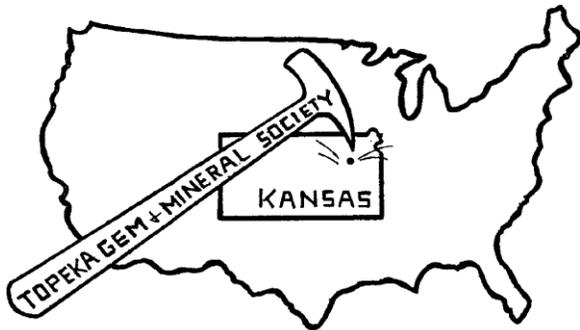


The Topeka Gem and Mineral Society, Inc
 1934 SW 30th St. Topeka, KS 66611
 Rock2Plate@aol.com

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. 56, No. 9, Sept. 2013

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.

2013 OFFICERS AND CHAIRS

President	Mike Cote	220-3272	Cab of the Month	Debra Fran/Fred Zeferjohn	862-8876
1 st Vice Pres.	Dave Dillon	272-7804	Field Trip Coord.	Larry Henderson	272-8444
2 nd Vice Pres.	Carolyn Brady	233-8305	Publicity	Christy Bien	608-1890
Secretary	Cinda Kunkler	286-1790	Welcome/Registration	Jason Schulz	379-5538
Treasurer	Millie Mowry	267-2849	Property	M. Cote/D. Dillon	379-5538
Directors	Clyde Burton	478-4778	AFMS Scholarship	Louellen Montgomery	
	George Reed	836-9277	Editor/Exchange Editor	Millie Mowry	267-2849
	Harold Merrifield	286-3548	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	272-8444
Librarian	Lucy Hrenchir	267-3325			
Web Master	Jason Schulz	379-5538			

Area Code for all numbers is (785).

In Memory of Louellen Montgomery



Louellen Montgomery, 95, Topeka, passed away on Wednesday, September 4, 2013. She was born November 19, 1917 in Oskaloosa, Kansas to John and Effie Hoskinson.

She married Lloyd Russell Montgomery on July 1, 1939 in Oskaloosa. He survives. She is also survived by their children, Bruce (Marcia) Montgomery, Lenexa; Deborah (Bill) Scanland; Cinda Kunkler (Chuck Curtis); Melissa (Kai) Follmer and Jana (Russ) Cook, all of Topeka; 10 grandchildren, two step-grandchildren, 10 great-grandchildren and five step-great-grandchildren.

Louellen's journey has just begun. Don't think of her as gone away; life holds so many facets—this earth is only one. Just think of her as resting from the sorrows and the tears in a place of warmth and comfort where there are no days and years. Think how she must be wishing that we could know, today, how nothing but our sadness can really pass away. And think of her as living in the hearts of those she touched, for nothing loved is ever lost, and she was loved so much.

Memorial contributions may be made to AFMS Scholarship Foundation, 12719 NE 116th St. #E-101, Kirkland, WA 98034.

"Old Rockhounds Never Die, They Just Slowly Petrify."

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.

From the President – Mike Cote'

Also a reminder to bring any Best Choice UPC Labels that you may have as we are still collecting them.

Lessons on Tuesday nights at my house are producing some very nice jewelry and polished stones. Anyone interested in joining us, give David or me a shout.

The September general meeting will be held at Stoffer Science Hall room 138 at 7:30 p.m. The program will be the Silent Auction. Bring all your unwanted items, equipment, rocks, jewelry, magazines, etc., and donate them to the Club for the Silent Auction.

Elections are just around the corner, we will have a few openings to fill, so when the Nominating Committee calls be willing to help as we need new ideas to make a success of our club.

Millie has the Annual Christmas dinner planned at McFarland's Restaurant, 4133 SW Gage Center Dr. in the lower level. You can choose from the regular menu at your own expense. This will be on December 6, 2013 at 6:30 p.m. **We need at least 25 -30 people to attend**, so bring your spouse, buddy, kids, or best friends. There is an elevator on the south end of the building that can be used instead of the stairs to reach the lower level. There will not be a general meeting or a Board Meeting for the month of December. At January's general meeting the program will be another silent auction.

Mike and his rock stash

CARNELIAN AGATE

By Jan Baumeister

Carnelian is a reddish-orange, or reddish-brown colored gemstone that has a translucent from the Quartz family. It has a warm, uniform, and easily distinguishable color due to impurities of iron oxide. This stone sits at a 6.5 - 7 on the Mohs scale (somewhere between Iron Pyrite and Quartz). Carnelian is derived from the Latin word meaning horn. Carnelian is also spelled 'cornelian' and has also been referred to as Mecca Stone, Pigeon's blood Agate, and Sadoine. The earliest name for this stone is "Sard". Carnelian is translucent, waxy and cloudy in appearance. Although it gets its name from the Latin word carneas, meaning fleshy, its color can range from oranges and tans to deep reds.

The best quality Carnelian is found in India but it is also found in many other parts of the world including Uruguay, Brazil, Japan, Botswana, and Madagascar. In the United States, Carnelian can be found in Texas, North Carolina, Colorado, Florida and Oregon. Carnelian show case centered around a big hunk of red-orange carnelian the size of a huge muskmelon I got while in Southwestern Arizona. Carnelian is one of the oldest stones used in ancient times. It gets its name from the Latin word carneas, meaning fleshy. The bow drill was used to drill holes into carnelian in Mehrgarh between 4th-5th millennium BCE. Carnelian was recovered from Bronze Age Minoan layers at Knossos on Crete in a form that demonstrated its use in decorative arts; this usage dates to approximately 1800 BCE. Carnelian was used widely during Roman times to make engraved gems for signet or seal rings as hot wax does not stick to carnelian. (from www.wikipedia.com; glgemstonejewelry.com; and www.beadage.com -photos by Bing.com, & The ammonite 9/13)



Sapphire

This birthstone has been popular since the Middle Ages and, according to folklore, will protect your loved ones from envy and harm. Medieval clergy wore sapphires to symbolize heaven, while commoners thought the gem attracted heavenly blessings. Blue sapphires range from very light to very dark greenish or violetish blue, as well as various shades of pure blue. The most prized colors are a medium to medium dark blue or slightly violetish blue. Sapphire is a variety of the gem species corundum and occurs in all colors of the rainbow. Pink, purple, green, orange, or yellow corundum are known by their color (pink sapphire, green sapphire). Ruby is the red variety of corundum.



Sapphire (Greek: *σάπφειρος*; *sappheiros*, 'blue stone', which probably referred instead at the time to lapis lazuli) is a gemstone variety of the mineral corundum, an aluminium oxide ($\alpha\text{-Al}_2\text{O}_3$). Trace amounts of other elements such as iron, titanium, chromium, copper, or magnesium can give corundum blue, yellow, purple, orange, or a greenish color. Chromium impurities in corundum yield a pink or red tint, the latter being called a ruby. Commonly, sapphires are worn in jewelry. Sapphires may be found naturally, by searching through certain sediments (due to their resistance to being eroded compared to softer stones) or rock formations. They also may be manufactured for industrial or decorative purposes in large crystal boules. Because of the remarkable hardness of sapphires—nine on the Mohs scale—and of aluminium oxide in general, sapphires are used in some non-ornamental applications, including infrared optical components, such as in scientific instruments; high-durability windows; wristwatch crystals and movement bearings; and very thin electronic wafers, which are used as the insulating substrates of very special-purpose solid-state electronics (most of which are integrated circuits).

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TLC REPORT

Nothing was reported, so all must be well this month.



A old snake goes to see his doctor. "Doc, I need something for my eyes. Can't see well these days." The doc fixes him up with a pair of glasses and tells him to return in two weeks.

The snake comes back two weeks later and tells the doctor he's very depressed.

Doc says, "What's the problem -- didn't the glasses help you?"

"The glasses are fine, Doc. I just discovered I've been married to a water hose the past two years!"

Internet Humor!



FIELD TRIPS AND DATES TO REMEMBER

Tuesday night coffee, first and third Tuesday night, has been renamed to the Fossil Special Interest Group, We will be meeting 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.

Sept 17, 7:00 p.m. Fossil Special Interest Group, Show & Tell, at Baker's Dozen, 4310 SW 21st St, Topeka, KS.

Oct 9, Field Trip Location TBA, Meet at McDonalds, 11th & Kansas, leave at 9:00 a.m.

Oct 15, 7:00 p.m. Fossil Special Interest Group, Show & Tell, at Baker's Dozen, 4310 SW 21st St, Topeka, KS

Oct 12-13 TGMS Show-The field trip booth will need exhibits of what we found this last year. If you have any donations to the Scholarship table, contact Carolyn Brady.

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

Topeka Gem and Mineral Society Calendar: <http://topekagemandmineral.org/calendar.html>

Trips dates are tentative and subject to additions and change. Call or e-mail Larry if you have an interest in any of these trips 272-8444 or LHenderson85@gmail.com

Larry Henderson, Field Trip Chairman



Other Opportunities:

Oct. 5-6: Omaha, NE 57th Annual Nebraska Mineral & Gem Club Show, Sat 9-6 Sun 10-5 Westside Community Center, 3534 south 108th St. (108th & Grover St.) Free Parking.

57th Annual Topeka Gem & Mineral Show

October 12 & 13, 2013

Agricultural Hall, Kansas Expocentre

\$1.00

OFF
Discount
Coupon

17th & Topeka, Topeka, Kansas

\$1.00

OFF
Discount
Coupon

Admission

Adult \$4.00 Student (13-17) \$1.00

Child under 13 with Adult - FREE

Hours

12th -10 am - 6 pm

13th -10 am - 5 pm

One Coupon Good For All Adults In Group

[email: rock2plate@aol.com](mailto:rock2plate@aol.com)

Oddities of Obsidian

By Dolores E. Rose

Obsidian is an extrusive igneous rock formed when the magma of an erupting volcano reaches the earth's surface and cools rapidly. It is an extrusive rock because it was pushed out onto the surface. The cooling of the extrusive rock occurs so rapidly that the magma doesn't form minerals at all, but a volcanic glass.

It derives its name according to Pliny, an ancient Roman naturalist, from a fellow named Obsius, who found it in Ethiopia. Originally, it was named "obsianus", but the spelling was changed over the centuries to its modern form.

Obsidian occurs in many colors, black being the most common. It can also be red, brown or even green. It can contain inclusions of magnetite, ilmenite, iron oxide, potassium oxide, sodium, oxide, lime and magnesium. It is composed of 66-77% silica, with about 13-18% alumina. Magnetite most likely gives obsidian its black color, and oxidized magnetite or hematite the reds and browns.

With slow cooling, silica crystals Cristobalite form, giving the "snowflake" obsidian or "flowering" obsidian. Iridescence reflected from minute inclusions arranged in layers is known as "rainbow obsidian". Another kind with gold inclusions with a strong metallic luster is called "gold sheen obsidian", and if the inclusions are grayish silver in color, it's called "silver sheen".

Obsidian is interesting in many ways, but mainly, for all practical purposes, it is a true glass. It has a hardness of 5-5.5 on the Mohs hardness scale. It represents a quickly congealed mass of molten rock, for if it had time to cool slowly, it would have crystallized into a rock similar to granite or rhyolite.

It shows no trace of crystalline structure nor possesses any established composition and must be considered a rock instead of a mineral. It is amorphous, having no regular internal arrangement of atoms as in crystals. The word amorphous is taken from the Greek and means "no form" because there is no pattern to amorphous materials. The atoms are jumbled together in small groups like particles in a pile of sand. It is extremely brittle and breaks easily with shiny, black conchoidal fractures – a feature so perfectly developed that it is easily identifiable in the field. It is translucent and will not soften when heated to a bright red.

Obsidian is found throughout the western United States, mostly in Alaska, Colorado, Utah, New Mexico, Arizona, Wyoming, Oregon, Nevada and California. It is also found in B. C. and throughout Mexico. American Indians valued obsidian highly. Its perfect texture and easy fracture made it a prize possession for chipping into arrowheads and large ceremonial spear points.

The Aztecs called obsidian "iztli", "teotal" or "divine stone" because of its usefulness in carving ceremonial blades. Even one of their gods was named "Itzoppziotl", meaning "obsidian butterfly".

Obsidian is also used to make attractive jewelry as cabochons or faceted. Thin slabs can be cut with a common glass cutter. Due to its extreme heat sensitivity, great care must be taken in working obsidian. Industries use obsidian as a raw material to make rock wool. Surgeons have even used thinly chipped obsidian knives in surgery because of the fine exact cut an obsidian knife makes.

From Stoney Statements, 4/01

Via <http://www.wenatcheerockclub.org/Obsidian.htm> & *The Rockhounder* 9/2013

How to Identify Minerals: 10 Steps to Mineral Identification

Pick Your Mineral.

Learning mineral identification is like learning to cook. You begin by following step-by-step procedures and looking up a lot of things. But after a while you notice regularities, become familiar with the usual suspects, make some productive mistakes, and get better at it until it becomes easy and fun. Another way mineral identification is like cooking is that professionals can go to school, learn to use expensive equipment and master the subject fully, yet amateurs can handle nearly all the common possibilities using just a few simple tools. The first thing to do is to observe and test your mineral. Use the largest piece you can find, and if you have several pieces, make sure that they are all the same mineral. Examine your mineral for all of the following properties, writing down the answers. After that you'll be ready to take your information to the right place.

Luster.

Luster is the way a mineral reflects light and the first key step in mineral identification. Look for luster on a fresh surface. The three major types of luster are metallic, glassy (vitreous), and dull. A luster between metallic and glassy is called adamantine, and a luster between glassy and dull is called resinous or waxy.

See the gallery of mineral lusters found at http://geology.about.com/od/mineral_ident/ig/lusters/ or some examples and further explanation.

Hardness.

Use the 10-point Mohs hardness scale. The important hardnesses are between 2 and 7. For this you'll need your fingernail (hardness about 2), a coin (hardness 3), a knife or nail (hardness 5.5) and a few key minerals.

(The following was taken from this month's (June 2013) MWF News. Originally written by Andrew Alden, About.com Geology Guide <http://geology.about.com/od/mineralsresources/a/whatsamineral.htm> & THE RICHLAND LITHIC 7/2013)

Mineral	Usual Color	Crystals	Cleavages	Hardness	Diagnostic
Biotite	Black	Rare	1 perfect	2–3	Cleavage
Calcite	White	Common	3 good	3	Acid fizz
Dolomite	White	Common	3 good	4	Acid no fizz
Feldspar	White or pink	Common	2 good	6–6.5	Hardness
Hornblende	Black	Common	2 (60/120°)	5–6	Cleavage
Muscovite	White	Rare	1 perfect	2–3	Cleavage
Olivine	Green	Common	1 fair	6.5–7	Color
Pyroxene	Dark	Rare	2 (87/93°)	5–6.5	Cleavage
Quartz	White	Common	None	7	Fracture

Color.

Color is important in mineral identification, but it can be a complicated subject. Experts use color all the time because they have learned the usual colors and the usual exceptions for common minerals. If you're a beginner, pay close attention to color but do not rely on it. First of all, be sure you aren't looking at a weathered or tarnished surface, and examine your specimen in good light. Color is a fairly reliable indicator in the opaque and metallic minerals—for instances the blue of the opaque mineral lazurite or the brass-yellow of the metallic mineral pyrite. In the translucent or transparent minerals, color is usually the result of a chemical impurity and should not be the only thing you use. For instance, pure quartz is clear or white, but quartz can have many other colors. Try to be precise with color. Is it a pale or deep shade? Does it resemble the color of another common object, like bricks or blueberries? Is it even or mottled? Is there one pure color or a range of shades? If you have an ultraviolet light, this is the time to see if the mineral has a fluorescent color. Make note if it displays any other special optical effects.

Streak.

Streak is the color of the finely crushed mineral. Streak is somewhat more reliable than color and is essential for a few minerals. You'll need a streak plate or something like it. A broken kitchen tile or even a handy sidewalk can do. Scratch your mineral across the streak plate with a scribbling motion.

Crystal Form and Mineral Habit.

A good knowledge of crystals is very helpful once you're past the beginner stage, but often minerals do not display any crystal faces, so for simplicity's sake, we'll ignore it. For beginners, a mineral's crystal form is less important than its cleavage (see the next step). When you're ready to learn this aspect of minerals, you'll want a book. One thing even beginners can do, though, is to observe a mineral's habit, the general form it takes. There are more than 20 different terms describing habit—see most of them illustrated in the Mineral Habits Gallery (found at <http://geology.about.com/od/minerals/ig/mineralhabits/>).

Cleavage and Fracture.

Cleavage is the way a mineral breaks. Many minerals break along flat planes, or cleavages some in only one direction (like mica), others in two directions (like feldspar), and some in three directions (like calcite) or more (like fluorite). Some minerals, like quartz, have no cleavage. Cleavage is a profound property that results from a mineral's molecular structure, and cleavage is present even when the mineral doesn't form good crystals. Cleavage can also be described as perfect, good or poor. **Fracture** is breakage that is not flat. The two main kinds of fracture are conchoidal (shell-shaped, as in quartz) and uneven. Metallic minerals may have a hackly (jagged) fracture. A mineral may have good cleavage in one or two directions but fracture in another direction.

To determine cleavage and fracture, you'll need a rock hammer and a safe place to use it on minerals. A magnifier is also handy, but not required. Carefully break the mineral and observe the shapes and angles of the pieces. It may break in sheets (one cleavage), splinters or prisms (two cleavages), cubes or rhombs (three cleavages) or something else.

Magnetism.

Magnetism is a distinctive property in a few minerals. Magnetite is the prime example, but a few other minerals may be weakly attracted by a magnet, notably chromite (a black oxide) and pyrrhotite (a bronze sulfide). Use a strong magnet. The magnets I use came from the corners of an old plastic shower curtain. Another way to test magnetism is to see if the specimen attracts a compass needle.

Other Mineral Properties.

Taste is definitive for halite (rock salt), of course, but a few other evaporite minerals also have distinctive tastes. Just touch your tongue to a fresh face of the mineral and be ready to spit—after all its called taste, not flavor. Don't worry about taste if you don't live in an area with these minerals.

Fizz means the effervescent reaction of certain carbonate minerals to the acid test. For this test, vinegar will do. (Learn more about the acid test at http://geology.about.com/od/mineral_ident/ig/acidtest/).

Heft is how heavy a mineral feels in the hand, an informal sense of density. Most minerals are about three times as dense as water, that is, they have a specific gravity of about 3. Make note of a mineral that is noticeably light or heavy for its size. Galena is distinctly heavy. Sulfides and oxides tend to be dense. You don't always need to do these tests, but remember them for the times they're called for.

Look It Up.

Now you are ready for mineral identification. Once you have observed and noted these mineral properties, you can take your information to a book or to an online resource. Start with my table of the rock-forming minerals (on page 6), because these are the most common and the ones you should learn first.

If you find yourself getting more interested in this subject, you'll benefit from a good book on rocks and minerals. An old one is as good as a new one in many respects, and having two or three books is better than having just one.



JUNIOR ROCKHOUND
PAGE



Junior Rockhound Roundup September 21st 10 A.M. -5 P.M.

The Junior Rockhound Roundup will be held on September 21st at the Town & Country Christian Church, 4925 SW 29TH Street, from 10am to 5pm. This is an opportunity for all Topeka Gem & Mineral Society members and the public to come and see what activities are available through the Junior Rockhound Program. Instructors will be present to describe what junior members will learn. Current junior members will show some of what they have learned. Join at the Junior Rockhounds Facebook Event Page.

Special Class Session September 27th

Junior members are to come a half hour early to the September Meeting of the Topeka Gem & Mineral Society on September 27th in order to evaluate the Washburn Collection.

Junior Rockhound Notebook Contest September 27th

Submitted Junior Rockhounds member notebooks will be judged at the September meeting. Notebooks will be judged on appearance, class handouts arranged by class/topic, and informative outside articles.

Junior Rockhounds are encouraged to attend the club meetings to receive Patches and Badges.

Facebook: <http://www.facebook.com/TopekaJuniorRockhounds>

