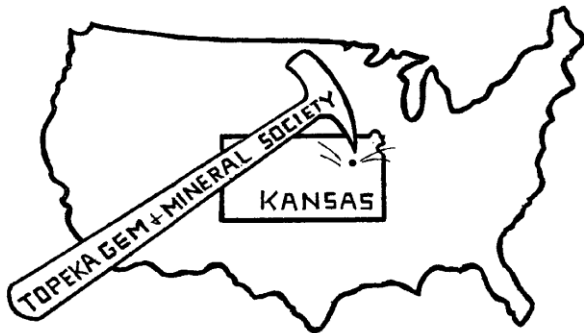


The Topeka Gem and Mineral Society, Inc.
 1934 SW 30th St. Topeka, KS 66611
 Rock2Plate@aol.com

THE GLACIAL DRIFTER



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. 63, No. 1,
 January, 2020



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

2020 OFFICERS AND CHAIRS

President	Brad Davenport	379-8700	Cab of the Month	Debra Frantz/Fred Zeferjohn	862-8876
1 st Vice Pres.	Will Gilliland	286-0905	Field Trip Coord.	Will Gilliland	286-0905
2 nd Vice Pres.	Cinda Kunkler	286-1790	Publicity	TGMS Board	
Secretary	Stacy Haug	1-857-3350	Welcome/Registration	Harold Merrifield	633-9745
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
	George Reed	836-9277	Show Chairman	Millie Mowry	267-2849
Historian	Open		Show Dealer Chairman	Millie Mowry	267-2849
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

Howdy all and a belated Happy New Year to you and yours. I hope you are off on the right foot. I have left 2019 behind me and am moving on.

As the clubs new President, I have plenty of challenges ahead of me. This position will be all new territory for me. I am sure I will stumble here and there but, as long as I keep getting back on to my feet, I will move forward.

With that said, I will need help from all of you just as the case has always been. Don't be surprised if I confront you with a request for some help that might place you a bit outside of your comfort zone. I too am out of my comfy place. I hope we can move beyond a little discomfort.

My main goal with accepting this position will be to help our club grow. We so need new blood and ideas. We could use any and all ideas that can promote ourselves. You and I are in this club because it is important to us. I have to believe there are others in our community that would feel the same way if only they were aware that we are here and have been for decades. We are not the new kids on the block. Be proud and excited to tell others about our Society and what we have to offer.

It is true that many of us are past our prime but, we aren't dead. Let's reach out to others and see if we can't get some others fired up. Children, grandchildren, neighbors and friends might just be looking for something to get involved with.

Time is a very limited commodity to each and every one of us. Where we spend it can be a tough choice. People with passions seem to find the time for what is important to them. Helping others to find their passions can be rewarding to them as well as ourselves.

We have two great Facebook pages that receive a good amount of attention from nonmembers. Come visit them and give us a "Like". For the members that do visit us regularly, hop in and start up a conversation. If our visitors see involved members, they might just want to take the next step and come see more of what we are about.

I will now step down off my soapbox. For now, at least. I am honored to be your leader and I hope I can live up to your expectations. I would also like to have some fun in the process. Feel free to contact me in any way you feel comfortable. Let me know what your feelings and ideas are. No subject should be off the table. If you don't tell me, I will never know.

Appreciatively

Brad

785-845-6624 Brad7254@gmail.com

**Program for the Meeting on January 24th, 2020.
This will be a silent auction, so clean out your excess rock
And donate it to the club.**

I do not have this scheduled just yet. I am open to suggestions for meeting ideas; please let me know if you have something you would like one of our meetings to cover!

Cinda Kunkler

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



An excerpt from a newsletter that Will Gilliland received that would be of interest to many of us.

“I am also delighted to share with you that our top choice for the 2020 KS Day speaker, Rex Buchanan, has agreed to visit our campus and give a talk on Wednesday, January 29, from 3-4:00 pm (location will be announced soon). His presentation is titled "Glyphs, Grasslands, and Waterways: Special Places in Kansas and Why They're So Important."

His presentation will be in the Rita Blitt Gallery from 3-4:00 pm on the 29th.

Dr. Vanessa Steinroetter, Associate Professor and Chair, Department of English, Washburn University

How to Spot a Fake Piece of Amber

When I see amber I instantly think of the movie Jurassic Park. If you have seen the movie, you've seen the techniques used in extracting amber that's been entombed for generations and finally unearthed for human eyes to see. Before and after the movie, many people took advantage by



producing fakes. Since more precious amber is harder to come by these days, fakes have popped up all over the market. Humanity has a sneaky way to mimic so called "amber" and it takes a keen eye or nose to figure out if you have a true piece. There is art to figuring out the fakes. Here are some simple techniques that might save you money and heartache.

Research has shown me, if amber is vigorously rubbed against fur, it will produce static and an aroma of pine. Many plastics may replicate the static but the smell of pine is always a good hint that it is obviously a fake.

Another cool treatment is the water method. By mixing a large amount of salt with water in a bowl or bucket, your amber should float. If not, you may have another plastic fake. With all these useful techniques, it should be easier to spot a fake and find the true treasure.

Brian Miller, Editor, Oxnard Gem & Mineral Society via the Golden Frog 4/15; via The Rollin Rock Jan 2020

DUES ARE DUE NOW.

TGMS Event Calendar

Jan. 2020			Feb. 2020		
1	W		1	S	
2	T		2	S	
3	F		3	M	
4	S		4	T	Wire Wrap Class at Millie's 6:30 p.m.
5	S		5	W	
6	M		6	T	Jr Rockhounds TSCPL rm 101C 6:30 p.m. Wire wrap class at Millie's 1:30 p.m.
7	T		7	F	
8	W		8	S	
9	T		9	S	
10	F		10	M	
11	S		11	T	Wire Wrap Class at Millie's 6:30 p.m.
12	S		12	W	
13	M		13	T	Wire wrap class at Millie's 1;30 p.m.
14	T		14	F	Board Meeting 7 P M @ Millie's
15	W		15	S	
16	T	Wire wrap class at Millie's 1:30 p.m.	16	S	
17	F		17	M	
18	S		18	T	Wire Wrap Class at Millie's 6:30 p.m.
19	S		19	W	
20	M		20	T	Wire wrap class at Millie's 1;30 p.m.
21	T	Wire Wrap Class at Millie's 6:30 p.m.	21	F	
22	W		22	S	
23	T	Wire wrap class at Millie's 1;30 p.m.	23	S	
24	F	General Mtg Stauffer rm 138 7:30 p.m. Silent Auction	24	M	
25	S		25	T	Wire Wrap Class at Millie's 6:30 p.m.
26	S		26	W	
27	M		27	T	Wire wrap class at Millie's 1;30 p.m.
28	T	Wire Wrap Class at Millie's 6:30 p.m.	28	F	General Mtg Stauffer rm 138 7:30 p.m.
29	W		29	S	
30	T	Wire wrap class at Millie's 1:30 p.m.	30		
31	F		31		

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

LESSONS AT THE BARN ARE WEATHER PERMITTING – Watch for emails

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: Topeka Shawnee CO Public Library 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

- Feb. 6, 6 – 8:45 p.m. Marvin Auditorium, 101C, Earth Processes
- Mar. 5, 6-8:45 p.m., Marvin Auditorium, 101C, Gemstone Lore & Legend
- Apr. 2, 6-8:45 p.m., Marvin Auditorium, 101C, Field Trips

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

Your dues are now due for the year 2020.

"Stabilized" Turquoise

By Al Pennington, CLGMS

Note: There is very little hard, "gem quality" turquoise on the market. Hence, in most cases, some sort of hardening treatment of this ancient, relatively soft mineral is needed especially for nuggets to help prevent breakage during tumbling and drilling.

Turquoise stone is a hydrous basic phosphate of copper and aluminum which is formed as water trickles through a host stone for about 30 million years, gradually leaving a deposit. If the mix has more copper, the turquoise will be colored in the blue range; if more aluminum, in the green to white range. The addition of zinc yields a yellow-green color and hardens the stone even more. Other colors that appear in a turquoise stone come from the host stone that the turquoise formed in, and are called matrix. A black matrix is usually from iron pyrite; a gold-brown matrix from iron oxide, and a yellow to brown matrix from rhyolite. Matrix that is thin and evenly

spaced over the surface of the stone is commonly known as spider web matrix. **Spider web matrix** usually enhances the collectability and value of turquoise.

Hardness/Density is a critical factor in determining the grade of a turquoise specimen. An inferior, chalk-like turquoise will feel light; it will be porous and stick to your tongue. The harder, denser pieces will have a "good" substantive feel to them. They will not draw the same quantity of moisture from your tongue as lower grades, but you will feel some adhesion to your tongue. As density increases, so too does hardness. Just as turquoise varies from a little over 2 to nearly 6 on the Mohs scale, its specific gravity also varies but typically is 2.8, like quartz. The grades of turquoise are:

NATURAL: turquoise means a stone with no alteration to its composition. Such stones are merely polished and

(Continued on page 6)

"Stabilized" Turquoise, cont'd

cut into shapes before being mounted in jewelry. Natural turquoise remains porous, as all natural stone is to varying degrees, and may tend to change color over time as it is worn and handled.

STABILIZED: turquoise means that the natural mineral has been chemically altered to harden the stone, usually by infusing epoxy or polystyrene into the porous surface of the stone. The stabilization process serves to freeze the color of the stone so it will not change.

COLOR-TREATED: color-enhanced, or color-infused turquoise means that the natural mineral, usually too soft and pale to finish for use in jewelry, has been chemically altered to change the color of the stone (and often the hardness also). Dye is mixed with a stabilizing epoxy or polystyrene liquid and infused into the stone under pressure.

RECONSTITUTED: turquoise is the name used for turquoise dust and chips that are mixed with plastic resins and compressed into a solid form so as to resemble natural turquoise.

IMITATION or SIMULATED: turquoise is any synthetic compound (usually dyed plastic) which is manufactured to resemble turquoise, but which contains no actual gemstone.

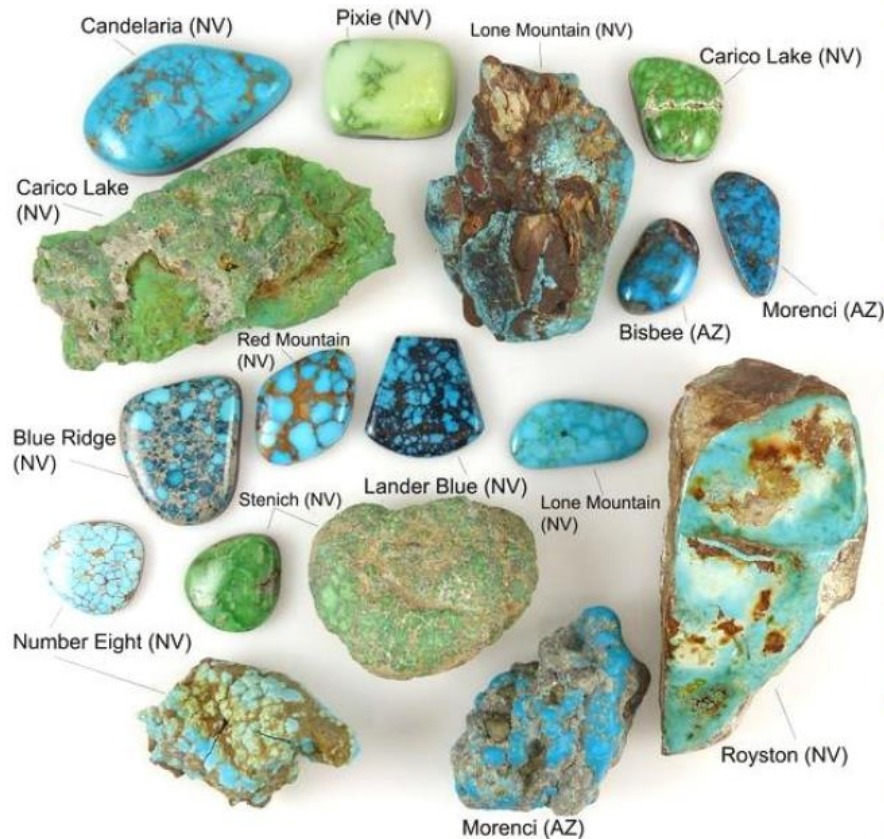
Why stabilize? Seen many an awesome turquoise gem that was full of cracks, pits and the like? To some, as long as it will polish, and it's turquoise, it's a gem. Problem is, most material on the market is too soft to cut, and thereby it won't take a polish. One of the beauties of turquoise, no one cares if it's calibrated, or if there's rough spots in the stone, or if one can't comb their hair in the reflection of the polish.

The term Resin Stabilized is most often used when referring to the process of hardening Turquoise and

like materials which are too crumbly or soft to cut and polish by baking hot resin into the stone to help its hardness. The process is done in an autoclave where resins are injected under heat and pressure. There are many formulas and techniques for stabilizing, many of them considered a trade secret to individual processors. **Stabilized turquoise leaves a slightly waxy surface.**

A similar process is used with the dust of these types of materials to press it into a cuttable block. The best test is to touch the material with a hot pin. You can smell the plastic on a treated piece.

More interesting to the small lapidary is the process called fracture filler. Epoxies are very useful as fillers of small pits or cracks, and most effective to use as a backing to stabilize a fragile piece through the sawing and grinding process. Best for this is that gray plumbers' epoxy applied



across the back of the slab.

Water glass is a good penetrant and sealer. This is very good to hide internal flaws. It is just as effective as oil to show color and hide the flaws, except more stable as it actually sets up like glue.

Canadian Balsam is very useful as a fracture filler. Pure Balsam is a little complicated in the application, as one needs a vacuum/pressure & heating unit to apply. This can be homemade with parts under \$100 (excluding compressor).

Via Stoney Statements 3/05

Photo from <https://www.garlandsjewelry.com/blogs/news/what-is-the-difference-between-stabilized-and-natural-turquoise>

KANSAS STATE **UNIVERSITY**

FALL 2019

Topeka Gem and Mineral Society, Inc. Scholarship

Dear The Topeka Gem & Mineral Society Inc,

Attn: Millie Mowry

This scholarship has made me very happy, I was up in the air for the longest time about if I should find a job after graduation or go to graduate school. A few good things have happened to me including this, and this was the cherry on top, as I will be applying to graduate school soon.

To be honest, K-State choose me. When I was stationed at Fort Riley in 2007, Manhattan felt so much like home that I bought a house in the area around August 2008. The military had me traveling all over, so I couldn't be here for a while. After getting out of the military I went to UTEP, University of El Paso Texas, for geology and then moved to Arkansas and did two years at UAFS, University of Arkansas Fort Smith. Eventually, I made it back here. Out of all three Universities, I have felt more at home here at K-State, both the veterans center and the geology department have made me feel like I belong. So you could say that the Army chose K-State for me, and I am very thankful for this opportunity.

Growing up I wanted to be an astronaut, I was going to be the first female scientist to land on Mars. I changed my mind several times just as most children do. Then when I was a senior in high school my chemistry teacher respectfully told me that I wasn't going to pass her class, and she suggested that I take the Earth science class. Instantly I fell in love with Earth science, and from that moment on I new I would become a geologist. I had already planned on joining the Army, and after graduation I joined. The entire time in the army, on every field prop and deployment I would imagine the formation of the mountains, the rising and regression of the seas, and what was and what will be. Since the day I finished my time in the army, I have been determined to become a geologist.

My favorite K-state experience was doing field camp in France with one of our geology department faculty members along with a couple of students. One of our Professors went to school in France, so he was able to gather students to do field camp with the school there. I have traveled the world and met different types of people in the army, but this experience was different and something that I will remember for the rest of my life. Meeting with other students who are passionate about geology, from another country and learning with them was a great experience that I hope our department carries it on in to the future.

I am thankful to not only this scholarship opportunity, but also those who have believed in me and those who nominated me for this scholarship. I never thought that I could feel this welcome within a school until I came to K-State. It brings me tears of joy, on how much the geology departments faculty and staff care for their students. In my opinion these individuals will help their students out with almost anything from issues at home to their homework, because they know that a healthy, focused mind will ensure the students success. Thank you for your part in my amazing time at K-State.

Lindsay Gutierrez

TANZANITE

Published in the September 2014 Quarry Quips, Wichita Gem & Mineral Society
by Lawrence H. Skelton, Wichita Gem and Mineral Society

Via: Pick & Shovel, 9/2014

Tanzanite, a recent entry to the world of gems, was first discovered in northern Tanzania near Mount Kilimanjaro in 1967 by Ali Juuyawatu, a member of the local Masai tribe. He showed his find to Manuel de Sauza, a prospector who was exploring for rubies. By 1968, samples of the new find had made their way to Tiffany and Company in New York. Tiffany named the gem tanzanite for its country of origin; introduced it to the public and held exclusive marketing rights into the 1980s. The gem's popularity was soon established and market demand rapidly increased. In 2002, tanzanite was added to the list of official birthstones promulgated by the American Gem Society. The first such addition since 1912, it joined zircon and turquoise as the official stone for December.

Tanzanite is a gem variety of the mineral zoisite, a hydroxy calcium aluminum silicate, $\text{Ca}_2\text{Al}_3(\text{SiO}_4)_3(\text{OH})$. Although zoisite itself is not an especially rare mineral, its tanzanite variety to date has been found only in an eight square mile area in northern Tanzania. A member of the epidote group of minerals, zoisite is a polymorph (having the same chemical composition but a different crystal form) of more the common clinzoisite. Zoisite is colored pale green to gray or pink (rare) to reddish-brown with the tanzanite variety being colorless to pale yellow to the desirable shades of blue and violet. Some of the reddish-brown crystals are converted to blue by heat treating to temperatures around 500° C. (932° F.). Crystals are vertically striated prisms forming in the orthorhombic system. They ordinarily are in the one to ten carat size range but some exceed 100 carats. The largest known tanzanite crystal is the "Mawenzi" named for one of the craters at Kilimanjaro: it weighs 7.24 pounds (3,367.8 grams or 16,839 carats) and measures 8.6 x 3.0 x 2.7 inches (220 x 78 x 64 mm). Mohs hardness of tanzanite is 6.5 and its specific gravity ranges from 3.10 to 3.38. It displays perfect unidirectional cleavage. A color shift from blue in daylight to violet under incandescent light is sometimes seen. It exhibits perfect one-directional cleavage. Being a variety of zoisite, tanzanite is a metamorphically formed mineral found in marble or schist formations within the late Precambrian age Mozambique Orogenic Belt in East Africa: The zoisite/tanzanite may have been formed there from hot mineral-filled fluids during the forming

of Mount Kilimanjaro during Tertiary time. The fluids likely traveled through a major fault or rift zone that trends northwest to southeast through northern Tanzania.

As noted, naturally blue tanzanites occur but are rare. Heat-treating is undetectable so it is best to assume that all blue tanzanites have been heated. Larger gems which display deeper blue hues are the most expensive. Small gems are more of a pastel blue. Most heat treating and cutting seems to be done in Thailand. Some smaller stones have been found to be coated with a layer of cobalt or titanium to enhance the color so the buyer must be cautious. Current prices offered by reputable dealers for well-colored gems are around \$400.00 to \$500.00 up to \$700.00 per carat for gems in the 3.0 to 5.0 carat size range. Larger or exceptionally colored stones bring greater per carat prices. A 4.36 carat marquise-cut tanzanite was priced at \$850.00 per carat or \$3,261.00 total. A 17.65 carat cushion-cut tanzanite of excellent color was offered at \$18,532.50 or \$1,050 per carat. A beautiful 3.34 carat purple-blue gem was offered at \$800.00 per carat or total \$2672.00. Light-colored stones in sizes less than a carat are approximately \$100.00 to \$200.00 per carat. No new sources of tanzanite have been found and its mining is more or less controlled by the Tanzanian government. Reportedly, the known deposits are being mined out so the gem's rarity will increase on the market. So long as the public fancy demands tanzanite gems, the price will rise.

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Via, The Gemrock Nov 2014