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. 66, No. 12
December 2023

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, 7:15 pm, First Congregational Church, 1701 SW Collins Ave, 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

2023 OFFICERS AND CHAIRS

President	Brad Davenport	379-8700	Cab of the Month	Donna & Russell Hedge	620-660-1651
1st Vice Pres.	David Dillon	221-4315	Field Trip Coord.	Chuck Curtis	286-1790
2nd Vice Pres.	Cinda Kunkler	286-1790	Publicity	Donna Stockton	913-645-7677
Secretary	Stacy Haug	1-857-3350	Welcome/Registration	Harold Merrifield	633-9745
Treasurer	Millie Mowry	267-2849	Property	Chuck Curtis	286-1790
Directors	Doria Skinner	231-9347	AFMS Scholarship	Cinda Kunkler	286-1790
	Jim Baer	785-256-2432	Editor/Exchange Editor	Millie Mowry	267-2849
	Shirley Schulz	n/a	Show Chairman	Millie Mowry	267-2849
Historian	Cinda Kunkler	286-1790	Show Dealer Chairman	Dave Dillon	221-4315
Federation Rep	Chuck Curtis	286-1790	Show Secretary	Cinda Kunkler	286-1790
Corporation Agent	Millie Mowry	267-2849	Jr. Rockhound Leader	Dennis Hippe	230-6729
Librarian	Amy Fluke	862-8876	Show Case Coordinator	Cinda Kunkler	286-1790
Web Master	Chad Skinner	640-6617			

Area Code for all numbers is (785).

EXCHANGE BULLETINS WELCOME

Fodder from the President. DEC/2023

Seasons greetings.

Surprisingly I have little to say this month.

Our Christmas dinner seems to have been a hit, I think I counted 37 members there. I and several others were disappointed with the room, the food and the service. We were able to overlook these disappointments and enjoy each other's company.

I think we can do better next year. Any suggestions?

The shops will be open next week on the 19th and then January 2nd.

We have been given a couple of pieces of equipment to either use or dispose of. One is a 6" trim saw with one wheel/ pad. The other is a 4 wheel cabbing machine with 2 silicone carbide wheels, 1-pad and an expandable drum. Each are solid machines but will need some TLC. I need to go over them to check bearings and switches. Let me know if you have any interest.

Otherwise, we are done with this year. I hope your holidays are stress and drama free. Have a great NEW YEAR!!!!

Don't forget, Your dues will be due soon. Let's get them all in early this year.

Brad

Greetings Fellow Rockhounds and Field Trippers:

We will not be having a field trip (or our regular monthly meeting) in December due to our club dinner on the 1st and Christmas. Historically we have had our field trips on the Saturday following our monthly meetings. So, our next trip will be Saturday January 27. If the weather is bad we will re-schedule. Location for the trip is to be determined.

If you have any suggestions for field trip locations please let me know.

Chuck Curtis, Field Trip Coordinator.

Our New Members are:
Akayla Criqui
Andy Connolly

TTGMS Event Calendar

DEC. 2023			JAN. 2024		
1	F		1	M	NEW YEARS DAY
2	S		2	T	Brad's Shop Open 6-10 pm
3	S		3	W	
4	M		4	T	Jr RHDS 6 p.m. at FC Church 1701 SW Collins
5	T		5	F	
6	W		6	S	
7	T		7	S	
8	F		8	M	
9	S		9	T	Brad's Shop Open 6-10 pm
10	S		10	W	
11	M		11	T	
12	T	Brad's Shop Open 6-10 pm	12	F	Board Meeting Millie's 7 p.m.
13	W		13	S	
14	T		14	S	
15	F	Jr RHD Mtg of Leaders at Millie's 7 p.m.	15	M	
16	S		16	T	Brad's Shop Open 6-10 pm
17	S		17	W	
18	M		18	T	
19	T	Brad's Shop Open 6-10 pm	19	F	
20	W		20	S	
21	T		21	S	
22	F		22	M	
23	S		23	T	Brad's Shop Open 6-10 pm
24	S		24	W	
25	M	**CHRISTMAS DAY**	25	T	
26	T	Shop CLOSED	26	F	General Mtg. Gather 7:15 p.m. FC Church 1701 SW Collins
27	W		27	S	
28	T		28	S	
29	F		29	M	
30	S		30	T	Brad's Shop Open 6-10 pm
31	S	NEW YEARS EVE	31	W	

As A Reminder!

If you are wanting to take a class in Silversmithing or wire wrapping you are to call either Jim Baer at 785-256-2432 or email him at jimbaer73@gmail.com, for wire wrapping contact Millie Mowry at 785-267-2849 or email rock2plate@aol.com the Monday before class to let them know you will be there.

JR ROCKHOUND Classes & Reminders

Here are reminders of the next months of classes: **First Congregational Church, 1701 SW Collins Ave., Topeka, KS.** Sign in starting at 6:00 pm and classes starting at 6:30 pm. 1st Thursday of each month.

https://www.facebook.com/TopekaGMSJuniorRockhounds
To register for the Junior Rockhounds or any of the classes, email:
Dennis Hippe at: go.purple@hotmail.com

Next Class: Jan 4, 2024 To Be Determined

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

Dillons Community Reward Program

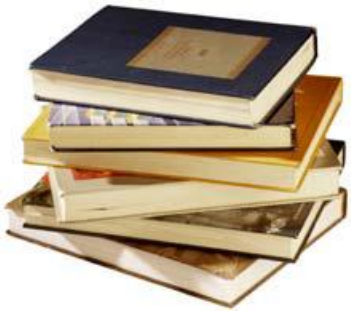
The Topeka Gem & Mineral Society has enrolled with the Community Rewards with Dillon's Store. You can enroll your shopper's card at: www.dillons.com/communityrewards once you sign up it will take about 7 to 10 days to be activated and our Club to start earning the rewards. At the bottom of your Kroger receipt you will notice "At your request, Kroger is donating to 'your organization name'.

1. You will have to re-register each year.

If you have any other questions email DCR@dillonstores.com

Kroger Reports

To June 2023.....5 Households signed up..... Rebate of $49.70
July to Sept 2023.....7 Households signed up..... Rebate of $29.68



Book Review From Our Librarian!

In the TTGMS Library there are well over 100 books to choose from That cover a vast array of subjects of lapidary art and geology.

Well worth the read, and can be checked out thru the TTGMS Library by sending an email to Amy at Jayhawk1072@gmail.com

This is a Reminder!

There is no December General Meeting as the Christmas dinner served as the meeting. The next meeting will be January 26th, 2024. The program for our January meeting will be Silent Auction. If you have rocks, slabs, cabs - any rock related items that you want to contribute to TTGMS please bring them to add to the Silent Auction.
Cinda

Here Are Just A Few Of The Rocks, Minerals and Metals That Affect Our Lives Every Day.

Con't from the Nov 2023 issue of the Drifter.

Soda Ash

Soda Ash and trona (see below) are both sodium carbonate. Soda ash is used in the manufacturing of glass containers, fiberglass, specialty glass and flat glass. It is also used in the paper making process, in liquid detergents, in medicine, as a food additive, and in cleaning compounds.

Sulfur

Used in the manufacture of fertilizer (necessary to grow our food), chemicals, in manufacture of sulfuric acid, in papermaking, film, tires, paint, detergents, explosives, matches, drugs and dyes.

Titanium

As a metal – because of it's light weight, strength and heat resistance, titanium is primarily used in the manufacture of such items as jet engines, aircraft frames and space and missile components. You most often come inContact with titanium in its form as titanium dioxide – the whitest substance know. Titanium dioxide has thousands of applications as a "whitener" in items such as paint, in food items such as sugar and candy and in toothpaste.

Trona

Trona is a primary source of sodium carbonate. It is used in the making of toothpaste, in glass and paper making, in soaps and detergents, in the treatment of water for domestic use and in the manufacture of a number of chemicals. One of its most important applications is its use in baking soda and baking powder, a necessary ingredient in making bread, cookies, cakes and most other baked goods. You "eat" this rock every time you have a sandwich, a cookie or piece of cake.

Tungsten

Tungsten is used in steel making and thus in all the items constructed of steel that require the hardness and other characteristics provided by tungsten-steel alloys. It is applied on metalworking, construction and electrical equipment; in transportation equipment, as filaments in light bulbs, and as components of dyes, enamels and paints and for coloring glass.

Vanadium

Vanadium is used in metal alloys for aerospace applications.

Zeolites

Zeolites have some unique absorption and neutralizing characteristics. They are used in kitty litter for order control and in fish hatcheries for removing ammonia form the water to protect the fish.

Zinc

"Copper" pennies are actually mostly zinc. One of the primary uses of zinc is as a protective coating on steel used to manufacture things such as automobile frames and bumpers to prevent corrosion and oxidation (rusting). It is also used as an alloy metal with copper to make brass, and for "galvanizing" iron used in making nails and roofing material that will not corrode when exposed to the weather.

(Source LG&MS Rockytier Dec 2012)

For those members that joined before October 2023. If in question see Millie.
Call 785-267-2849 or rock2plate@aol.com.

Dues are now due.

The Topeka Gem & Mineral Society
General Meeting, November 17, 2023 at 7:30 p.m.

Call to Order: President Brad Davenport calls the meeting to order at 7:32 p.m. Harold Merrifield reports there are 30 members present. Four door prizes are given out.
Approval of Minutes: Minutes from the previous meeting were printed in The Drifter. Chuck Curtis moves to accept the minutes as written, Will Gilliland seconds. Motion carries.
Treasurer's Report: Millie reports the club balance. No bills are presented. She is accepting membership dues for 2024 at this time.
Old Business: Christmas Dinner is at the Viking on December 1st at 6:00 p.m. We will be in the small party room.
Membership dues are due. Brad asks everyone to take care of this ASAP.
Communications: Andy Connolly sent an email regarding the field trip tomorrow at 10:00 at Mount Mitchell Heritage Prairie Park in Wabaunsee County. Kirby Marker is keeping a spot open for the club in late February to March. This will be a glacial till hunt at a brand-new location.
Show: We will no longer be having a yearly theme for the show. It will simply be listed as "The ____ Annual" Show
Publicity: Nothing new to report. The next meeting is scheduled for Wednesday, November 29th.
Juniors: Dennis Hippe has been appointed as the new Junior's Coordinator. He will be taking over the position for Jason Schulz. Brad thanks Jason for his years of service. We need to set up a time for a meeting for teachers - can swap classes, bow out, join in to teach, etc.
Webmaster: Brad announces that Chad Skinner has been appointed as the new Webmaster. If anyone has pictures of club events, shows, dinners, etc., Chad would like them sent to him electronically (email, flash drives, etc.) Brad will send Jason's contact information to Chad.
Shop: The 8-inch oil saw will be out-of-service until the new parts come. There has continued to be good turnout from club members. There has generally been enough room for everyone to participate.
Historian: Nothing new to report.
Membership: Yearly membership dues are due. Matt has been advertising the club as much as he can and has 3 people who would like to sign up.
Time-Sensitive: There is a field trip scheduled for tomorrow at 10:00 a.m. Christmas dinner will be on the 1st. Brad reminds members to vote on Cab of the Month, Specimen Of the Month, etc.
New Business: Coordinators for Lawn & Garden Show asked if we would like to participate at their next show. This could possibly be in the form of a presentation.
Tonight is elections. Chuck is the Chairman of our Nominating Committee and hands out ballots to each member present. All officers have agreed to hold their positions. Anyone who wants to be an officer is encouraged to step up.
Will Gilliland brought in a display on crinoids that is available for members to look at tonight.
Adjournment: With nothing further to discuss, a motion is made to adjourn the meeting, Matt seconds, Meeting is adjourned at 7:57 p.m.

Submitted by: Stacy Haug, TTGMS Secretary

Ken's Chemistry Corner: All about Tungsten

-Tungsten (W) was discovered in 1781. Buckle up for the naming history of this one... Tungsten means 'heavy rock' in Swedish and was used for several minerals with very high density. Similarly, there was a mineral called wolframite. It was named in the 1500's from the German 'wolf's froth' because it 'devoured zinc like a wolf' during its extraction. In 1781, Carl Wilhelm Scheele discovered a new metal in the mineral 'tungsten'. In 1783, the same metal was extracted from the mineral wolframite. Both tungsten and wolfram were used as names, hence tungsten retaining its chemical symbol of W even today. To lessen confusion, the mineral 'tungsten' was re-named scheelite, for the chemist who discovered tungsten from 'tungsten', Carl Wilhelm Scheele. See, clear as mud!
-Tungsten is quite rare, making up only 1-2 ppm of the Earth's crust. While there are some very rare tungsten minerals, the two mentioned above are the only ones with industrial importance. Scheelite is calcium tungstate and wolframite is iron-manganese tungstate, more correctly described as a solid solution of two minerals, ferberite (iron tungstate) and hubnerite (manganese tungstate).
-China is the world's largest producer of tungsten, followed distantly by Vietnam and Russia. Smaller deposits have also been important historically. As I will describe below, tungsten has been very important during war times since World War I. During World War II, Spain supplied much of Germany's tungsten.
Because this single export made up 20% of Spain's total export profit, it took the allies several years to convince them (and sanction them) to stop the supply. It is thought that this helped turn the tide of the war in 1944, just before D-Day. The UK also has its own tungsten deposit, which allowed it to produce armaments in both World War I and World War II. Canada was also a leading producer, but its single tungsten mine shut down in 2015.
-Tungsten is a very useful metal. It has the highest melting point of any metal (3422°C, 6192°F). It also has the highest tensile strength and lowest coefficient of thermal expansion, meaning it is very strong and doesn't change size under extreme temperature changes. Further, it is as dense as gold and uranium.
Not being able to melt it under normal conditions makes it difficult to work with, but it can be powdered (although strong, it can be quite brittle) and alloyed with nickle at reasonable temperatures.
-Its military applications are the same as we listed with depleted uranium, but without the drawbacks of radioactivity. These include armor piercing shells, grenades and bullets. Germany revolutionized using small bore tungsten shells from light-weight artillery to take out large heavy tanks, until their tungsten supply was cut off during World War II. 'High-speed steel' contains up to 18% tungsten and is used for high temperature applications such as rocket nozzles. Other alloys are used in turbine blades, radiation shielding and arc welding applications.
-Tungsten metal was used as the filament in the first light-bulbs, enabling Edison to make a reliable bulb. It is also used where a dense metal is needed, especially since the use of lead has dropped. This includes counterweights, fishing sinkers, and ballast for aircraft, ships, and even Formula One cars.
Since tungsten is the same density as gold, it has classically been used to counterfeit gold, because it is difficult to tell that a gold-plated tungsten bar isn't pure gold just from feel.
-Although not used by complex life forms, some bacteria use tungsten-containing enzymes, making it the metal with the highest molecular weight used by living creatures.

Source: Oklahoma Mineral and Gem Society, Nov, 2023

DUES ARE DUE

Vanadinite

(From Wikipedia)

Vanadinite is a mineral belonging to the apatite group of phosphates, with the chemical formula Pb5(VO4)3Cl. It is one of the main industrial ores of the metal vanadium and a minor source of lead. A dense, brittle mineral, it is usually found in the form of red hex agonal crystals. It is an uncommon mineral, formed by the oxidation of lead ore deposits such as galena. First discovered in 1801 in Mexico, vanadinite deposits have since been unearthed in south America, Europe, Africa, and North America.

Vanadinite is an uncommon mineral, only occurring as the result of chemical alterations to a pre-existing material. It is therefore known as a secondary mineral. It is found in arid climates and forms by oxidation of primary lead minerals. Vanadinite is especially found in association with the lead sulfide, galena. Othe associated minerals include wulfenite, limonite and barite. [2] [4]

It was originally discovered in Mexico by the Spanish mineralogist Andres Manuel del Rio in 1801. He called the mineral “brown lead’ and asserted that it contained a new element, which he first named pancromium and later, erythronium. However, he was later led to believe that this was not a new element but merely an improved form of chromium. In 1830, Nils Gabriel Sefstrom discovered a new element, which he named vanadium. It was later revealed that this was identical to the metal discovered earlier by Anderes Manuel del Rio. Del Rio’s ‘brown lead” was also rediscovered in 1838 in Zimapan, Hidalgo, Mexico, and was named vanadinite because of its high vanadium content. Other names that have ever since been given to vanadinite are johnstonite and lead vanadate.

Crystals of Vanadinite conform to a hexagonal system of symmetry. This internal structure is often reflected in the hexagonal external shape of the crystals. The crystals are usually in the form of short hexagonal prisms, but cin also be found as hexagonal pyramids, rounded masses or crusts.

Along with carnotite and roscoelite, vanadinite is one of the main industrial ores of the element vanadium, which can be extracted by roasting and smelting. Vanadinite is also occasionally used as a source of lead.

References: [3] Anthone, John W.; Bideaux, Richard A/; Bladh, Kenneth W.; Nichols, Monite, C Eds (2000). “Vanadinite”. Handbook of Mineralogy PDF).IV (Arsenates, Phosphates, Vanadates). Chantilly, VA; U.S. MINERALOGICAL Society of America. ISBN 0962209732.
[4] Treasures of the Earth: The Minerals and Gemstone Collection – Vanadinite factsheet. Orbis Publishing Ltd. 1995
[5] J.A. Perez-Bustamante di Monasterio (1990) “Highlights of Spanish chemistry at the time of the chemical revolution of the 18th century”. Fresenius’ Journal of Analytical Chemistry, 337 (2): 225-228. Doi:10.1007/BF00322401.
Source: The Independence Gem & Mineral Soc. Dec. 2023

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