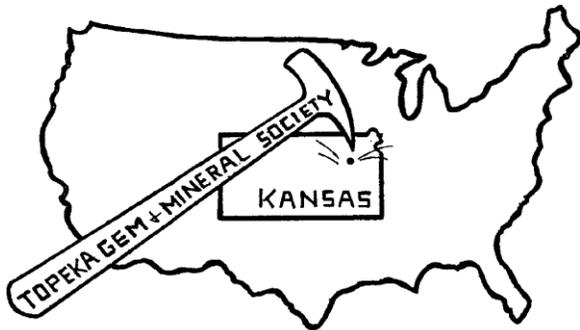


The Topeka Gem and Mineral Society, Inc.
 1934 SW 30th St. Topeka, KS 66611
 Rock2Plate@aol.com

THE GLACIAL DRIFTER



www.topekagemandmineral.org
 Facebook: Topeka Gem and Mineral Society Field Trip

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. 58, No. 09, Sep. 2015

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.**

2015 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.	Larry Henderson	-----
2 nd Vice Pres.	Carolyn Brady	233-8305	Publicity	Donna Stockton	913-645-7677
Secretary	Cinda Kunkler	286-1790	Welcome/Registration	Jason Schulz	379-5538
Treasurer	Millie Mowry	267-2849	Property	M. Cote/D. Dillon	379-5538
Directors	Harold Merrifield	286-3548	AFMS Scholarship	Cinda Kunkler	286-1790
	Chuck Curtis	286-1790	Editor/Exchange Editor	Millie Mowry	267-2849
	George Reed	836-9277	Show Chairman	Harold Merrifield	286-3548
Historian	Deborah Scanland	273-3034	Show Dealer Chairman	Dave Dillon	272-7804
Federation Rep	Harold Merrifield	286-3548	Show Secretary	Cinda Kunkler	286-1790
Corporation Agent	Millie Mowry	267-2849	Jr. Rockhound Leader	Larry Henderson	-----
Librarian	open	-----	Show Case Coordinator	Francis Stockton	913-645-7677
Web Master	Jason Schulz	379-5538			

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.



September we get back to our regular scheduled meetings on the 4th Friday of the month at the Washburn University Stoffer Science Hall, room 138. The September meeting is our annual Silent Auction and the Club has purchased a large quantity of rock that will be for sale at the club auctions as well as the show auctions. If you want some good slabbing rock, be sure to make it to one of the auctions to see it, and bring your check book!

The show is coming up fast and we need plenty of help to set up and help with the show. Remember you need to help with the show in order to get in free. Sign-up sheets will be at the next club meeting.

Mike and his Rock Stash!



Word from our V. P.

Our show is fast approaching around the corner. We can use all the help we can get on Friday October 9th starting at 8:00 a.m. Help is needed in setting up the tables and helping set up our cases and club areas. Let us know if you can help out. Also please sign the signup sheets at our September meeting which will feature our silence auction! We will be putting out some great rocks that we acquired just last month! So bring your money/checkbooks to buy, buy, buy!!!

We will be setting up for casting on Tuesday September 22th at the class at Mike's. Even if you have not been to class come out to see what is involved with this process and learn how to cast! Hope everyone has had a great summer and is ready for our meetings and fellowships!!! I will see you at the meeting!!!! Dave-

We still need Best Choice UPS Labels!



Test Your Knowledge:

Garnets occur in every color except one. What is it?
What two gems are part of the corundum family?
True or False? Hematite is the primary ore of Zinc.

Bench Tip By Brad

'Get all 101 of Brad's bench tips in "Bench Tips for Jewelry Making" on Amazon'
www.amazon.com/dp/0988285800/

SMOOTHING EAR WIRES Any time you make your own ear wires, the hardest part for me is to sand and polish the end that's inserted into the ear. Any sharp edge there is no fun. I've tried using sanding sticks, cup burs, and silicone polishing wheels. I've tried buffing on a Zam wheel, and I've tried spinning the wire in the Foredom to polish+ the tip. While all of these techniques do the job, none are very easy, and none are as fast as I'd like. Then it occurred to me - I could melt the wire smooth. One quick touch in the flame of the propane/oxygen Little Torch does the trick - not enough to form a bead on the wire but just enough to round off the tip. I find it's worth practicing the maneuver a couple times on some scrap wire before trying it on completed earrings. - - - - -



BALL BURS I use ball burs quite a bit for carving and for cleaning up bits of solder that need to be removed. The ball shape seems to be more controllable than other cutting burs. They're less apt to grab and walk over your piece. As to sizes I've found that 8 mm is a very useful size for carving while a half mm or smaller at high speed works great for signing your name on the back of your work.



BLACK HILLS FAN CORAL - *Chatetes Millepuracedus* Exerpts from article "Black Hills Fan Coral by Roger Clark)

The *Chatetes Millepuracedus* is, to my understanding, an early form of coral. While it apparently is not classified as coral, I will use the term Coral in this article. Agates hunters find this coral regularly when they hunt the badlands of South Dakota. It differs from the horn coral, which is also found in the badlands, in that it grows in a large bunch and has sort of a fan shape. The pieces that are found in the badlands are smaller pieces because they have been stream-tumbled and broken in smaller pieces. The coral is found in conjunction with the Minnelusa Formation where we have been uncovering the agates of the Hills. With verification as to its location, it was of interest to me to find out whether this fossil could tell us anything. The coral is well silicified and cuts and polishes just like agate or jasper. The fossil appears to have been completely replaced in a fashion similar to petrified wood. I was given several specimens and I met Professor Pabian at a show in the Minneapolis area and I was able to get the identification.

It turns out that this coral was a victim of the Pennsylvanian-Permian extinction which took place about 250,000,000 (250 million) years ago. It is another verification of the age of the Minnelusa formation formed between 306 and 260 million years ago. It is also, to me, evidence that there was a lot of silica around during the Minnelusa formation, which was available to replace this coral. The Fairburn agates were formed in this same formation and is further my contention, that they would have formed earlier in the lithification (compaction) of the Minnelusa. This is circumstantial evidence. I am still waiting for someone to do some definitive time dating, before we can really zero in on the time of origin. Present day corals can indicate environmental conditions, including depth, temperature and salinity. This could be helpful about the conditions during the Fairburn agate formation, talking about the conditions during fossilization rather than during its growing period.

Additional information: The Minnelusa formation was formed during the Pangaea when all the countries in the world were together before they were separated. (www.uwyo.edu/eori/_files/minn_consoritia/jackson%20pml.pdf -Permisson given to copy Coral article)
The Ammonite Sept 2015

Field Trip Calendar

An up-to-date Calendar can be found on the Topeka Gem and Mineral Society Website:

<http://topekagemandmineral.org/calendar.html>

Public Facebook Page:

<http://www.facebook.com/pages/Topeka-Gem-and-Mineral-Society-Field-Trips/92795058262>

Trips dates are tentative and subject to additions and change. E-mail Larry if you have an interest in any of these trips LHenderson85@gmail.com

No Field Trip September 26th

October 10-11th Topeka Gem & Mineral Show, KS Expo AG Hall

October 24, Field Trip TBA

November 14, Field Trip to Linda Hall Library, Kansas City MO. Kansas City Area Fossils Exhibit. Meet at McDonald's 11th and Kansas to car pool to Kansas City. Leave at 9:00 AM. Junior Rockhounds, contact Larry for worksheets.

- **Additional Show Dates:**

For additional listings of gem shows see www.rockngem.com

Fossil Special Interest Group

The first and third Tuesday night at 7:00 p.m. at Baker's Dozen, 4310 SW 21st St, Topeka, KS. We will discuss fossils and other collections. Come join us with show and tell.

*October 6, *October 20

Junior Rockhounds can get help on their collections.

TOPEKA JUNIOR ROCKHOUNDS

Facebook: <http://www.facebook.com/TopekaJuniorRockhounds>
To register for the Junior Rockhounds or any of the classes, email Shirley Schulz, Program Secretary sschulz@kdheks.gov.

Classes start at 6:30 pm at the Town & Country Christian Church, 4925 SW 29th Street. The Topeka Junior Rockhound Advisors will meet at 6:30 pm. Junior Rockhounds are encouraged to attend the club meetings to receive Patches and Badges.

We have a Junior Rockhounds Activities Center that is open at the general meetings, September through May. It begins at 7:00 pm and run through the meeting preceding the program. Door prizes and patch/badge presentations will be given out at that time

Topeka Gem and Mineral Society members have access to lapidary and jewelry-making classes every Tuesday, from 6:00 to 9:00 at Mike's, through the spring, summer, and fall!



Junior Rockhound - New Class Schedule

2015

October 1	Minerals-The Basics
November 5	Rocks-The Basics
December 3	Fossils

2016

January 7	Dinosaurs
February 4	Rocking on the Computer
March 3	Earth Resources
April 7	Stone Age Tools & Art
May 5	Maps
June 2	Leadership
July 7	Fluorescent Minerals
August 4	Special Effects
September 1	Earth in Space



Junior Rockhound Roundup, September 19th, 2015, Topeka, Shawnee County, Public Library
9:00 AM to 2:00 PM

Free Notebooks at Roundup

New Junior Rockhounds, and those renewing for 2016, will receive a free Junior Rockhound, 3 ring notebook to keep their notes and handouts in. Come to Roundup early, while supplies last.

Looking for Junior Rockhound exhibits for Roundup

If you would like to show your collection, exhibit, presentation, and/or your Junior Rockhound vest, at the Roundup, please contact Larry.

Topeka Gem & Mineral Show, Junior Rockhound booth, October 10-11th, 2015, Kansas Expocentre, Ag Hall

Help with set up: Set up Friday, October 9th, at 9:00 AM

Looking for Junior Rockhound exhibits for Show booth

If you would like to show your collection, exhibit, presentation, and/or your Junior Rockhound vest, at the show booth, please contact Larry.



Publicity

IT'S TIME TO WEAR SHIRTS !!!!

This is the busiest time of year for our club and I've been off and running to spread the word.

OH, AND DID I TELL YOU IT'S TIME TO WEAR OUR SHIRTS TO SCHOOL, TO THE MARKET, STANDING IN LINE AT THAT BIG BOX STORE (Wal-Mart, Best Buy, Target), CHURCH, GRANDMA'S HOUSE, you get it.....

We have two large events within the next few weeks. There is the Jr. Rockhounds Roundup at the Library on the 19th and the TGMS ROCK AND MINERAL SHOW---OCT. 10-11. We need everyone to help get the word out.

We wanted to do some different things this year to hope to make a bigger difference in attendance. I found that radio spots for 93.9 The Eagle, an oldies station, was affordable where as we turned our TV spots into a free appearance on The Red Couch. Last year 7 of our spots never made it on air. We also explored 3 billboards. That was \$1400 versus \$300 for the radio spots. The board just didn't think billboards were possible for this year. We got the wooden nickels. DID I TELL YOU WE ARE WEARING OUR WALKING BILLBOARD SHIRTS EVERYDAY FROM NOW ON?

You all are being good sports about helping publicize our show and roundup. Thank you so much and if you think of something else we can do, please tell us.

Next year we will explore sponsors to help pay for billboards for our 60th show. If you own a business, please consider helping us next year. Planning ahead will help us succeed.

Oh, and did I remind you to wear your shirts? Saturday at the Haskell art show, Several people said we should turn them around and wear them backwards. Try that if you want.

See you at the meeting and show.

Donna Stockton

How to Cut Obsidian

Gold Sheen: To get the most out of mahogany gold sheen obsidian, saw with the bands, as if they were a stack of plates, and you wish to unstick them. Watch for “fire spots” in gold sheen. It is not plentiful, but opal-like colors do sometimes occur in mahogany gold sheen.

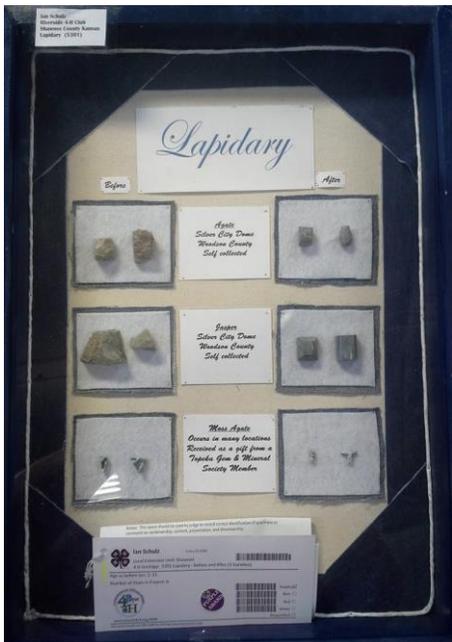
Iridescent: There are two types of iridescent obsidian. In cutting both correctly, the orientation of the color is most important. One type of obsidian is banded and the color lies in the bands. On the unbanded types of obsidian the surface has to be chipped to find the color. The banded type will have several colors or shades, while the unbanded will have only one. Cut the banded parallel to the bands to get effect. To get rainbow effect cut the stone at an approximately 15 degree angle across the bands.

Midnight Lace: Lace patterned obsidian should be cut across the surface pattern that you desire to reproduce. Though obsidian is comparatively soft, it is still very important to sand away all scratches before going to polish. Some advice that wet sanding be done, since obsidian is heat sensitive and very brittle. For final polish, felt with cerium oxide is the choice. Should you be faceting some particularly gemmy obsidian try cerium oxide on Lucite but keep it wet.

Rainbow: Cut parallel to flow layers. These can be seen by examining fractured surfaces using an overhead single lamp bulb. These are not always straight; it may be necessary to turn the stone slightly in the saw. Examine each slab set with either water or saw oil to see if the correct angle has been obtained.

Grinding Obsidian Cabs: Approach your grinding wheel with the material at a slight horizontal angle. If brought straight in, it may be a “shattering” experience as obsidian fractures conchoidally, and this is a sure way to do it.

Polish on Obsidian: Keep the polishing wheel wet. A dry polish will result in blisters and scratches. After obsidian is sawed, be sure to bevel the edges on your fine grinding wheel to keep them from flaking and chipping. Wear goggles or glasses at all times. If a small chip of obsidian got into your eye it could be very hard to remove as it is transparent and hard to see even with a powerful magnifying glass, and the edges may cut your eye to great extent before it can be removed. (Source: author unknown from Quarry Quips, May 2004; via: Chippers’ Chatter – September, 2010)



Fair Lapidary Competition

Robert Schulz

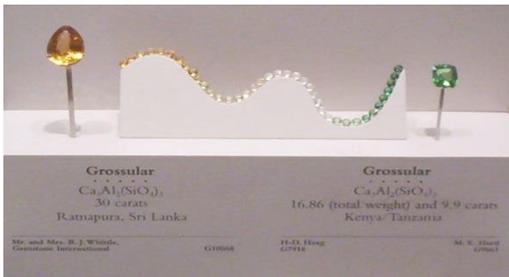


Ian Schulz

State

GEM PROFILE—Tsavorite and Green Garnets

Gem Profile by Layna Palmer – [wire-sculpture.com](http://www.wire-sculpture.com)



We'll take a look at the green garnets. *Editor's note: while green garnets are beautiful, they are extremely hard to come by... so we are pleased to feature even more red garnet wire jewelry made by talented readers like you in this Garnet article!* Green is a color for a Garnet? Well, yes it is! Uvarovite, Grossularite, and Andradite garnets range in color from a light yellow-green to an intense green – nearly the same color as the finest Emerald.

The color range of grossular garnet, from champagne to a vivid green. (via <http://en.wikipedia.org/wiki/File:GrossularShades.jpg>)

Tsavorite

Tsavorite is a deep green stone discovered in 1967 by Campbell R. Bridges, a British Geologist. He was camping in the mountains in northeastern Tanzania when he came across some curious nodules of rock. After breaking them open, he discovered beautiful green crystals he later found to be of the grossular group, though these were too small to facet. (See a picture of Tsavorite here. Via <http://en.wikipedia.org/wiki/File:Grossular-4jg61a.jpg>) Bridges then continued to search for a viable gem-quality source of the stone in Kenya where he not only lived in a tree hut to protect himself from animals, but was successful in finding larger stones that could be faceted. (so Mom, the next time your boy builds a fort from your couch cushions, remember Campbell Bridges and tsavorite!) Since the stones were first found in Tanzania near the Tsavo preserve, Tiffany and Co president Henry Platt named the stones Tsavorite. So far the stone has only been found in



Madagascar and Kenya. Tsavorite has a refractive index of 1.74 giving the stone fire that is said to be seen even while hid-den by cloth. It is also rare to find the Tsavorite in larger than 2 – 3 carats with most of the stones being less than 1carat, though in rare instances larger carat stones have been found like the 325 carat beauty found in 2006.

Demantoid Garnets

Another type of green garnet is the Demantoid Garnet, my personal favorite. Demantoid doesn't refer to a condition, but rather it means it's an andradite garnet that ranges in color from yellow green to deep emerald green. It has amazing luminosity with a 0.057 dispersion and 1.80-1.89 refractive index making the —fire of the Demantoid greater than that of a diamond.

Demantoid garnet, also called —Ural Pearls, were discovered in the Ural Moun-tains of Russia in 1868 and soon graced workshops in St. Petersburg – most notably, that of Carl Faberge. Faberge, who created the famous Faberge eggs, loved the demantoid for its brilliance. Only occasionally seen on the market after World War I, the demantoid made a rather dramatic return in the 1996 when more of the material was found in the Spitzkoppe range of Namibia.

A Namibian goatherd was just wandering around, minding his own business, when he stubbed his toe on the gem. (I don't know about the toe part, but he did find the stones in the dirt and thought they should be looked at by the village elders... what a great story!)

So what differentiates the Demantoids found in Russia versus the ones in Namibia? Well, they are equal in brilliance, color and fire, but differ in one minor detail: the horsetail inclusions. Generally when we think of inclusions in gemstones, the fewer there are, the greater the value of the gem. This does not hold true for the humble Demantoid. The inclusions are called —horsetaill because they're golden brown threads usually seen radiating from the center of the stone, looking like the hair on the tail of a horse. The horsetail inclusions are chrysotile, a form of asbestos. Because these inclusions are only found in the demantoid garnets of the Ural Mountains, these stones are rare and thus priced higher than the equally beautiful yet inclusion-free ones from Namibia.

Uvarovite

Last but not least is Uvarovite, one of the rarest of garnet, was discovered by Germain Henri Hess in 1832 and named for Count Sergei Semenovitch Uvarov. The small crystals form a druze in the marble and schist deposits in the Ural Mountains and the Outokumpu range in Finland and has also been found in Quebec, Canada, Norway, and South Africa. The bright green of uvarovite is due to the chromium content within the garnet structure. Uvarovite is the **only** garnet that has a consistency to its green color!

Green Garnet Metaphysical Properties

Tsavorite is said to bring strength during difficult or new phases of life. It is a stone of wealth and positive feeling helping the wearer in financial, creative, and physical health.

Demantoids are said to reduce loneliness, increase love and help remove emotional obstacles. They help promote growth in relationships and decrease the feelings of emotional inequality. Green Andradite is the color of the earth giving the wearer a sense of awakening, helping one to persevere and is an excellent talisman of power.

Uvarovite is a calming stone that is said to strengthen the heart and other organs as well as bringing a sense of self-worth, especially to heal negative emotions caused by a feeling of scarcity.

Resources & Recommended Reading

Green Crystals Meanings – Crystal Vaults -- Garnet on Minerals.net -- Garnet on Wikipedia --Tsavorite on Wikipedia -- Uvarovite on Wikipedia -- Demantoid on Wikipedia International Colored Gemstone Association – Demantoid Garnet -- International Colored Gemstone Association – Tsavorite Garnet

Due to space issues some of the photos of members craftsmanship were not placed in the article. Go to website to view all of the gorgeous pieces. Type in the article title .

(The Rockhound Gazette December 2013 Volume 47, Issue # 12)

Gemstone Inclusions

from **The Rockhound Gazetteer**, April 2008 via **Pick & Pack**, Aug. 2008

Almost all gemstones have some type of inclusion which a lot of people look at as a flaw. This flaw is an important characteristic of the gem you are looking at, as well as the evidence of the genuineness and sometimes even the country or origin of a particular stone. A jeweler's loupe or a microscope is needed to view the internal world of the gemstone.

Lily-pad inclusions look like a lily pad and are found in peridot.



Lily-pad

inclusion in peridot

Fingerprints are small crystal inclusions that are arranged in curved rows and look like a fingerprint.

A **Halo** or disc-like inclusion looks like a flat disc like shape and resembles a halo. Very often this inclusion will contain a black mark in the center, which could be a zircon crystal. This inclusion is found in Ceylon sapphires.

Horsetail inclusions consist of hair-like fibers arranged together and resemble a horse's tail. This is indicative of demantoid garnets.



Horsetail inclusion in demantoid garnet

Needle inclusions resemble fine needles and are found in garnet, sapphire, aquamarine andalusite, and Burmese rubies.

Two-phase inclusions resemble a frankfurter in outline that has a bubble enclosure. This bubble may or may not move when the stone is tilted. Topaz, quartz, some tourmalines, synthetic and genuine emeralds exhibit this inclusion. Bubbles look just like what you would think they would. This type of inclusion indicates a synthetic material, glass or a piece of genuine amber.

Dark, **ball-like** inclusions look like a dark, opaque ball surrounded by irregularly shaped, wispy brown cloud-like formations. The inclusions are exclusive to Thai rubies.

A **Feature** inclusion is actually a crack in a gemstone that looks like a feather. This inclusion is observed in sapphires, rubies, and diamonds.

Zebra stripes look just like a zebra's stripes and are indicative of quartz.

Swirl marks look like serpentine, curved shapes or curlicues and usually appear as a darker shade of material than what you are looking at. This indicates you are looking at a piece of glass.

Veils look like bubble-like inclusions that are arranged in layers and resemble a wispy veil. This is common in synthetic emeralds and synthetic rubies.

Color-banding looks like concentrated color bands in a gem material. This is caused by changes in temperature, pressures, and chemicals during the growing period. Straight color banding indicates a genuine stone and curved color banding indicates a synthetic stone of gem material.

(Gem Cutters News Nov 2013)

Answers to Test Your Knowledge

1. Garnets occur in every color except in blue.
2. They are Rubies and Sapphires.
3. False. Hematite is iron oxide, the primary ore of iron.