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. 61, No. 5, May., 2018

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, Stoffer Science Hall, Room 138, Washburn University. 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

2018 OFFICERS AND CHAIRS

President	Mike Cote	220-3272	Cab of the Month	Debra Frantz/Fred Zeferjohn	862-8876
1st Vice Pres.	Dave Dillon	272-7804	Field Trip Coord.	Will Gilliland	286-0905
2nd Vice Pres.	Cinda Kunkler	286-1790	Publicity	TGMS Board	
Secretary	Lettie Thomas	409-7026	Welcome/Registration	Russ & Rhonda Miller	272-6408
Treasurer	Millie Mowry	267-2849	Property	M. Cote/D. Dillon	220-3272
Directors	Chuck Curtis	286-1790	AFMS Scholarship	Cinda Kunkler	286-1790
	Brad Davenport	379-8700	Editor/Exchange Editor	Millie Mowry	267-2849
	Will Gilliland	286-0905	Show Chairman	Dave Dillon	272-7804
Historian	Jessica Reedy	230-3445	Show Dealer Chairman	Dave Dillon	272-7804
Federation Rep	Harold Merrifield	633-9745	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 .

Words from Our Top Rock!

As an up-coming reminder, May will be the last month for our general meeting at Washburn University until September. For the months of June, July and August there will be pot luck picnics at Millie's house.

The lessons at the barn started last week and had several new members show up to see what was going on. Hopefully the weather will cooperate with us and more will show up. For the month of July when the weather is hot the barn will be closed and at that time I will have my knee surgery. I will let everyone know when it will reopen.

Mike C.

New Members

Michael Granberg & Donnita Reiman, 2521 SW Granthurst, Topeka, KS 66611
785-730-3528 c-720-207-8631 mdgranberg@comcast.net
David Ledesma & Stephanie Simpson, *Kynlee Ledesma, 3907 NW 94th St,
Topeka, KS 66618 785-289-7914 tootsie2917@gmail.com
Christina & Jason Stoneking, *Lakyn Stoneking, 606 NW 86th St., Topeka,
KS 66617 785-215-2832 christine.stoneking1001@gmail.com
Sammy Wall, 815 SW Frazier, Topeka, KS 66606, 785-640-6471
Sammy2229@cox.net

There is room at the bottom of page 3 for these new members-corrections—if you have a correction, please notify me so I can make the changes. Millie

FOR JUNE, JULY, & AUGUST

At Millie's house: 1934 SW 30th St, Topeka

Bring your favorite picnic food to share & your plates, silverware & a cup or glass to drink out of. Ice Tea and Coffee will be furnished.

We eat inside where it is cool or you can eat out on the patio.

FOOD FELLOWSHIP FUN

TGMS Field Trip

The TG&MS field trip to the Blue Rapids, Kansas area on May 5, 2018 was attended by 15 members and one guest. The weather was warm and clear. Those attending found rocks and minerals brought into the area by the glaciers and stopped at the Ice Age Monument in Blue Rapids. A final stop was the Stockdale kimberlite plug in Riley County for more rocks and minerals.

Will Gilliland, Field Trip Coordinator

Have You Heard The News?

Our web-site TopekaGMS.org placed second in the RMFMS-AFMS Web Site Contest for 2018.

Thank You, Jason Schulz, for all your hard work on the web site to achieve this goal.

TGMS Event Calendar

May. 2018

1T	
2W	
3T	
4F	
5S	
6S	
7M	
8T	
9W	
10T	
11F	
12S	
13S	
14M	
15T	
16W	
17T	Wire Wrap Class @ Millie 1-3,
18F	
19S	
20S	
21M	
22T	
23W	
24T	Wire Wrap Class @ Millie 1-3,
25F	General Mtg. 7:30 pm Stauffer rm 138 Hall Washburn-Program-Robert Schulz
26S	
27S	
28M	
29T	
30W	
31T	Wire Wrap Class @ Millie 1-3,

Any questions ask Millie at rock2plate@aol.com

If you are interested in Wire Wrap Classes, contact Millie, 267-2849 or rock2plate@aol.com

Lessons at the Barn: For Directions contact Mike Cote` or David Dillon or Millie Mowry.

June 2018

1F	
2S	
3S	Jr Rkhd's @ TSCPL rm 101A Marvin Auditorium Wire Wrap Class @ Millie 1-3 pm
4M	
5T	Lessons at the Barn 6-9 pm
6W	
7T	Wire Wrap Class @ Millie 1-3 p.m.
8F	
9S	
10S	
11M	
12T	Lessons at the Barn 6-9 pm
13W	
14T	Wire Wrap Class @ Millie 1-3 p.m.
15F	
16S	
17S	
18M	
19T	Lessons at the Barn 6-9 pm
20W	
21T	Wire Wrap Class @ Millie 1-3 p.m.
22F	Pot Luck Picnic @ Millie's See page 2
23S	
24S	
25M	
26T	Lessons at the Barn 6-9 pm
27W	
28T	Wire Wrap Class @ Millie 1-3 p.m.
29F	
30S	

Check out the calendar on our web site
www.TopekaGMS.org

If you are interested in Wire Wrap Classes, contact Millie, 267-2849 or rock2plate@aol.com

NO LESSONS AT THE BARN IN JULY

https://www.facebook.com/TopekaGMSJuniorRockhounds
To register for the Junior Rockhounds or any of the classes, email:
Jason Schulz at: Fleetcommander@att.net

JR ROCKHOUND Classes & Reminders

Here are reminders of the next 3 months of classes: Topeka Shawnee CO Public Library sign in starting at 6:00pm and classes starting at 6:30pm. 1st Thursday of each month… **PLEASE watch for a new email for the new updated classrooms, classes, and instructors schedule starting with December 2017 to November 2018.**

- June 7th Barbara Smith, Collecting, rm. 101A Marvin Auditorium
- July 5th Brad Davenport, Minerals, rm, 101C Marvin Auditorium

Some of the Rockhounds were given notebooks for the Communication Patch. If you have written your story for the article in the Drifter, bring it in so that it can be counted, then published in the next Drifter. For those who do not have the note books, see Millie and she will give you one.

From the Coordinator, for May, 2018

This month's class was Lapidary Arts, led by Millie as she (with help from Cinda, Mike, Dave, Brad, and Pat) took our aspiring jewelry makers through a couple of Lapidary projects. The class was held in the friendly confines of the Library this month, and the projects gave an introduction to wire-wrapping techniques suitable for younger makers.
Along with the collection of Rockhounds and a gaggle of instructors, Kim Schultz and her partner Robin from the Topeka LMC came by to check out our program and gather information for advertising. They were impressed by what we're teaching our young pebble pups and will be making more visits in the future.
Our next class is Collecting, led by Barb Smith. It'll be at the Library on June 7th. Sign in opens at 6pm, and class starts at 7pm. We'll be downstairs in Marvin 101C.

Jason Schulz






Visitors are always WELCOME at our meetings!

Taconite

Taconite is a variety of iron formation, an ironbearing (>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 United 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 (Fe_3O_4) to hematite (Fe_2O_3), 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 2/11via: WGMS Rockhounder 5/2018

How do dendrites form?

Dr. Bill Cordua, University of Wisconsin-River Falls

Anyone who has seen "moss agate" is familiar with the delicate branching structures that look like fossil plants. These features, called dendrites aren't plants, and the processes that form them are essentially inorganic. Dendrites are fairly common. They often form on bedding plane and joint surfaces in limestone, shale, granite and other rocks. They frequently develop during the industrial processes of making various alloys. They control the shape of some snowflakes. Most annoyingly, they form as frost on your car windshields on wintry mornings.

Dendrite refers to any mineral that grows in a delicate branching pattern. The habit is similar to arborescent, although I use tend to use the term arborescent when the branches are relatively stout, rather than moss-like. Many minerals can take on dendritic forms. These include various iron and manganese hydroxides, copper, gold and silver. How do these structures form if they aren't plants?

Dendrites are thought to form when crystallization is rapid and there is a limited amount of what chemical is formed available. These are conditions associated with disequilibrium. Frost on your windshield is a good example. The little frost flowers grow fast, but if there is too much moisture they intergrow to make a solid sheet of ice without the delicate form showing. Black dendrites on a limestone bedding plane are another example.

(con't on next page)

These make what people often call "pyrolusite dendrites", although recent analyses have shown them not to be pyrolusite, but instead other manganese hydroxides such as romanechite, birnessite, coronadite, and cryptomelane. At any rate, a fluid bearing manganese in solution is seeping along a bedding plane surface as little tendrils of liquid. The liquid dries out, becomes supersaturated in manganese compounds and the dendrites form fast. However since there isn't a lot of manganese in the tendrils to start with, the manganese hydroxide doesn't form a solid sheet, preserving the fractal patterns of the fast mineral growth.

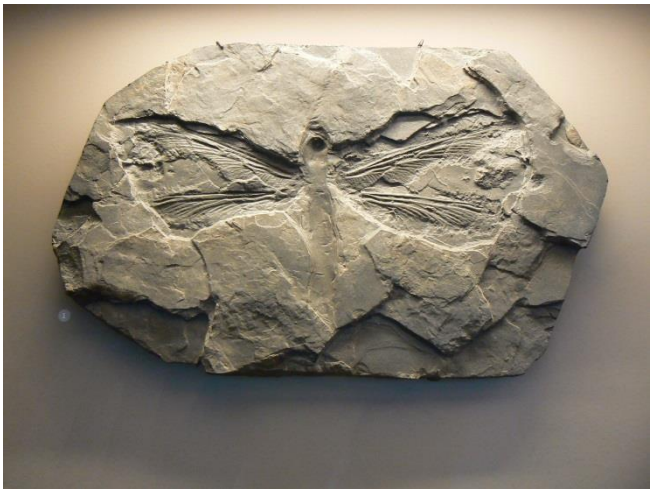
Dendrite formation can be modeled artificially and studied quantitative-ly. This is done because understanding dendrite growth is an essential part of material science, especially alloy formation. It turns out that the shape and amount of dendrite growth affects all sorts of properties of materials - such as their flexibility, springiness, stretchiness, electrical conductivity and so forth. NASA did a crystallization experiment on a Space Shuttle mission to study the nature of alloy growth under weightless conditions. A video of growing copper dendrites can be found at http://nepp.nasa.gov/whisker/dendrite/index.html. Dendrites can be modeled exactly by simple computer programs in which the computer constructs what happens when sticky particles encounter an-other at random. The way they stick together beautifully generates dendrites. So this random relationship over time turns out to form an elegant pattern. A lot of nature works this way.

In minerals dendrite growth isn't quite random. The little atoms (particles in the above experiment) don't stick at random, but do so ac-cording to the crystalline structure of whatever mineral they are forming. Thus in ice and snow the branching often takes a hexagonal form and in copper, a lot of branching is at right angles, consistent with copper's cubic crystal structure.

Via Leaverite News, v. 33, no. 7, 2008 via WGMS Rockhounder 5/2018

If you look around you can find dendrites in the most unlikely places. This image is of dendritic formations that occurred in a puddle of water in front of my local Post Office. The water had evaporated but the pattern survived.

Editor Rockhounder



The **Meganeura** is a genus of extinct insects from the Carboniferous period (approximately 30 million years ago) which resembled and are related to the present day dragonflies. They had at wingspan ranging from 2.6 inches to over 27.6 inches. Meganeura is one of the largest known flying insect species. Maganeura were predatory and fed on other insects.

(Central Iowa Nuggets April 2018)

CITRINE

Citrine /ˈsɪtriːn/ is a colour, the most common reference for which is certain coloured varieties of quartz which are a medium deep shade of golden yellow. Citrine has been summarized at various times as yellow, greenish-yellow, brownish yellow or orange.

The original reference point for the citrine colour was the citron fruit. The first recorded use of *citrine* as a colour in English was in 1386. It was borrowed from a medieval Latin and classical Latin word with the same meaning. In late medieval and early modern English the citrine colour-name was applied in a wider variety of contexts than it is today and could be "reddish or brownish yellow; or orange; or amber (distinguished from yellow)". In today's English citrine as a colour is mostly confined to the contexts of (1) gemstones, including quartz, and (2) some animal and plant names. E.g., the citrine wagtail (*Motacilla citreola*), an Asian bird species with golden-yellow plumage.

"Citrine" is used in the names of birds and other lifeforms with such colouring to describe their appearance, including the citrine wagtail, citrine warbler, citrine canary-flycatcher and citrine forktail. (Stoney Statements Dec 2017)

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

BEST CHOICE

0 70038 30349 7