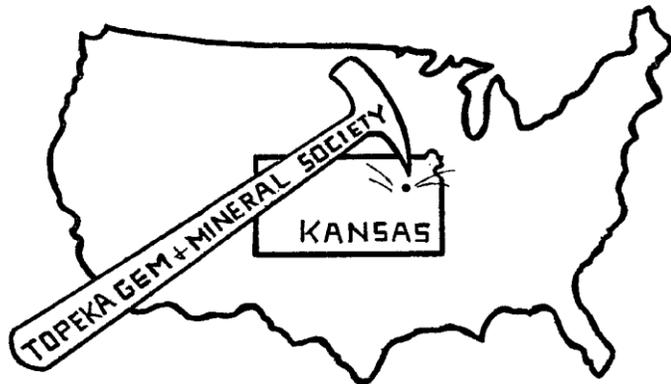


The Topeka Gem & Mineral Society, Inc.
 1934 SW 30th St. Topeka, KS 66611
 Rock2Plate@aol.com

THE GLACIAL DRIFTER



www.topekagemandmineral.org

Facebook: Topeka Gem and Mineral Society Field Trips



The Glacial Drifter, Vol. 56, No. 5, May 2013
 The Topeka Gem & Mineral Society, Inc.
 Organized December 3, 1948

Member of Rocky Mountain Federation of Mineralogical Societies
 American Federation of Mineralogical Societies

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; (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, except December, unless notified of a change, September – May, 7:30 pm, Stoffer Science Hall, Room 138, Washburn University. Picnic meetings held during summer months, June – August.

Dues: Individual, \$15.00; Couple, \$20.00; Junior (under 18 years of age), \$5.00. Dues are due in December for the Coming year; they are delinquent after the January meeting. Send dues to Millie Mowry, Treasurer 1934 SW 30th St., Topeka, KS 66611.

2013 OFFICERS AND CHAIRS

President	Mike Cote`	220-3272	Cab the Month	Debra Franz/Fred Zeferjohn	862-8876
1 st Vice Pres.	Dave Dillon	272-7804	Field Trip Coordinator	Larry Henderson	272-8444
2 nd Vic 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	220-3272
Directors	Clyde Burton	478-4778	AFMS Scholarship	Louellen Montgomery	354-1290
	George Reed	836-9277	Editor/Exchange Editor	Millie Mowry	267-2849
	Harold Merrifield	286-3548	Assistand Editor	Lucy Hrenchir	267-3325
Historian	Deborah Scanland	273-3034	Show Chairman	Harold Merrifield	286-3548
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Corporation Agent	Millie Mowry	267-2849	Show Secretary	Cinda Kunkler	286-1790
Librarian	Lucy Hrenchir	267-3325	Jr. Rockhounder Leader	Larry Henderson	272-8444
Web Master	Jason Schulz	379-5538			

Area Code for all numbers is 785.

Minutes of the Topeka Gem and Mineral Society

Our Secretary is on vacation!

TLC REPORT



*George Reed is recouping from knee replacement, but not able to drive yet.
Louellen Montgomery was in the hospital with an infection, but got home on May 10th
Roger Wake recently had surgery and is at home, under Lucy's watchful eye.
Carolyn Brady is going back in the hospital on the 16th to have her kidney stones removed.
Jim Mowry went into the hospital on May 2nd and ended up having lung surgery on the 9th. He is doing well, but still in the hospital.*

From the President – Mike Cote`

Hi everyone,
I was glad to see all you at the last meeting. The program by Dr. Laura Wilson, Curator for the Sternberg Museum put on a great program. I was in need help to form a call committee and I now have a committee of Vicki Cote', Deborah Scanland, Carolyn Brady and myself. We will be calling to get volunteers for different jobs and to cancel a meeting if the weather is bad, etc. May is the last general meeting before the summer picnics start in the months of June, July and August. Let's all make an effort to make it to this meeting.

I would also like to mention that Lucy Hrenchir has agreed to take over as our Librarian and be Assistant Editor, as well as being on the Notebook Committee. Thank you Lucy.

Mike

Make Welcome Our New Member

Charlie Sowell

Rejoining: Ken Hoffman

Field Trips - Dates to Remember

Tuesday night coffee, first and third Tuesday night, meets at Classic Bean, 7:00 p.m. We will discuss fossils and other collections. Come join us with show and tell.

May 17-19, Rapid City, South Dakota, trip canceled.

May 21, 7:00 p.m. Coffee, Show & Tell, at Classic Bean, Fairlawn Plaza.

May 25, Local Field Trip TBA

Jun 4, 7:00 p.m. Coffee, Show & Tell, at Classic Bean, Fairlawn Plaza.

June 6-8 Colorado Springs, CO, Mineralogical Society Annual Pikes Peak Gem & Mineral Show Western Mining Museum of Industry

Jun 18, 7:00 p.m. Coffee, Show & Tell, at Classic Bean, Fairlawn Plaza.

Jun 22-23 Victor Gem & Mineral Show, Victor, CO. For more info. on the event email stcfg@victorcolorado.com or call 719-689-2675 Vendors Welcome

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

We meet at McDonalds, 11th and Kansas Ave.

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

Larry Henderson, Field Trip Chairman



As a Reminder

For the months of June July & August

We do not have a General Meeting as we have picnics on the 4th Friday of the month, 6:30 p.m., at Millie's house, 1934 SW 30th St. Bring your favorite picnic food to share, and your own table service --- coffee and ice tea will be furnished. We will eat where it is cool or you can eat out on the patio.

THE TAGUA NUT (VEGETABLE IVORY)

The Tagua nut, a true ivory, known to have been used for over 125 years, is the exceedingly hard kernel of a nut produced by a palm. It grows in northern South America Botanical name: *Phytelephas macrocarpe*. Found in dense thickets near or along rivers, the tree may reach heights of twenty to thirty feet. From eight to thirty nuts are massed in large thorny heads, resembling enlarged chestnuts, but may be found growing at ground level, or a few feet above the ground, or in the top of the tree, depending on the species.

About 1859, ships returning to Germany from South America carried tons of Tagua nuts in their holds as ballast. Some of these found their way into the hands of skilled Austrian carvers, who made beautiful hand-carved buttons of them. By 1860, ivory buttons were in demand, and Schnollen, Germany, became the center of the ivory button industry. By 1864, a factory was established in America, where ivory buttons were made in many forms - dyed and natural, shiny and dull finish, metal rimmed, carved, and stamped. Probably your grandmother or great-grandmother used ivory buttons made from the Tagua nut.

In the early 1900s, experimentation with plastics developed, and in a few years, cheaper plastic buttons foretold the end of the ivory button industry. The use of Tagua nuts for carvings and figurines continued in the Orient. Today, many would like to work with ivory, to slab, carve, cab, or scrimshaw, but scarcity, high cost, and endangered species have turned us back to the Tagua nut.

Working with Tagua: It handles, cuts, ages, and works just like animal ivory.

To cut: Use any small saw - hacksaw or similar. Cut dry. Do not use your diamond saw - it is a waste of time and the nut may absorb oil. To grind: A worn 80 or 100 belt will remove saw marks. To polish: A worn 400 or 600 belt used dry will polish, or you can use any white polish and your favorite buff. Use a little moisture here.

Source: THE ROCKPILE January 2003; Show-Me Rockhounds Feb. 2013

SONORAN DENDRITIC RHYOLITE

By Scot Empey

One of the newer materials to show up at mineral shows is Sonoran dendritic rhyolite. Rhyolite is an igneous (volcanic) rock and is formed when very thick and slow moving lava is extruded or expelled from a volcano or volcanic rift. The lava cools and solidifies on the earth's surface rather than deep underground. Generally, the rhyolites favored by lapidaries have a high silica content and are very fine grained. When slabbed they look a lot like jasper.

Sonoran dendritic is hard, compact rhyolite, very suitable for cutting and polishing. It has gorgeous, flowery red and white dendritic inclusions on a blue/gray or tan pink background. It looks similar to Apache Canyon dendritic rhyolite from New Mexico.

The first time I cut this material, I found it to be a pleasure to work with. It is easy to use the colors and dramatic dendritic patterns to make a nicely designed gem.

Like all rhyolites, Sonoran dendritic is relatively soft material, but it is fairly solid and not especially prone to chipping. The dendrites form along fractures that, in many cases, healed naturally through further silicification. Some, however, did not heal enough to create a very strong bond; the weak bonds look a little dry and porous under magnification.

There are a couple of ways to deal with this issue. One is to apply pressure to break the weak joins and make your cabs from the pieces in between the breaks. Another is to seal the slab before you cut and sand. Since one of the dendrites that really caught my eye was on one of these dry fractures, I sealed the slab beforehand so I could use the pattern in a cab.

I used Krazy Clue, a cyanoacrylate adhesive. It is the thinnest or most watery brand I have found. A thin glue is more effective than a thicker type because it will penetrate the gaps. Another way to ensure good penetration is to apply the sealant when the slab is heated; I set it in the sun on hotter days or on top of the space heater if the weather is not cooperating. When the slab is hot to the touch, I apply the sealant to one side and return it to the heat source until it is completely dry and hard. Then I seal the other side and return it to the heat source for curing.

When the slab is thick and I am going to cut it down well below the surface, I re-seal it after the 220 grit step, when there will be no further significant removal of material. When the sealant has dried completely, I sand off the glue with the 220 belt and go on smoothing through the finer grits.

I was able to rough grind this softer material quickly on a 260 grit metal bond wheel and avoid the deep scratches I get from my 100 grit wheel. After that, I did my doming on a 220 grit belt on an expanding drum to eliminate any faceting left over from the hard wheel used in the roughing step. After sanding with the 220 belt, I went straight to a 600 grit belt, skipping the 400 grit step. Sanding with a 1200 belt didn't quite produce the satin finish I wanted, so I sanded it with a 6 mic (about 3000 grit) belt. This gave it a nice satin finish with a nice sheen. If you want a satin finish you can stop at this point.



Getting a glossy polish on rhyolites can be a bit tricky. First I tried tin oxide on a poly pad, but the results were not very impressive. Next I used Pro-Polish (0.5 micron aluminum oxide) powder on a Polypad polishing disk which brought much better results. By polishing the cab completely while the pad was wet, I was able to improve the finish, but when I did a glossing pass after the pad had dried out to the point that it pulled on the stone a bit, the finish became nice and glossy. A good way to tell if the pad is in the sweet spot for glossing is to check the amount of polish left behind after each pass; if the layer is thin, the pad is too wet. When the pad is just right it will leave a clean surface and will show a nice polish.

Author: Scott Ernpey, owner of Gerard Scott Designs, creates hand-cut gemstones, designer jewelry, and props for the motion picture industry. His Web site is www.gerardscottdesigns.com.

Source: Rock N Gem Magazine 3/13 via Deming Rock Chips 4/13; The Rockhounder May 2013



May Birthstone - Cut Emeralds

Emeralds, like all colored gemstones, are graded using four basic parameters—the four Cs of Connoisseurship: *Color*, *Cut*, *Clarity* and *Crystal*. The last C, *crystal*, is simply a synonym for transparency, or what gemologists call *diaphaneity*.

Before the 20th century, jewelers used the term *water*, as in "a gem of the finest water,"^[3] to express the combination of two qualities: color and crystal. Normally, in the grading of colored gemstones, color is by far the most important criterion. However, in the grading of emeralds, crystal is considered a close second. Both are necessary conditions. A fine emerald must possess not only a pure verdant green hue as described below, but also a high degree of transparency to be considered a top gem.^[4] In the 1960s, the American jewelry industry changed the definition of 'emerald' to include the green vanadium-bearing beryl as emerald. As a result, *vanadium emeralds* purchased as emeralds in the United States are not recognized as such in the UK and Europe. In America, the distinction between traditional emeralds and the new vanadium kind is often reflected in the use of terms such as 'Colombian Emerald.'^[5]

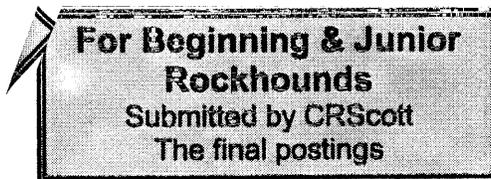
Color

Scientifically speaking, color is divided into three components: *hue*, *saturation* and *tone*. Emeralds occur in hues ranging from yellow-green to blue-green, with the primary hue necessarily being green. Yellow and blue are the normal secondary hues found in emeralds. Only gems that are medium to dark in tone are considered emerald; light-toned gems are known instead by the species name *green beryl*. The finest emeralds are approximately 75% tone on a scale where 0% tone would be colorless and 100% would be opaque black. In addition, a fine stone should be well saturated; the hue of an emerald should be bright (*vivid*). Gray is the normal saturation modifier or mask found in emerald; a grayish-green hue is a dull green hue.^[4] Emeralds are green by definition (the name is derived from the Greek word 'smaragdus', meaning green).^[6] Emeralds are the green variety of beryl, a mineral which comes in many other colors that are sometimes also used as gems, such as blue aquamarine, yellow heliodor, pink morganite and colorless green shenite.^[7]

Clarity

Emerald tends to have numerous inclusions and surface breaking fissures. Unlike diamond, where the loupe standard, i.e. 10X magnification, is used to grade clarity, emerald is graded by eye. Thus, if an emerald has no visible inclusions to the eye (assuming normal visual acuity) it is considered flawless. Stones that lack surface breaking fissures are extremely rare and therefore almost all emeralds are treated, "oiled", to enhance the apparent clarity. Eye-clean stones of a vivid primary green hue (as described above) with no more than 15% of any secondary hue or combination (either blue or yellow) of a medium-dark tone command the highest prices.^[4] This relative crystal non-uniformity makes emeralds more likely than other gemstones to be cut into cabochons, rather than faceted shapes.

From Wikipedia, the free encyclopedia



CLEANING FOSSILS;

As with rocks, the most important thing to remember about cleaning fossils is that most of the things you can try are potentially dangerous, so always seek help from right there to help you like your parent or teacher. The second most important thing to remember is that most fossils are fragile, so be gentle with them. There is no one set of steps to remove fossils from rock, because there are many different kinds of rock, and many different kinds of fossil preservation. Each presents its own opportunity for cleaning. Some fossils cannot be removed from the rock. Most of these are trace fossils, like footprints, and they are simply impressions in the rock itself; they are not made out of different material. Most plant fossils are carbon films that are very fragile, and they are usually preserved in shale. Any preparation beyond splitting the rock to reveal the fossil could easily damage the fossil. **DO THIS ONLY WITH ADULT SUPERVISION!** Fossils in soft sandstone or soft shale are the easiest to prepare. Some fossils, like shark teeth, tend to pop right out of the rock, especially if they are preserved in soft, poorly cemented sandstone. Fossils in soft sandstone can often be cleaned with a small brush. A used toothbrush works well. Sometimes soaking soft shale in water, or water plus detergent, will loosen the fossils, or even make the shale disintegrate without harming the fossils. Most sea shells are made of calcium carbonate, which is the same thing limestone is made of. However, the shells are often just a little bit harder than the surrounding rock. The best way to clean this kind of fossil is using a toothbrush, distilled vinegar and water. Soak your fossil in the vinegar for 1 minute. Remove from vinegar. With toothbrush and water gently scrub your fossil, removing the extra debris. Repeat as often as necessary. Once again I must add: **DO THIS ONLY WITH ADULT SUPERVISION.**

By: Susan Postlethwait, Jr. Chair The Rockhound Gazette Jan. 2011

Doorbell

I was accompanying my eight-year-old daughter who was selling cookies door-to-door for the Girl Scouts.

After visiting several homes, she commented on the different styles of doorbells: some buzzed, some rang, some warbled. We made a game of guessing what the next bell would sound like.

At the precise moment she touched the doorbell at one house, the church tower began to chime. She wheeled around with a look of amazement on her face. "Now that's a doorbell!"

Arenophile Class

Analysis of sand samples from first class.

Following is a rough analysis of the four samples provided to the Jr. Rock Hounds class.

Submitted by Bradford W. Davenport 05/09/13

Samples origin, Waikiki, Oahu Hawaii.

This sample is composed almost entirely of shell and coral fragments.

All grains are well rounded and the average sizes are about 2x-3x the size of table salt. There are several entire shells, some of which had tiny red stripes swirled around snail type shells. One student described as peppermint candy.

Composition.

98% shell & coral, 1% Basalt, 1% Rhyolite, 1% quartz

1. Sample origin, McMurdo Bay Antarctica.

This was easily the most interesting sample of the four. The sand was of very consistent size. The majority of the grains were about half the size of table salt. All grains were very sharp and angular. I reason this to be the result of the material being ground up under glaciers and deposited directly into the bay. Under a 20X microscope, I found material that looks like bits of green tourmaline because of the striations on the exterior sides of crystal faces. I found grains that looked very much like opal. I also found two tiny perfect octahedrons that were citrine in color that I believe are actually diamonds. They are very sharp edged and show no signs of any wear. There were also some of these that had been cracked into smaller pieces. Their edges were very sharp. I am still investigating these. They are too small for me to test with any means available to me. I have a Gemologist going to take a look at them.

Composition.

55% Basalt, 20% quartz, 5% Na & K Feldspar, 5% Iron, 10% Scoria/Pumice,
5% Assorted material like the Opal, Tourmaline, Diamond, etc.

2. Sample origin Kansas river. Masonry sand

This sample is as above mentioned, Masonry sand that has been screened for the use as mortar. It is very uniformed in size, about 2X-3X larger than table salt. All grains are very rounded. Some of the Quartz grains are very spherical.

Composition.

90% Quartz, 6% Na & K feldspar, 3% Basalt, 1% Other Flint, Calcite and a few Ferromagnesians.

3. Sample of origin. Iowa City, Iowa

Although there were no really large grains, there was quite a variety of sizes. The Quartz grains were quite rounded while many of the other materials were sharp to slightly rounded. The grains of Schist, Basalt and flint/cherts were the largest of all the materials. The average size was similar to table salt.

Composition.

96% Quartz, 3% Na Feldspar, .5% Flint/Chert, .25% Mica Schist, .25% Basalt

Junior Page



Junior Rockhounds – May 11, 2013

The Junior Rockhounds meeting was held on Thursday, May 2nd at 6:30 pm at the Town & Country Christian Church in Topeka, Kansas. Four members attending the class with Brad Davenport. Brad was continuing the session on The World of Miniatures. He brought in a magnifying glasses and a Microscope in order to give the members a close up look at various miniature samples. He had several samples of sand from various locations for which the members were given the tools to try and detect what types of locations the samples came from. Several “cool” comments were heard upon looking through the microscope, especially at the miniature shell which reminded some of peppermint candy by its coloration. Assignments were handed to be completed by the next meeting in June. The June meeting will be on the topic of Fossils with Larry Henderson and Debbi Jackson and Brad checking those assignments returned for review. Meeting will be held June 6th at 6:30pm at the Town & Country Christian Church in Topeka, Kansas.

Monthly classes are being held on the 1st Thursday of the Month starting at 6:30 pm at the Town & Country Christian Church. The Topeka Gem & Mineral Society Advisors meet at the same time.

Upcoming months will have the following classes:

May – Continue with Miniatures (Brad Davenport)

June – Fossils (Larry Henderson & Debbi Jackson)

July – Fossils (Larry Henderson & Debbi Jackson) / Introduction of Collecting (Pat Gilliland)

Aug – Continue with Collecting (Pat Gilliland) / Introduction of Showmanship (Pat Gilliland)

Sept – Continue with Showmanship (Pat Gilliland) / Introduction of Leadership (Jason Schulz)

-Shirley Schulz, Program Secretary

