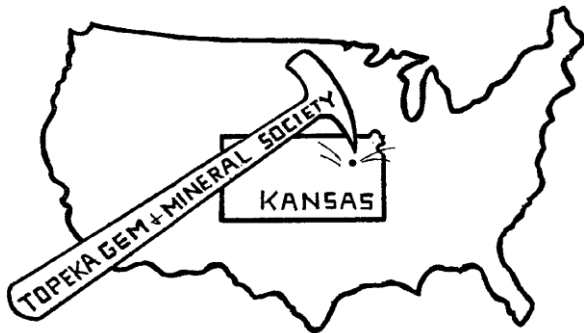


The Topeka Gem and Mineral Society, Inc.
 1934 SW 30th St. Topeka, KS 66611
 Rock2Plate@aol.com

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. 60, No. 12, Dec., 2017

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
1 st Vice Pres.	Dave Dillon	272-7804	Field Trip Coord.	Leslie Hartman	380-6016
2 nd Vice Pres.	Leslie Hartman	380-6016	Publicity	Leslie Hartman	380-6016
Secretary	Colleen Lightwine	350-2958	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 .
Permission is granted to reprint articles only if proper credit is given to the author, Glacial Drifter and the date.

Words from Our President

WOW! We sure had a crowd at Paisano's for our Christmas dinner. It was great to see everyone there, all 50 of you. Yes, Paisano's ran out of tables between our party and another one that was scheduled at the same time. They were thrilled to say the least.

The program for the January meeting will be Rock and Fossil identification along with show and tell. We are not going to have an auction at this time.

At the February meeting Mark and Kathy Ellis will present the program again, and if you have never sat in on one of his programs you defiantly don't want to miss this meeting about "Bones from dinosaurs in Colorado."

Mike and his Rock Stash



Meeting Minutes November 17, 2017

Meeting of the Topeka Gem & Mineral Society November 17, 2017 was called to order by Mike Cote'.

Lesliee – reporting for Russ & Rhonda Miller (on vacation) we had 21 members and 1 guest.

Fred Zeferjohn reported we have 4 member jewelry, 3 member cabs and 2 class cabs to vote on for Cab of the Month.

Minutes of the prior meeting were printed in The Drifter; a motion was made by Jason Schulz and 2nd by Pam Mortensen to accept as printed.

Millie reported our checking account balance and that she is accepting dues. Jason made a motion to accept and Chuck Curtis 2nd.

AFMS – Cinda Kunkler had been in contact with Dr. Matthew Brueseke to let him know that the TGMS wanted to nominate him for the RMFMS Honorary Recipient to name the Scholarship Recipients that he selects.

Historian position a replacement has been found to take over since Deborah Scanland has resigned.

Publicity Lesliee announced the Executive Committee has chosen "Opal Down Under" as the theme for next year's show. We plan to have Ron Wooley give a program at the show. We will have an opportunity to publicize the club at the Discovery Center February 24 from 10 – 5. Let the committee know if you are interested in helping there.

Show Committee Harold Merrifield said that we had a successful show. A suggestion was made that the club have a wheelchair at the show available if needed.

Field Trip Lesliee Hartman – she plans to have a field trip in January depending on the weather.

Junior Rockhounds Jason Schulz said that Lesliee had a successful class this month. The students (and parents) had lots of fun with clay. She has the Jr Rockhound Schedule for the next year ready.

Web Master Jason Schulz said the 2018 Website Design contest will be coming up in one month. He is open to idea suggestions. The Facebook page has had good views and 3 more likes.

New Business: Nominations of 2018 Officers open positions as presented by the Nominating Committee on ballots were distributed. Nomination from the floor by Thomas Schulz suggested Jason Schulz for 2nd Vice President. Door prize drawings were awarded during the counting of the ballots. Chuck announced the results: 2nd Vice President = Lesliee Hartman, Director = Will Gilliland, Secretary = Colleen Lightwine.

Carolyn Brady announced the program tonight is Thomas Schulz – "Space Mining".

Cab of the Month winners were announced. Member cab – George Reed - Moldiavite, Member jewelry – Millie Mowry - Wire Wrapped Carnelian & Bronze pendant, and Class Cab – Robert Schulz - Jade.

Respectfully submitted and thank you for accepting me as Secretary for all these years – wishing Colleen all the best!

Cinda Kunkler

Visitors are always WELCOME at our meetings!

Volunteering is the heart



beat of YOUR club

Event Calendar

Dec. 2017

Jan. 2018

1F	
2S	
3S	
4M	
5T	
6W	
7T	
8F	
9S	
10S	
11M	
12T	
13W	
14T	
15F	
16S	
17S	
18M	
19T	
20W	
21T	No wire wrap classes
22F	
23S	
24S	Christmas Eve
25M	Christmas Day
26T	
27W	
28T	No wire wrap classes
29F	
30S	
31S	New Years Eve

1M	
2T	
3W	
4T	Jr Rkhd's @ TSCPL rm 101A Wire Wrap Class @ Millie 1-3 pm only
5F	
6S	
7S	
8M	
9T	
10W	
11T	Wire Wrap Class @ Millie 1-3, 7-9p.m.
12F	Board Meeting 7 p.m. @ Millie's
13S	
14S	
15M	
16T	
17W	
18T	Wire Wrap Class @ Millie 1-3, 7-9p.m.
19F	
20S	
21S	
22M	
23T	
24W	
25T	Wire Wrap Class @ Millie 1-3, 7-9p.m.
26F	General Mtg. 7:30 pm Stauffer Hall Washburn
27S	
28S	
29M	
30T	
31W	

Any questions ask Millie at rock2plate@aol.com

Lessons at the barn are finished because it is too cold.

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

Lessons at the barn are finished because it is too cold.

TOPEKA JUNIOR ROCKHOUNDS

<https://www.facebook.com/TopekaGMSJuniorRockhounds>

To register for the Junior Rockhounds or any of the classes, email: Lesliee Hartman at: Hartman.12345@hotmail.com



JR ROCKHOUND CLASSES

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.**

- Thursday, January 4, 2018 class Leadership: instructor Lesliee Hartman: Marvin Auditorium Room 101A.
- Thursday, February 1, 2018 class Earth in Space: instructor Jason Schulz: Marvin Auditorium Room 101C.
- Thursday, March 1, 2018 class Field Trip: instructor: Lesliee Hartman: Hughes Room 205. (As a reminder to all Jr Rockhounds, at the March general meeting each Jr Rockhound will be giving a presentation. Any questions please ask.)

Activity Center

During the general meeting at Washburn University 1700 SW College Ave., Topeka, KS in the Stoffer Science Hall Room 138 there is an Activity Center for Jr Rockhounds from 7:00pm-7:30ishpm. Barbara Smith will be doing an activity.

TGMS and Jr Rockhounds Activities

At this point the next upcoming event for TGMS and Jr Rockhounds will be February 24, 2018 at the Topeka Discovery Center from 10am to 5pm. Set up time starts at 9am and clean up starts at 4:45pm Email Lesliee Hartman Hartman.12345@hotmail.com for questions and if you can help.

****Any help with the following list would be greatly appreciated:****

- We NEED your help at the Discovery Center. There will be plenty of jobs and we will find that will fit your talent.
- Different size smooth mostly flat rocks.
- Small kid friendly stickers. Fuzzy or regular stickers. Kids can design the rock how they want...like a pet rock. No painting this time. Below are some examples of the activity we will be doing.



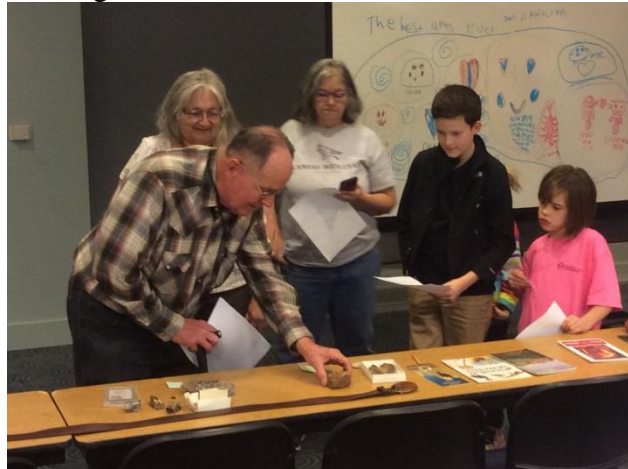
- I have the glue.

TGMS and Jr Rockhounds Field Trip

As the weather is unpredictable and several holidays are coming, we will not have a field trip for December 2017. Check for future field trip updates starting January 2018.

FROM JASON'S DESK

This month, the Junior Rockhounds looked at Fossils with Pat Gilliland. Five rockhounds attended the class at the Topeka and Shawnee County Public Library and got to look at different types of fossils while hearing about life throughout the geologic timeline. Towards the end of the class, the kids got to dig out their own fossils, learning how to sift and pick them out of surrounding material.



The next classes are Leadership (with Leslie Hartman) in January and the Earth in Space (with Jason Schulz) in February. Classes meet at the TSCPL starting at 6:00pm to sign in.

Jason



WORKING TOGETHER WORKS



Club Dues are due by December 31, 2017.

If you joined the last of September 2017 thru December 2017 your dues are not due until 2018. If you are in doubt, contact me and I will look it up for you.

Millie Mowry, Rock2plate@aol.com



Pictures from the Annual Christmas Dinner



We had 2 waiters taking orders



Cinda made a new sign for us



rock games were played with prizes



Dave & Mike got steering wheel covers



Debra was all smiles



Isaac Hartman with his Jr Rock Hound of the Year Award



ON THE COLOR OF SMOKY QUARTZ

By Paolo Sanchez, Junior Member of the Pasadena Lapidary Society



On the Color of Smoky Quartz By Paolo Sanchez, Junior Member of the Pasadena Lapidary Society. The practical mineral collector would've most likely encountered some of the mineral smoky quartz at least one time in his or her life. Whether it would be at gem shows or at rock hounding trips, this crystalline form of silicon dioxide has not really been a major interest of rockhounds. Usually, smoky quartz would just best sold as a faceting material for beginners, or as crystals serving as décor or paperweights. However, in the scientific community of mineralogy, one thing about this mineral remains of interest: the color. As implied by the name, the color of smoky quartz is, well, smoky – ranging from a light tint of brown to a blackish hue. While many people would consider the mineral's color to be rather drab, the origin of this color is actually unique in the mineral world. (Picture from Wikipedia--by Dario Crespi)

A good majority of minerals receive their color from certain elements in their intrinsic chemical composition or from the light absorption and reflection properties of the mineral's crystal lattice. These minerals are known as idiochromatic. Other forms of minerals include allocromatic minerals, where traces of accessory elements alter the absorption of different colors of light throughout the crystal lattice. Smoky quartz, however, gets its color from a rather surprising source. Smoky quartz is known to form in granitic pegmatites, associated with different minerals and gemstones including tourmaline, cleveite, and aquamarine. What is unique about these pegmatites is that they contain a significant amount of radioactive elements, particularly the elements uranium, radium, and thorium. Because these elements decay from their radioactivity, they emit gamma rays that are then absorbed by the surrounding rock. When quartz (particularly clear quartz) is in close proximity to these elements, the gamma radiation that is absorbed causes aluminosilicate ion impurities [Al^{IV}O₄] within the quartz to lose an electron, forming a neutral, aluminosilicate compound which absorbs multiple colors of light.



This coalition between chemical impurities and radioactivity eventually results in the unique, brown to blackish color that gives smoky quartz its name. Fortunately, there is no need to worry about the radioactivity that smoky quartz is exposed to, for the amount of radioactivity in the quartz is so minuscule that it doesn't cause any damage to living species nor the surrounding environment. While this rather common species of silicon dioxide is often underestimated in most of the rock collecting community, the formation of color in smoky quartz still stands as a unique and relatively rare process in the mineral world.

Works Cited: N.p.,n.d. Web 1 Nov. 2016 –tification of Gemstones, Pearls, and Ornamental Minerals, New York: Arco Pub., 1978. From PLS Rockhound Ramblings, 4/17 via the Rollin' Rock, 9/17 via: The Rockhouser Oct 2017 via Stoney Statements Nov 2017.



NO FOOLING, IT'S IRON PYRITE

Cheryl Ogletree, Pleasant Oaks Gem and Mineral Club of Dallas



Eureka! I've found my gold mine. It's not that bright yellow mineral that humans have been searching for through the ages. It is that "other gold"; the gold that prospectors threw aside when they were fooled by its brassy sheen and thought they had found real gold. They labeled this mineral fool's gold and worthless. That mineral is iron pyrite.

Iron pyrite (FeS_2) is a compound of iron and sulfur. Pyrite crystals can form cubes and octahedrons. Sometimes a combination of both crystals can occur. In crystallization, cubes can form twinning, a union of two or more crystals. The faces of the crystal are smooth, crossed by fine, sometimes parallel straight lines. There is not good cleavage.

Pyrite occurs in a variety of environments. It can be found in igneous rock, in metamorphic formations and in sediments. In sedimentary rock, pyrite replaces fossils, seeming by the reaction of the sulfur in the dead animal or plant to the iron in the rock surrounding them. In black shale, nodules are formed under stagnant, anaerobic conditions. In slate, well-shaped crystal cubes can be found. It is, also, a common mineral in hydrothermal sulfide veins.

Pyrite used to be an important ore for the production of sulfur. Today, sulfur is obtained as a by-product through the processing of crude oil and natural gas. The most important use of pyrite is as an ore for gold production. With pyrite so abundant, worldwide, it's a shame that finding a more economical and beneficial use for pyrite hasn't reached fruition. Maybe, in the near future, through research, we will find a solution to help mankind, through the use of iron pyrite.

Researchers at Berkeley National Laboratory have invented a method of producing pyrite nano-crystals from a solution heated under pressure for use in solar cells. There are advantages for using iron pyrite: (1) there is an abundant nontoxic material supply, (2) it has good absorption qualities, and (3) it has a lower cost than silicon.



Pyrite and marcasite are often confused because they are similar in characteristics. Marcasite is a polymorph of pyrite. That means that marcasite has the same chemistry as pyrite (FeS_2) but is a different structure and crystal shape. The marcasite / pyrite pair is notable next to the diamond / graphite pair.

To make it more confusing between pyrite and marcasite, marcasite – the mineral name – is also used as a jewelry trade name. So, when one sees marcasite stones all polished, faceted and inlaid in silver, one is still looking at pyrite. And speaking of jewelry and gems, they often use pyritized fossils in jewelry settings. Pyrite can be cut as domes or faceted cabochons and beads. Did you know pyrite is the “veins” in lapis lazuli, a vivid blue stone?

Last week I was watching a program about a small Scottish island that had a slate quarry. The cottages were made of stones from that quarry. The villages prided their selves in living in sparkling cottages. You ask, “What makes them sparkle?” You’re right; it was the pyrite in the slate that sparkled. I guess that I wouldn’t mind living in a “gem” of a house, but I’m happy to live in my house with my favorite fool’s gold specimens that I’ve collected and that I will attempt to collect again in the future.

References:

- _ The Rock Book by Carroll Lane Fenton and Mildred Fenton, Doubleday & Co., Inc., 1940.
 - _ Cambridge Guide to Minerals, Rocks and Fossils, Bishop Woolley Hamilton, Cambridge University Press, 1999,
 - _ Collecting Rocks, Gems and Minerals, Second Edition, 2012; Patti Polk, Krause Publications.
 - _ Processing Iron Pyrite Nanocrystals for Use in Solar Cells, <https://ipo.lbl.gov/?s=pyrite>.
 - _ Minerals.net, <http://www.minerals.net/mineral/pyrite.aspx/>
 - _ The Gemstone Pyrite (Marcasite), http://www.minerals.net/gemstone/pyrite_gemstone.aspx
 - _ The Mineral Pyrite, <http://www.galleries.com/Pyrite>
- Geology.com, Pyrite, <http://geology.com/minerals/pyrite.shtml>
Picture by Carles. Via: Stoney Statements Nov 2017



Your Dues are due December 31st, 2017



From Topeka Gem & Mineral Society