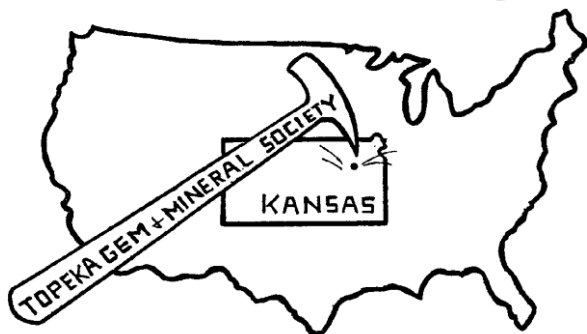


The Topeka Gem and Mineral Society, Inc.  
 1934 SW 30<sup>th</sup> St. Topeka, KS 66611  
 Rock2Plate@aol.com

# 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. 65, No. 5  
 May 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: 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)

## 2022 OFFICERS AND CHAIRS

President	Brad Davenport	379-8700	Cab of the Month	Donna & Russell Hedge	620-660-1651
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	Donna Stockton	913-645-7677
Secretary	Stacy Haug	1-857-3350	Welcome/Registration	Harold Merrifield	633-9745
Treasurer	Millie Mowry	267-2849	Property	D. Dillon	272-7804
Directors	Chuck Curtis	286-1790	AFMS Scholarship	Cinda Kunkler	286-1790
	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
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 the president. May/22

Howdy everyone.

Great things are happening with your club. Three things I want to make you aware of.

May 27<sup>th</sup> is our next general meeting and you don't want to miss it. Our program will be covering the history of the Tri-State Mining District. Marvin Dahmen will present the program with lots of interesting history, some good humor and a line-up of old tools and relics from the period. It will be a really great program. Marv has over 3,000 items he has collected through the years (He won't be bringing them all). One item predates Columbus wading ashore in the Caribbean.

In the past we only had picnics June-August because Washburn was not available to us. This will be changing. Instead of everyone eating and then just going home, we will be having some activities following dinner. In June we are going to have a Rock-Swap. So, bring in some of your extra materials or rocks you have grown tired of. A trade only works if you have something to trade with. So, for those of you bringing materials, you need to set some level of value so you might sell them to those who don't have something to trade with. So come early to set up with your treasures before dinner. Some of us will be selling stuff with the proceeds going to the club. There promises to be some great items available.

Activities for July and August will be announced later so watch the Drifter and your emails.

The third item we are changing is a new category for our monthly competition's. On top of "Cab of the Month" and "Jewelry of the Month", we will have "Specimen of the Month". This is going to be kind of a wide-open event. Many of you don't Cab or make jewelry but most of you have your favorite agate, fossil, crystal or rock shaped like a giraffe. Here is your chance to show them off. We would like to see you write a brief description of your specimen as to what it is, where you found it, what you may have done to prepare it, how it makes you feel, what you learned about it etc. etc. Good humor will be more than welcome. I think this can be a lot of fun. I would say that the only restriction would be that it is not something you just bought at a rock shop.

On a side note, the shops are not being utilized to their capacity. The weather is mighty nice now and the air conditioning is on. So come on out.

Brad

We need your **BEST CHOICE** UPC Labels --

Bring them to the monthly meeting, and give them to Cinda Kunkler.



# TGMS Event Calendar

MAY 2022			JUNE 2022		
1	S		1	W	Publicity Meeting-Elmont Church 7 p.m.
2	M		2	T	Jr Rockhounds, UUMC 6 p.m. sign in
3	T		3	F	
4	W		4	S	
5	T		5	S	
6	F		6	M	
7	S		7	T	Brad's Shop Open 6-9:30pm
8	S		8	W	
9	M		9	T	
10	T		10	F	No Board Mtg.....
11	W		11	S	
12	T		12	S	
13	F		13	M	
14	S		14	T	Brad's Shop Open 6-9:30pm
15	S		15	W	
16	M		16	T	
17	T	Brad's Shop Open 6-9:30pm	17	F	
18	W		18	S	
19	T		19	S	
20	F		20	M	
21	S		21	T	Brad's Shop Open 6-9:30pm
22	S		22	W	
23	M		23	T	
24	T	Brad's Shop Open 6-9:30pm	24	F	General Meeting UUMC 7:30 p.m.
25	W		25	S	
26	T		26	S	
27	F	General Meeting UUMC 7:30 p.m.	27	M	
28	S		28	T	Brad's Shop Open 6-9:30pm
29	S		29	W	
30	M	Memorial Day	30	T	
31	T	Brad's Shop Open 6-9:30pm			

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)

**ALL MEMBERS.....SAVE THE DATES.....**  
**OCT 7 thru 9<sup>th</sup>, 2022**

That is when our club show happens and we need EVERYONE to HELP not just for an couple of hours. Tell your boss you're sick, play hooky from work, take vacation days but we need your help. Sign up sheets will be available soon.

## 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: June 2, 2022 Collecting.....Cinda Kunkler/Millie Mowry

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



The Junior Rockhounds are invited to a field trip on Saturday, May 21. We will meet at 9:00 A.M. at the 24/7 Service Station, Maple Hill Exit off I-70. This is a joint field trip with the 4-H geology project members. The collecting locations will be westward along I-70. Most specimens collected will be rocks and fossils. A few minerals and plant fossils may be found. Plan to have food and drinks for lunch if you attend the entire trip. If you plan to attend, please e-mail Will Gilliland at [gillilandp@aol.com](mailto:gillilandp@aol.com) so that I can prepare enough field trip guides.

Will Gilliland



The Sertoma Duck Race has started for 2022

<https://www.duckrace.com/topeka>

Purchase your Ducks under Topeka Gem & Mineral as it is our only fund raiser of the year.

The Race is September 17, 2022 at Lake Shawnee.

Topeka Gem & Mineral Society  
General Meeting April 22, 2022 @ 7:30 p.m.

Brad Davenport called the meeting to order at 7:31 p.m. There are 31 members present.

**Approval of Minutes:** Copies of minutes from last month were provided to members. Jason moved to approve minutes, Chuck seconds. All in favor. Motion passes.

**Treasurer's Report:** Millie Mowry reports the club account balance. There are no outstanding bills.

**Old Business:** We are still working on our corporate change; paperwork is almost ready to file. Cinda will contact Mary Thomas on Monday with a few questions. The club is registered under the name The Topeka Gem & Mineral Society.

**Communications:** Cinda notes that Mary Thomas has been helping us with the 1023 paperwork. She also reports receiving correspondence from RMFMS thanking us for our donation in memory of Dr. Parnell. To date, TGMS donations to RMFMS total \$15896.80, which is equal to \$1/member for 158 years.

**Show Committee:** Dave reports we currently have 7 to 9 dealers. More contracts are out, but they are slow in returning them to us. Magnetic signs for vehicles will be updated; these help us advertise. Dave also has a contact who is working on sample bumper stickers for the club; we will have 500 printed. We need many club members involved with working at the show: set-up on Friday, various activities on Saturday & Sunday (tables for silent auction, scholarship, Junior Rockhounds, demonstrations, etc.), and tear-down on Sunday night. There will be sign-up sheets. Participation from many club members is essential. If anyone has ideas for the show, contact Dave.

**Junior Rockhounds:** Last meeting was on April 7th. The class was "Stone Age Tools & Art"; Brad taught the kids how to make baskets. Next class is May 5th - "Field Trips" - taught by Pat.

**Web Master:** nothing new to report.

**Shop:** There has been great participation at the shop. New members have been coming. We may look at setting up one or two Saturdays/month at the shop as clean-up days.

**Historian:** nothing new to report.

**Public Relations:** Donna Stockton reports the PR Committee has been formed. She will be reaching out to people who signed up last month to schedule time/place to meet. We will be starting this committee again all over from scratch. Ideas for advertising are welcome, contact Donna.

**Membership:** We have had new people join. The new club roster was sent out with the Drifter.

**Field Trips:** Will reports there is nothing planned right now. He is working on setting up a field trip for Jr. Rockhounds next month. He will continue to work on more club field trips after the first part of June. Tom Hammer with Topeka Parks & Rec asked Will to help with setting up a sign at Dornwood Park. He also reports quite a few TGMS pamphlets were picked up by people at the Dino Days displays at Visit Topeka & the Great Overland Station.

With nothing further to discuss, Chuck makes a motion to adjourn, Sammy seconds. All in favor. Meeting is adjourned to the program "Precious Metal Clays" by Jim Baer.

Submitted by Stacy Haug, TGMS Secretary

Brad Davenport



Millie Mowry



Russell Miller



Donna Hedge



Cabs - Jewelry - & Specimens of the Month of April 2022

## *Wulfenite is Loved ... Our 2019 TGMS Show Theme*

By Peter Megaw, Tucson GMS Exhibits Chair

Wulfenite ( $PbMoO_4$ ) is as Arizonan as Saguaros, Gila Monsters and Snowbirds...and in 2017 was officially recognized by our Legislature as our Official State Mineral. This puts it in company with Petrified Wood as our state fossil, Turquoise as our state gemstone, the Bolo Tie as our state neckwear and Copper as our state metal. In one way or another all these “official state” designations are an outgrowth of our hobby and Show and reflect the maturing of tastes...with mineral *specimens* finally getting the recognition they deserve!

So why “*Wulfenite is Loved*”? The answer goes back to the late 60s when some (presumably successful) mineral collector scrawled *PbMoO<sub>4</sub> is LOVE* (no “D”) on an old shed at the Red Cloud Mine...arguably the world’s finest wulfenite locality. Photographs of this graffiti appeared in the mineral collecting magazines and spawned bumper stickers (now serious collector’s items) that graced collector’s vehicles until they disintegrated under our fierce Arizona sun. So when our Legislature decided to recognize wulfenite as our State Mineral it seemed right to recognize that love, update the bumper sticker slogan with that missing “D”, and make it our Show Theme as quickly as possible. As it turned out 2019 was as soon as we could do it.

Mineralogically, wulfenite is lead molybdate and forms in the oxidized, near-surface parts of lead-zinc-silver-gold deposits...of which we have many in Arizona! When originally described from the Bleiberg (Lead-Mountain) District in Austria, it was called “*plumbum spatosum flavo-rubrum*” but mercifully it was renamed “wulfenite” in 1845 in honor of Franz Xaver von Wulfen who had written extensively on the ores of Bleiberg (<https://www.mindat.org/min-4322.html>). Wulfenite crystallizes in the tetragonal system (remember this year’s show theme?) as flat, square, tabular plates, often with pyramidal bevels along the edges. Elongate, dipyramidal crystals are locally common and pseudo-octahedral examples are known. Twinning is common but inconspicuous. Although wulfenite has a high index of refraction and is often transparent and gemmy with bright yellow, orange and red colors, it is a poor gemstone because it is soft (2.5-3) and brittle. Nonetheless, it makes very attractive faceted stones for the careful collector. Careful is the watchword for wulfenite collectors as it often forms spectacularly beautiful...but equally fragile groups of crystals on crumbly matrix. (Los Lamentos, the famous Mexican wulfenite locality is a notable exception to this.)

Many wulfenite occurrences are characterized by enormous open cavities lined with yellow, orange or red crystals...often growing to several inches across. Until just after WWII, wulfenite was one of our major sources for molybdenum (which gives stainless steel strength at high-temperatures and corrosion resistance) so tragically, some large wulfenite occurrences were mined and processed simply for their molybdenum content. The famous Tiger Mine, just north of Tucson, produced 6.3 million (!) pounds of molybdenum oxide ( $MoO_3$ ) ([www.janrasmussen.com/pdfs/Arizona%20Wulfenite.pdf](http://www.janrasmussen.com/pdfs/Arizona%20Wulfenite.pdf)). That means at least 8,500 tons of wulfenite were mined, which jibes with stories of miners raking bright orange wulfenite crystals off the walls and shoveling them into wheelbarrows to haul to the smelter!



Wulfenite con't:

[For a really scary perspective, this would make a solid cubic wulfenite crystal about 35 feet on an edge] Fortunately, after WWII, metallurgists and miners figured out that it was easier and cheaper to extract molybdenum from the sulfide mineral *molybdenite*...which occurs in HUGE deposits like the Porphyry Copper mines around Tucson...so our remaining wulfenite occurrences were left for collectors to enjoy. Curiously, for some reason wulfenite does not typically form in *molybdenite*-rich systems, a fact which has been well documented by scientists at the Arizona Geological Survey...including our own Jan Rasumssen (then Wilt) (See Wilt, Keith and Theodore, 1984:

<https://pubs.usgs.gov/of/1984/0830/report.pdf>).

For equally mysterious reasons, Arizona and neighboring parts of northern Mexico are exceptionally well endowed with wulfenite occurrences...including many of the world's best known: Red Cloud, Glove, Los Lamentos, Rowley, San Francisco, Tiger, Ojuela, Defiance-Silver Bill, Santa Eulalia, Hilltop and Tucson's own Old Yuma Mine. A good guess is that a combination of long-lived arid conditions and slow, but deeply penetrating oxidation acting on rocks and mineralization of the right compositions led to this preponderance of wulfenite occurrences, a supposition that might be borne out by comparison with other places where wulfenite abounds like the deserts of southern Africa, Iran, Australia and China.

Because wulfenite is such an attractive and popular collector species it is very well represented in the mineral collecting literature. Articles focusing on wulfenite in particular regions like Arizona are worth boning up on (cf, see Rasmussen reference above) and Lithography's books *American Mineral Treasures* and *Collecting Arizona* that went along with our 2008 and 2012 Shows feature superb in-depth articles on specific Arizona wulfenite localities. *Mineralogical Record* has featured articles on specific localities practically since its inception (See especially the Arizona and Mexico Special Editions). As always, *Rocks and Minerals* February issue spotlights our Show Theme, so next year's issue will feature Arizonan and Mexican wulfenite locality articles written by familiar names...like TGMS VP Les Presmyk...and me!

*Via The Tucson Gem & Mineral Society, Rock Talk, Sept/Oct 2018; via WGMS Nov 2018*

## Oddities of the Mineral Kingdom

**ITACOLUMITE:** the rock that bends. It will bend and when turned over will bend in the opposite direction. No known practical use has been found for this bend rock, but it is a source of gold and some diamonds in Brazil and India. It is also found near clay with diamonds in it in these countries.

Itacolumite is a metamorphic rock. The rock is a most extraordinary kind of sandstone and will bend under its own weight and slabs of it will bend even if the slabs are thick. The rock's flexibility is caused by symmetrical quartz grains which interlock and, therefore, rotate against each other when it bends. There is also some mica in it that helps as elasticity for the bending. Minerals of chlorite and talc are also found flexible. Itacolumite is porous to some degree from the water running through the veins in the rock.

**BENTONITE:** the rock that swells. This rock, when put in water, will swell, taking up some five times its own weight, and can enlarge to 50 times its own volume.

Bentonite is a clay mineral, which makes it soft and slippery. The Black Hills region has beds of this mineral and they have a very wrinkled look when viewing them, as there is hardly any vegetation growing on them.

Bentonite is mined with mechanical shovels used for industrial purposes. Bentonite is used by oilmen in filling the pores in rocks in which they are drilling for oil. It filters and also purifies some commercial products and holds molding sand together. It is also used as a paper filler/carrier for use in such things as drugs and in farm ponds to prevent leakage. There are many other uses as well. Utah is one of the sources of bentonite.

**MAGNETITE:** The mineral, magnetite, used in compass needles has been found in Monarch butterflies. This discovery may help explain the well-known yearly migration of this species from eastern North America to Mexico.

Source: The Rock Rattler, 2/92 via Pick and Pack, 2/02 via Rockhound Ramblings 5/06



# Birdseye Marble

in the Manti-La Sal National Forest, Utah County.

**Geologic Information:** Approximately 58 to 66 million years ago (Paleocene epoch), a large body of water known as Lake Flagstaff covered parts of northeastern and central Utah. This lake deposited a sequence of sediments that formed rocks known as the Flagstaff Formation.

Although these rocks are technically a limestone, the building stone industry has termed this deposit a "marble." The rocks are rich in algal ball structures commonly known as "birdseyes." These birdseye features were formed by algae that grew around snail shells, twigs, or other debris. The algae used these objects as a nucleus, forming into unusual, elongated, concentric shapes.

**How to get there:** From Salt Lake City take I-15 south approximately 50 miles to Spanish Fork (exit 261). Travel east and proceed up Spanish Fork Canyon (Rte 6) for about 13.5 miles to Hwy 89. Make a right onto Hwy 89 and go south about 5.8 miles until you see a gravel road to your left. At the entrance to the gravel road, a sign is posted for the Birdseye Marble Quarry, which is under claim and closed to all collecting. Don't let this discourage you because the Birdseye Marble Quarry is not part of our collecting area. Turn left at the gravel road and proceed until you reach a gate. This gate marks the beginning of Forest Service Road 126. Before you proceed up the road, remember to close the gate after yourself. Continue up this road for about 1.5 miles until you see a sign indicating that you have crossed into the Forest Service lands.

**Where to collect:** Specimens can be found along the road just after crossing the Forest Service boundary. Some of the birdseye marble contains cores of snail fossils, which have been replaced by the mineral calcite. This material takes a great polish and is ideal for making unusual decorative bookends.

**Useful maps:** Nephi 1:100,000-scale topographic map; Birdseye 1:24,000-scale topographic map; Manti-La Sal Forest Service map covering the Sanpete, Ferron, and Price ranger districts; and a Utah highway map. Topographic and Forest Service maps can be obtained from the Natural Resources Map & Bookstore, 1594 W. North Temple, Salt Lake City, UT, (801) 537-3320 (or 1-800-UTAH-MAP).

**Land ownership:** Manti-La Sal National Forest.

**Forest Service collecting rules:** Rock, mineral, and fossil collecting on lands managed by the U.S. Forest Service generally requires a permit. However, small amounts of material for personal use, such as 2 to 3 pieces, can be collected without a permit. If you fall in the category of needing a permit, it can be obtained at the Manti-La Sal National Forest office, Monday through Friday from 8:00 a.m. to 4:30 p.m. at 599 West Price River Drive, Price, UT, (435) 637-2817 or (435) 637-3521.

**Miscellaneous:** Remember to bring plenty of water and a first aid kit in case of emergencies. The usual rockhounding tools are needed: gloves, hammer, wrapping paper, and safety glasses. Most importantly, be patient and have fun!

**Author: Carl Ege**

Taken from: [geology.utah.gov](http://geology.utah.gov), via Wasatch Gem Society