoom down. In the area between Gypsum and Assaria, Kansas there have been more than 100 earthquakes magnitude 2.0 to 4.2 in the last few months. As you zoom down you can see the epicenters and the magnitude of the individual events. The larger the circle and darker the color the greater the magnitude. Earthquakes of a magnitude of 2.5 or less are felt by few people. Those of 2.5 to 3.0 and above are felt by many people, while 4.0 and above are felt by most people and may cause structures to be damaged.

Why are these earthquakes occurring in Kansas? See reference 1 "Earthquakes in Kansas" and reference 2 "Induced Seismicity, The Potential for Triggering Earthquakes in Kansas" for a more detailed discussion. This area is the south end of the Salina Basin and is somewhat separated from the Sedgwick Basin to the south. Most of the Kansas earthquake activity that was caused by injection of oilfield brines in Oklahoma and South-central Kansas were in the Sedgwick Basin. This activity appeared to be caused by increased hydrostatic pressure on old faults in the deep basement rocks. The increase in fluid pressure may have allowed the faults to move. We do not at this time have enough information on how far or how fast the pressure changes move in the deep bedrock, but this concentration of earthquakes may be an indication that the pressure change is only now moving between the two basins. The Kansas Geologic Survey is currently studying the area and collecting data to better explain why it is occurring.

The above series of earthquakes is still occurring. If you are interested, you can follow it's development on the Survey's site. You might also find additional sites of developing seismic activity.

References

1. Earthquakes in Kansas, Public Information Circular PIC 3, Kansas Geological Survey, Lawrence, Kansas. https://www.kgs.ku.edu/Publications/pic3/pic3_1.html
2. Induced Seismicity, The Potential for Triggering Earthquakes in Kansas, PIC 36, Kansas Geological Survey, Lawrence, Kansas. https://www.kgs.ku.edu/Publications/PIC/pic36.html

The Kaali Meteorite Catastrophe

By Dr. Bill Cordua, University of Wisconsin

We have evidence that past asteroid or comet impacts have caused mass extinctions such as that of the dinosaurs 65 million years ago. We have also seen movies and read articles about possible catastrophic effects to future civilization from such impacts. These events are hard to grasp, perhaps because we have no record of great human suffering due to such impacts in our history. Some see passages in the Bible or in other traditions (such as the Scandinavian Ragnarok) as indications of past catastrophic events (Gribbin and Gribbin, 1996). One would not expect, however, hard scientific evidence that those parts of ancient history were associated with a comet or asteroid impact. Recently, however, researchers in Estonia and Sweden have turned up evidence of a meteorite causing havoc in an Estonian island community (Veski, et. al., 2001).

Scientists studying the geology of an island of Saaremaa, off the coast of Estonia, found evidence that a large iron meteorite, perhaps weighing 1000 tons, fell on this island between 800 and 400 B.C.. Such an impact would unlease a force slightly greater than that of the Hiroshima A-bomb. Archeological records show that at that time the island was densely populated. Little is known of these people as they left no written record.

The evidence for meteorite impact at this time is certain. An impact crater, 350 feet across, called the Kaali Crater, was found. It now forms a shallow lake. At least 8 satellite craters surround the main one. Crater morphology indicate the impact released the energy equivalent to 20 kilotons of TNT. Fragments of meteoritic nickel-iron are associated with the crater, as are beads of glass formed by shock melting of rocks upon impact. High iridium concentrations in the lake sediments are also evidence of meteorite impact. Carbon 14 dating of the peat deposited in the lake and nearby bogs pin-point the impact as occurring between 800 and 400 years BC.

Saarema was densely inhabited then, as it had been for thousands of years before the impact. Many Bronze Age artifacts are found there, as are the remains of towns, fields and fortresses. Cattle and crops formed the basis for the economy. Pollen deposited in nearby fens and bogs allow a detailed re-creation of the vegetation before, during and after impact. Before impact, a number of pollen grains from a variety of cultivated cereals were present, along with tree and herb pollen. At the time of impact, a unique deposit formed. This was a layer of glass spherules, meteorite fragments, rock dust, charcoal and burned stumps. **Sediment deposited for the 100 years following impact was quite different from what went before.** There was no cereal pollen and little tree pollen found, only an increase of dwarf shrubs. Eventually pollen populations return to their pre-impact character.

Veski et. al.'s interpretations of this data paint a stark picture. **The people were hit suddenly with the force of a Hiroshima-size explosion. By comparison with Hiroshima, no living thing likely survived within a mile of the crater.** Flash burning of vegetation would occur up to 2 miles away, setting the stage for still wider wildfires. All structures up to 6 miles away would have collapsed. That the culture itself collapsed is indicated by the fact that there was no sign of crop cultivation for 100 years after the impact, although there are signs that survivors used the edge of crater in a fortification soon after impact.

One wonders what the survivors must have thought had happened to them, or how they would have described it to others. What influences might this have on stories and legends down to this day?

References:

Gribbin, John and Mary Gribbin, 1996, Fire on Earth, St. Martin's Press, 264 p.

Veski, Siim, A. Heinsalu, K. Kirsimae, A. Poska and L. Saarse, 2001, "Ecological catastrophe in connection with the impact of the Kaali meteorite, about 800-400 B.C. on the island of Saaremaa, Estonia", Meteoritics and Planetary Science, vol. 36, p. 1367-1375.

Cordua, William S., "Articles for the Leaverite News," 26 Aug. 2006, http://www.uwrf.edu/~wc01/Kaali.htm

Photo from https://www.visitestonia.com/en/kaali-field-of-meteorite-craters

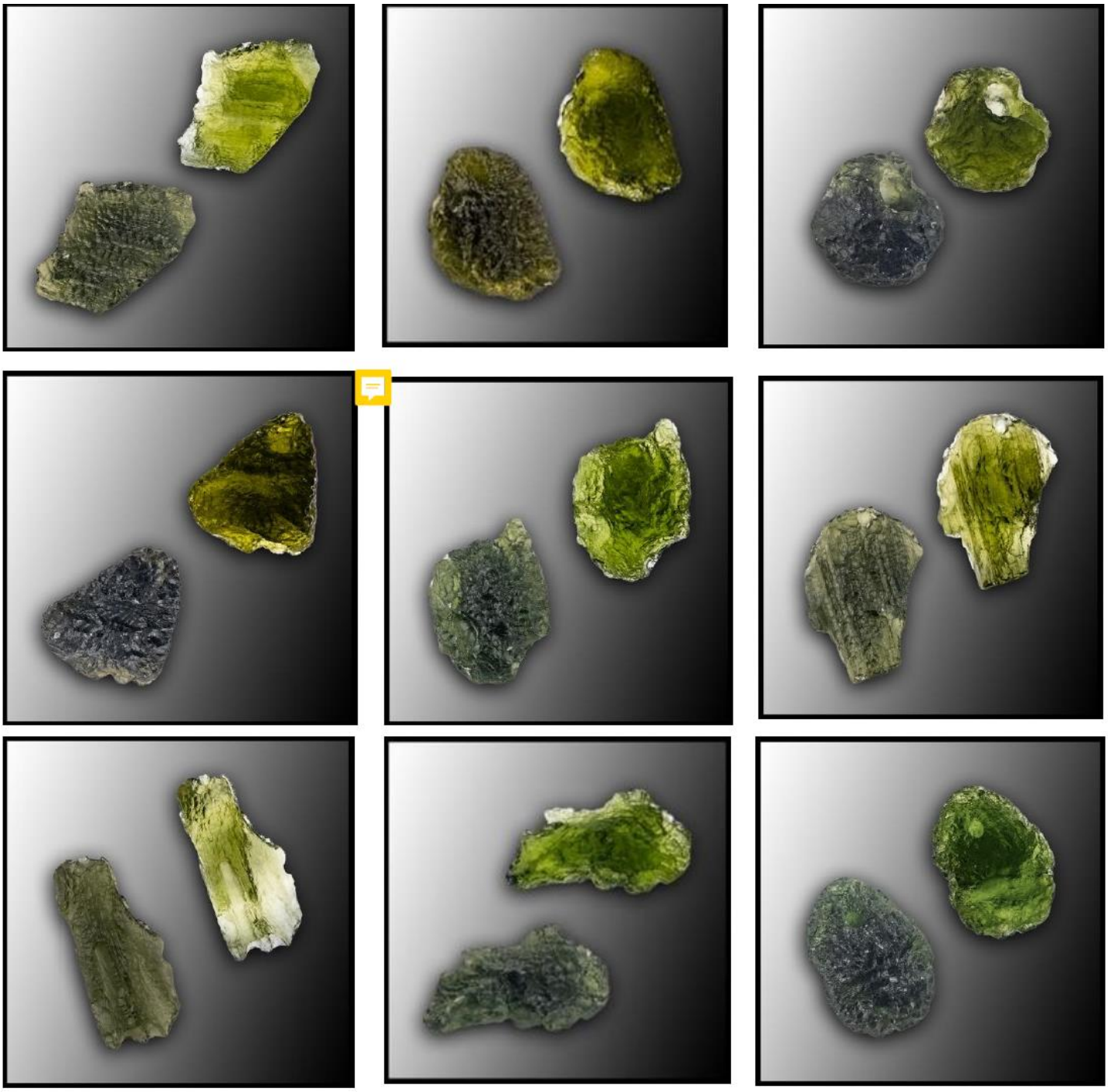
Via: Roseville Rock Rollers Jan 2022

MOLDAVITE

from the Gem Shop 11/03/2021

Moldavite is the product of a meteor collision with Earth nearly 15 million years ago. It fell over what is now called the Moldau River valley in Czech Republic. These green Gems are among the most rare minerals on Earth. They have been prized by humans for thousands of years and are still given as gifts from royalty to royalty. In legend, it is believed Moldavite was the green stone in the Holy Grail and has the power to quicken one's spiritual evolution.

Even people not sensitive to the energies of stones, often feel the energy of Moldavite. Many sense it as heat, tingling, or pulsing sensation in their hand. Others feel a rush of energy through their body, usually upwards out the top of their head. Moldavite's high vibrational energy is a powerful chakra opener, particularly at the heart and above. Sleeping with Moldavite activates the Dream State. Wearing it helps manifest positive life change.



Via: Tips & Chips Jan 2022

Alunite by Hale Sweeny

Alunite is a potassium aluminum sulfate, K-Al3-(SO4)2-(OH)6. Also called alumstone. They use it mostly to produce alum. There are some (now not active) mines near Marysvale, UT that I have visited a time or two. The ore can be processed to recover both potassium and alum, and they started to develop the Marysvale mines during WWII; more to get the potash for gunpowder than for the aluminum, as I remember.

But they got into a big hassle with the State government vs private parties etc. about just where to build the plant where it was going to be processed, and very little came of it before the end of the war. It is mostly massive or disseminated, but the stuff I have from the "good" mine is somewhat crystalline and rather attractive. It is rather soft, about 4.

Alunite is sulfate of potassium and aluminum. Hardness: 3.5 - 4.0. Sp G: 2.6 I have the chemical composition if anyone wants it. Alunite, also known as Alumstone, is found in Nevada, Utah and Colorado. It is a reddish pink with gray areas and has a waxy feel. The material I have used would not need to be stabilized. I do not think it would absorb stabilizer easily. The suggestion about using a stocking in polishing gypsum sounds interesting and viable. My alunite is in a sphere form and polishing was not easy due to its softness. - Mike Eggleton

The Rockhounder Editor's Note:
There are local collecting areas for alunite right outside of Quartzsite and some can usually be found for sale at Pow Wow or Desert Gardens. The following article shows and describes alunite from other locations but it looks and cuts as described. My experience is that it produces a colorful and interesting stone, and even though it is soft it takes a polish.

via Stoney Statements 2/11; The Rockhounder Jan 2016

Taconite

Taconite is a variety of iron formation, an iron bearing (>15% iron) sedimentary rock, in which the iron minerals are interlayered with quartz, chert, or carbonate. The term was coined by Minnesota State Geologist Newton Horace Winchell during his pioneering investigations of the Precambrian Biwabik Iron Formation of northeastern Minnesota due to its superficial resemblance to iron-bearing rocks he was familiar with in the Taconic Mountains of New York. The iron content of taconite, commonly present as finely dispersed magnetite, is generally 25 to 30%. In the late 19th and early 20th centuries, available iron ore was of such high quality that taconite was considered an uneconomic waste product. After World War II, much of the high grade iron ore in the Unit-ed States had been mined out, and taconite became a new source of iron. To process taconite, the ore is ground into a fine powder, the magnetite is separated from the waste rock by strong magnets, the powdered iron con-centrate is combined with a binder such as bentonite clay and limestone as a flux, and rolled into pellets about one centimeter in diameter containing approximately 65% iron. The pellets are fired at a very high temperatures to harden and make them durable. This is necessary to ensure that the blast furnace charge remains porous to allow heated gas to pass through and react with the pelletized ore. Firing the pellet oxidizes the magnetite (Fe3O4) to hematite (Fe2O3), an exothermic reaction which reduces the energy cost of pelletizing the concentrate.

The Mesabi Iron Range region of the American state of Minnesota is a major production area. The taconite iron ore pellets are hauled by railroad through the ports of Silver Bay, Two Harbors and the Twin Ports of Duluth, Minnesota and Superior, Wisconsin, all on Lake Superior. The ore is generally shipped by lake freighters to locations on the lower Great Lakes. Many steelmaking centers are located near Lake Erie.

From http://en.wikipedia.org/wiki/Taconite, via The Rock Collector 2/11, via Rockhound via Stoney Statements 2/11; via WGMS May 2018