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. 64, No. 6,
June 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 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	
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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 .

Ramblings from your President.

Howdy all.

My plan is for you to be reading this while I am in Big piney WY for the big show and convention. I really don't know what all I am supposed to be doing up there but I don't think I can go too far astray Cinda & Chuck will also be up there as well. Cinda has been doing this most all of her life so she will probably keep an eye on me. I haven't been in the mountains for thirty years or so and I am pretty excited to head that way.

Also, on the road this month are Sammy & Sam Wall. They are on a five-week rock and fossil adventure. They will be hitting some of the premiere rock sites in several western states. I hope they take lots of photos and share their stories with us when they return.

I hope there are others of you getting out and enjoying our late spring and early summer. Maybe some fishing. I think I am going to see a ton of cool blue clear flowing water. I won't be packing a rod. Maybe some of you are starting to reap the benefits of planting early gardens. Boating & swimming also has an appeal this time of year as well. I hope some of you will be enjoying some water as well.

On June 25th we will be starting our summer picnics. We will be going back to the covered dish format and we will be meeting at the church. You will need to bring your place settings, drinks as well as a covered dish.

If you wish to bring some rocks, fossils or minerals for show and tell or for identification, please do. What would all of you think about a rock swap for July's picnic? Let me know.

I guess that's all for now. So until next month, enjoy yourselves.

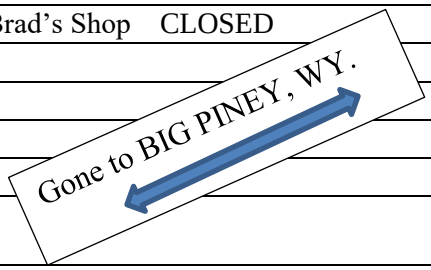
Brad

Summer Time Picnics—June July August

No formal meeting during these months, just a friendly pot-luck dinner among our rock friends. Bring a dish or two to share, your own table service, soft drink. We will meet at the UUM Church at 1621 SW College, Topeka, and eat at 6:30 p.m. on the 4th Friday of the month.

TGMS Event Calendar

JUNE 2021			JULY 2021		
1	T		1	T	Jr. RHD's UUMC 6 p.m.
2	W		2	F	
3	T		3	S	
4	F		4	S	
5	S		5	M	
6	S		6	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
7	M		7	W	
8	T		8	T	
9	W		9	F	
10	T		10	S	
11	F		11	S	
12	S		12	M	
13	S		13	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
14	M		14	W	
15	T	Brad's Shop CLOSED	15	T	
16	W		16	F	
17	T		17	S	
18	F		18	S	
19	S		19	M	
20	S		20	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
21	M		21	W	
22	T	Brad's Shop CLOSED	22	T	
23	W		23	F	**POT-LUCK PICNIC 6:30 P.M. UUMC**
24	T		24	S	
25	F	**POT-LUCK PICNIC 6:30 P.M. UUMC**	25	S	
26	S		26	M	
27	S		27	T	Brad's Shop OPEN 6 PM Wear Masks, have shots
28	M		28	W	
29	T	Brad's Shop OPEN 6 PM Wear Masks, have shots	29	T	
30	W		30	F	
			31	S	



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: July 1, , Instructor

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

Bring rocks, Fossils or minerals for show and tell or ID to the June 25th picnic.

The special speaker at the July 23rd picnic will be, Donna Doel, Assistant Coordinator 24 For Life, A Diabetes Prevention Program by Midland. We will have a rock swap after the program in July.

Cinda Kunkler cindakunkler@att.net

Welcome Back:

Mandy Harmon and *Emma Reynolds

BEST CHOICE
0 70038 30349 7

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

AFMS BULLETIN EDITORS HALL of FAME

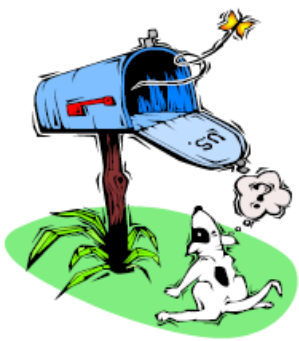
Each year the regional federation hosting the AFMS Show & Convention is given the opportunity to nominate outstanding editors to the AFMS Bulletin Editors Hall of Fame. Shirley Leeson, the AFMS Bulletin Editors Hall of Fame chair (and creator) contacted me in December 2020 requesting nominees. Here are the names of RMFMS editors who will be inducted into the Hall of Fame this year:

- Amber Brenzikofer, Colorado Mineral Society, *CMS Mineral Minutes*
- Chris Whitney-Smith, Mineralogical Society of Arizona, *The Rockhound Record*
- Dennis Gertenbach, Flatirons Mineral Club, *Flatirons Facets*
- Millie Mowry, Topeka Gem & Mineral Society, *The Glacial Drifter*
- Pete Modreski, Friends of Mineralogy, Colorado Chapter, *Friends of Mineralogy Colorado Chapter (FMCC)*
- Sandy Whiting, Wichita Gem & Mineral Society, *Quarry Quips*

Meteoroid, Meteor, Meteorite: What is the Difference?

from Diamond Dan's Mini Miners Monthly, March 2021, Vol. 13, No. 3

When a space rock is moving through space it is known as a meteoroid. When a meteoroid enters earth's atmosphere it heats up due to the friction created when it rubs against molecules in the atmosphere. This is what some call a "shooting star." As it burns up in the atmosphere, a long tail of light appears behind it. This is called a meteor. There are times when a meteor is big enough that when it travels through earth's atmosphere long enough it will hit the earth. When a meteor hits earth's surface, it is then called a meteorite.



Do you have a change of address or email or phone number? Let the editor know so that you will be kept current with the newsletter and notices that are sent.

Millie Mowry, rock2plate@aol.com or 267-2849 & leave a message.

Brecciated Jasper History

The word "jasper" is derived from the Greek word *iaspi* meaning "spotted stone," related to the Hebrew *jashpeh* and the ancient Assyrian word *ashpu*. Jaspers were worn by Egyptian priests in amulets covered with inscriptions from their Book of the Dead and wrapped up with mummies for protection in the afterlife.
The Minoans of Crete carved seals for the palace of Knossos of jasper.
Jasper was the 12th stone in the breastplate of the Hebrew High Priest, and is said to be the foundation stone of New Jerusalem.
Some Native American tribes used jasper to dowse for water and to call rain.
"Brecciated" comes from "breccia"--a geology term used to identify rock composed of broken fragments cemented together into a fine-grained matrix. Brecciated jasper is made when the earth melds sharp-angled fragments of stone together, just like a hearty stew includes carrots, potatoes, onions and other chunks in a lentils base.

Brecciated Jasper Metaphysical Properties

Jasper was popular in the ancient world for its medicinal and spiritual values, and has been used for centuries by cultures around the world for its unique properties. Legend has it that jasper would drive away evil spirits and protect against snake and spider bites. In the fourth century, jasper was called "the great rain bringer."
Medicinal values attributed to jasper include an ability to strengthen the stomach and provide cures to gynecological issues.
Brecciated jasper is also thought to provide mental clarity and focus to its wearer. The uplifting stone may help to increase organization and decrease stress. Jaspers in general have been viewed as symbolizing the variety that is the Earth, and all the balance and grounding that implies.

Brecciated Jasper Geological Properties

Jasper is a variety of quartz that may contain up to 20 percent foreign materials or inclusions, including organic material and mineral oxides, which determine the color, pattern and appearance of the stone. Uniformly colored jasper is uncommon but not unheard of; usually jasper is multicolored, spotted or banded. This stone is opaque, even in thin slices, and takes a high polish. Different types of jasper display different lusters.
Like agate, the wide selection of jaspers include a range of trade names and classifications that are used by jewelry makers and collectors.
Brecciated jasper contains hematite, an iron compound, which gives it both its red tones and the dark bands. It is primarily deep red--veined or patterned with brown, black and beige--and sometimes has clear crystal inclusions.
Jasper is found all over the world including deposits in the United States, Egypt, Brazil, Australia, India, Canada, Russia, Uruguay, Madagascar and Kazakhstan.
Mineral
Information
Quartz--often infused with iron and inclusions of organic material and mineral oxides, which determine the color, pattern and appearance of the stone.

Chemical
Composition SiO_2
Color Yellow to orange-red to brown. Spotted or banded with white, yellow, brown or red.
Hardness 6-1/2 to 7 (Mohs)
Specific Gravity 2.5–2.9
Refractive Index About 1.54

Source: Stoney Stmts July 2017

Septarian Dragon Stone

This stone has a few different names, Dragon stone, Septari-an Geode, Septarian Concretion, to name a few. It is an interesting stone as it is a combination of different minerals. The name Septarian is derived from the Latin name, Septem, meaning seven. This relates to the fact that the mud balls cracked with 7 points in every direction, thereby creating the beautiful design.

Septarians are composed of Calcite (The Yellow Centres), Aragonite (The Brown Lines) and the Outer Grey Rock is Limestone. Occasionally the fossil or some of the fossils which started the formation of the rock is noticeable in the rock.

Septarians were formed during the Cretaceous period, 50 to 70 million years ago when the Gulf of Mexico reached what is now Southern Utah. Decomposing sea life killed by volcanic eruptions, had a chemical attraction for the sediment around them, forming mud balls and as the ocean receded, the balls were left to dry and crack. Because of their bentonite content they also shrank at the same time trapping the cracks inside. As decomposed calcite from the shells was carried down into the cracks in the mud balls, calcite crystals formed. A thin wall of calcite was transformed into aragonite separating the bentonite heavy clay exteriors from the calcite centres. Because of this, the nodules are called Septarians.

Concretions

Septarian concretions are a special type of concretion. Concretions are masses of mineral matter formed when minerals in water are deposited about a nucleus (such as a leaf or shell or other particle) forming a rounded mass whose composition or cement is usually different from the surrounding rock. This can occur at the time of deposition, shortly thereafter, or after the sediment has hardened.

Generally, concretions are harder than the rocks around them; therefore, over time the concretions can weather out of the surrounding rocks. Concretions in Kansas are formed from any of a number of minerals, including calcite, limonite, barite, pyrite, or silica. They vary widely in shape and size, with the huge spherical concretions at Rock City in Ottawa County and Mushroom Rock State Park in Ellsworth County measuring up to 27 feet in diameter.

Septarian stone also makes very good cabochons. Here is a geode I cut in half and then polished. I will eventually turn them into pendants, setting them in silver.

Excerpted from Rockgrinders Gazette, 6/17; via The Rockhounder July/Aug 2017

COPROLITE FOSSILS

Coprolites form in much the same way as any other fossil - the original organic material is infused with water containing dissolved minerals, and as the minerals crystallize, the original material is slowly replaced by stone.

Most people, when handed a coprolite for the first time, go and sniff it as their first impulse. But it smells of nothing but stone, because that's all it is now, technically speaking.

Coprolites are at a disadvantage from the start in the fossil-forming process. Generally speaking, the quicker to decay an object is, the less likely it is to successfully fossilize. Fossilization takes time, and if the whole thing rots before it can finished, well, no fossil [1]. That's why hard and durable objects, such as bones and teeth, are much more common fossils than soft tissues, or coprolites.

Coprolites were first identified as what they actually are, by a woman named Mary Anning (21 May 1799 – 9 March 1847). Mary Anning was a fossil collector and paleontologist from southern England, and noticed these odd stones inside the abdominal areas of the ichthyosaur fossils she was collecting. When she broke them open, she noticed they had fragments of fossilized fish bones and scales.

In 1829, Anning's observations led a geologist named William Buckland to propose that these stones were the digested remnants of the dinosaurs' last meals, and he gave them the name of coprolites.

Those fossil fragments inside coprolites contain a wealth of scientific information, for anyone who really wants to look closely. The kinds of fossils contained in the coprolite can tell us a lot about the environment the creature was living in, by what it found in the area to eat. It also reveals the creature's preferred food sources, such as whether it was an herbivore or a carnivore, and sometimes it will even reveal what parasites plagued its creator. And, yes, we learn a lot about its intestinal systems. That's pretty much a given.

Coprolite from Madagascar presumed to have been left by a giant turtle

The challenge, of course, is in determining exactly *which* species of creature left a particular coprolite behind. In some cases, when there are a lot of fossilized remains of a particular animal around, it's easy to make a good guess. And in some cases, as with Mary Anning's fossils, the coprolites were petrified while still within the animal's body. But with a more isolated coprolite specimen, it can be very difficult.

Early human settlements left the occasional coprolite as well, so they have archaeological value as well as geological value. As it turns out, we can learn about our own history from them. A human coprolite found in a cave in Oregon revealed the existence of a long-lost 13,000-year-old society [2].

And a research team from the University of Colorado, studying an ancient Anansi settlement in Colorado known as Cowboy Wash, uncovered human remains showing what they believed to be evidence of cannibalism. They tested a coprolite found nearby, and discovered it contained a protein only found in human muscle tissue, confirming their theory [3].

Oddly enough, coprolites from dinosaurs and other prehistoric beasts are often used in jewelry. Due to the mineralization, many of them have bright and beautiful coloration. And, well, you get a great answer to give when someone says, "Ooh, what a pretty necklace! What stone is that?"

Some people may think coprolites are disgusting, but like any other fossil, they're also windows into a lost and wondrous past on this planet.

Sources:

[1] http://discovermagazine.com/1996/jun/whatthedinosaurs786
[2] http://www.foxnews.com/scitech/2012/07/12/fossilized-human-feces-hints-at-long-lost-13500-year-old-west-coast-culture/
[3] http://www.smithsonianmag.com/people-places/anasazi.html?c=y&story=fullstory

via Rockhound Times article at http://www.rockhoundtimes.com/coprolites.html
Source: The Rockhounder Aug 2016