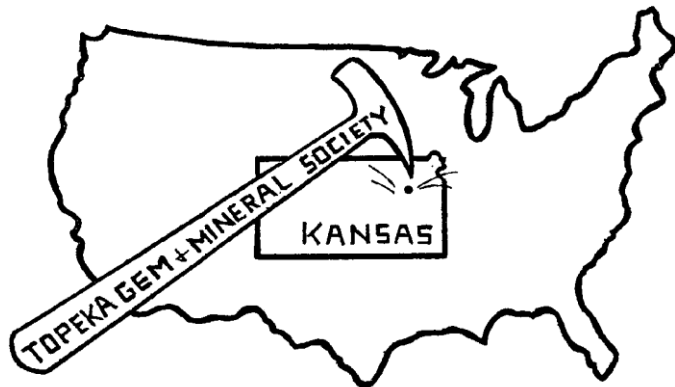


The Topeka Gem & Mineral Society, Inc.
 1934 SW 30th St. Topeka, KS 66611
 Rock2Plate@aol.com

THE GLACIAL DRIFTER



www.topekagemandmineral.org

Facebook: Topeka Gem and Mineral Society Field Trips



The Glacial Drifter, Vol. 56, No. 3, March 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; Husband and wife, \$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	Show Chairman	Harold Merrifield	286-3548
Historian	Deborah Scanland	273-3034	Show Dealer Chrm.	Dave Dillon	272-7804
Federation Rep	Harold Merrifield	286-3548	Show Secretary	Cinda Kunkler	286-1790
Corporation Agent	Millie Mowry	267-2849	Jr. Rockhounder Leader	Larry Henderson	272-8444
Librarian	Jim & Millie Mowry	267-2849			

Area Code for all numbers is 785.

Minutes of the Topeka Gem and Mineral Society

The February Meeting was cancelled because of the snow storm.
(Food for thought... We may have to consider not meeting in February as this is the second year in a row we have had to cancel the February meeting due to snow. Maybe next year it will be sunshine all month!)

The Program for the March Meeting will be "Rock Identification."
Bring your unknown rocks in to be identified.

For the May Meeting the video, How to Build a Dinosaur will be presented.

From the President – Mike Cote`

Since the February meeting was cancelled, we will be voting on the changes to the By-Laws at the March meeting. They are as listed below:

The TGMS Board has approved the following changes to the By-Laws. They will be presented at the next General Meeting for your vote.

Under Membership

Article III Sec. 2 reads: There shall be three classes of membership: (1) Adult: (2) Junior (under 18): (3) Honorary.

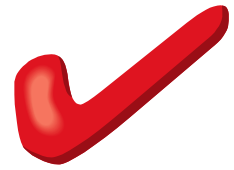
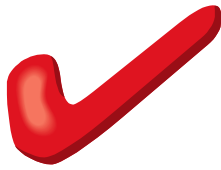
Change to: There shall be three classes of membership: (1) Adult: (2) Junior (under 18) requiring at least one parent or guardian to be a member, who will be responsible for the Junior: (3) Honorary.

Adding Sec. 3: Members will be requested to sign a Release of Liability form.

Under Dues

Article IV Sec. 1 reads: Dues, payable at the December meeting for the next calendar year, shall be: Adult member, individual, \$15.00; man and wife, \$20.00; Junior members, \$5:00, per year. Honorary members will not be assessed dues. Members who are delinquent will be dropped from the membership rolls at the March meeting. Reinstatement of membership will require full payment of dues for the coming year.

Change to: Dues, payable at the December meeting for the next calendar year, shall be: Adult member, individual, \$15.00; man and wife, \$20.00; Junior members, \$5:00, per year. Honorary members will not be assessed dues. Members who are delinquent will be dropped from the membership rolls at the February meeting. Reinstatement of membership will require full payment of dues for the coming year.



Your Dues is Due!!

Your dues is due, as of January 1, 2013. If you joined in October – December 2012, your dues is not due. If you are in question as to, or, if you have paid, check with Millie, at rock2plate@aol.com or call 267-2849. **The new directory will be printed the first of April – so I need your dues!**

The Board has approved a Release of Liability form that each member will be requested to sign. It will be effective immediately and available at the next meeting and sent with the paper copies of the Drifter as well as an attachment with the email copies. Please sign and return a.s.a.p. to Millie or any officer of the club.

Address Changes / New Members

Bradford W. Davenport

Leonard & Julie Bremenkamp and Lucas Masters (Jr. Member)

Dates to Remember



March 15-17, 2013, Gem Show Kansas City, KCI EXPO Center 11730 NW Ambassador Dr.

\$1.00 OFF	52nd Annual Greater Kansas City GEM & MINERAL SHOW March 15th, 16th & 17th, 2013	\$1.00 OFF
FREE PARKING	KCI EXPO Center	FREE PARKING
	11730 NW Ambassador Dr. Exit 112th St off I-29 or KCI Exit off I-435	
Admissions:	Multi-day tickets available:	Show Hours:
Adults: \$6.00	3 day pass...\$14.00	9:00am to 8:00pm FRI.
Children 5-12: \$3.00	2 day pass...\$10.00	10:00am to 7:00pm SAT.
Under 5: Free		10:00am to 5:00pm SUN.
	www.kcgemshow.org or www.gemshowkc.org	
One Coupon Good For Entire Group or Family		

Field Trips

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.

- **March 19, 7:00 p.m. Coffee, Show & Tell, at Classic Bean, Fairlawn Plaza.**
- **March 23, Local Field Trip TBA 8:30 a.m. McDonalds Leave at 9:00**
- **April 2, 7:00 p.m. Coffee, Show & Tell, at Classic Bean, Fairlawn Plaza.**
- **April 5-7, Fossil Expo, Iowa City, Iowa**
Flier: http://www.lakeneosho.org/MAPS/2013_MAPS_PDF_Flier.pdf
Near Coralville fossils: <http://www.igsb.uiowa.edu/browse/spillway/spillway.htm>
- **April 6 – 7, 2013 Lincoln Gem & Mineral Show, Lancaster Event Center 84th & Havelock, Lincoln, NE.**
- **April 26-28, 2013 Wichita Gem & Mineral Show**
- **May 3-5, McPherson Gem & Mineral Sale & Swap**
- **May 17-19, Long weekend Field Trip-Near Rapid City, South Dakota, for Fairburn and other Agates, with stops at Sioux Falls in Sioux Falls, South Dakota, and Ashfall Fossil Beds Nebraska State Historical Park.**
- **<http://www.facebook.com/pages/Topeka-Gem-and-Mineral-Society-Field-Trips/92795058262#!/events/351537784957378/>**

TLC REPORT

Larry Springer is in physical therapy due to a stroke and May reported that he will be there for a couple months to regain his equilibrium and stability.

I also learned that Christie Bien is recovering nicely from recent surgery and is back to work.

Deborah Scanland also is recovering from surgery.

Most of all, our sympathy goes out to Barbara Renfro, for the loss of her husband Mike last month.

Bench Tips – Brad Smith

PROBLEMS WITH SMALL DRILLS

When drilling small holes, you sometimes encounter new problems. We're talking about drills that are less than 1 mm (which is 18 gauge or .040 inches). Often the chuck will not tighten down far enough to grip a small twist drill. You can solve this two ways - with a chuck adapter or by buying your small drills with a 3/32 inch shank size. Either way you have a 3/32 shank to go into the chuck of your drill press, Foredom or Dremel, so changing bits is fast and easy.

Remember that small drills are much more prone to breaking because of too much pressure or if you tilt the drill or the work piece when the drill is in the hole. And drilling always goes easier with a little wax or oil on the tip. Almost anything will work - Three and One, injection wax, mineral oil, Burr Life, car oil, olive oil, etc.

Topeka Gem & Mineral Society Junior Rockhounds

Topeka Junior Rockhounds have started off really well. We currently have 7 youth enrolled. Our first class on Rocks and Minerals as taught by Brad Davenport was attended by 5 youth members on March 7th at the Town & Country Christian Church. Brad stated that the youth members have a good spread of experience among them and appear to be really enthusiastic. Brad has assigned their first challenge of starting to put together a mineral sample collection. The Topeka Junior Rockhounds advisors are looking for a few good Topeka Gem and Mineral Society members to share their knowledge with the youth on a couple of topics. Those topics are "Special Effects" and "Fluorescent Materials". Special Effects consists of activities such as magnetism, triboluminescence, birefringence or double refraction, Chatoyancy (cat's eye and asterism), natural fiber optics (tv stone), phantoms and inclusions, other special effects, and an amazing mineral magic show. Fluorescent Minerals consists of activities such as "What is fluorescence and why do some minerals fluoresce, famous fluorescent mineral locations, how to collect them, how to display and exhibit them, safety with fluorescent lamps, and special effects of some fluorescent minerals. If you or someone you know would be willing to share their experiences in these areas or others with Junior Rockhounds members ages 18 and younger, please contact Larry Henderson at lhenderson85@gmail.com or 785-272-8444.

Shirley Schulz, Program Secretary

FLUORESCENCE

Fluorescence is the emission of light by a substance that has absorbed light or other electromagnetic radiation. It is a form of luminescence. In most cases, the emitted light has a longer wavelength, and therefore lower energy, than the absorbed radiation. However, when the absorbed electromagnetic radiation is intense, it is possible for one electron to absorb two photons; this two-photon absorption can lead to emission of radiation having a shorter wavelength than the absorbed radiation. The emitted radiation may also be of the same wavelength as the absorbed radiation, termed "resonance fluorescence"

The most striking examples of fluorescence occur when the absorbed radiation is in the ultraviolet region of the spectrum, and thus invisible to the human eye, and the emitted light is in the visible region.

Fluorescence has many practical applications, including mineralogy, gemology, chemical sensors (fluorescence spectroscopy), fluorescent labeling, dyes, biological detectors, and, most commonly, fluorescent lamps.

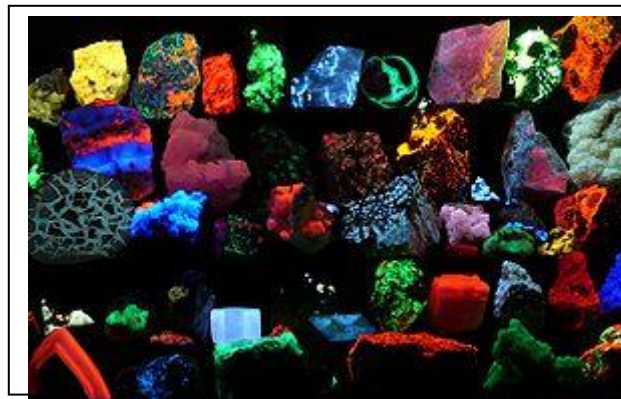
Fluorescence In Nature

There are many natural compounds that exhibit fluorescence, and they have a number of applications. Some deep-sea animals, such as the greeneye, use fluorescence.

Gemology, mineralogy, and geology

Gemstones, minerals, may have a distinctive fluorescence or may fluoresce differently under short-wave ultraviolet, long-wave ultraviolet, or X-rays.

Many types of calcite and amber will fluoresce under shortwave UV. Rubies, emeralds, and the Hope Diamond exhibit red fluorescence under short-wave UV light; diamonds also emit light under X ray radiation.



Fluorescence in minerals is caused by a wide range of activators. In some cases, the concentration of the activator must be restricted to below a certain level, to prevent quenching of the fluorescent emission. Furthermore, certain impurities such as iron or copper need to be absent, to prevent quenching of possible fluorescence. Divalent manganese, in concentrations of up to several percent, is responsible for the red or orange fluorescence of calcite, the green fluorescence of willemite, the yellow fluorescence of esperite, and the orange fluorescence of wollastonite and clinohedrite. Hexavalent uranium, in the form of the uranyl cation, fluoresces at all concentrations in a yellow green, and is the cause of fluorescence of minerals such as autunite or andersonite, and, at low concentration, is the cause of the fluorescence of such materials as some samples of hyalite opal. Trivalent chromium at low concentration is the source of the red fluorescence of ruby. Divalent europium is the source of the blue fluorescence, when seen in the mineral fluorite. Trivalent lanthanides such as terbium and dysprosium are the principal activators of the creamy yellow fluorescence exhibited by the ytrofluorite variety of the mineral fluorite, and contribute to the orange fluorescence of zircon. Powellite (calcium molybdate) and scheelite (calcium tungstate) fluoresce intrinsically in yellow and blue, respectively. When present together in solid solution, energy is transferred from the higher-energy tungsten to the lower-energy molybdenum, such that fairly low levels of molybdenum are sufficient to cause a yellow emission for scheelite, instead of blue. Low-iron sphalerite (zinc sulfide), fluoresces and phosphoresces in a range of colors, influenced by the presence of various trace impurities.

Crude oil (petroleum) fluoresces in a range of colors, from dull-brown for heavy oils and tars through to bright-yellowish and bluish-white for very light oils and condensates. This phenomenon is used in oil exploration drilling to identify very small amounts of oil in drill cuttings and core samples.

Organic liquids

Organic solutions such anthracene or stilbene, dissolved in benzene or toluene, fluoresce with ultraviolet or gamma ray irradiation. The decay times of this fluorescence are of the order of nanoseconds, since the duration of the light depends on the lifetime of the excited states of the fluorescent material, in this case anthracene or stilbene.

Common materials that fluoresce

- Vitamin B2 fluoresces yellow.
- Tonic water fluoresces blue due to the presence of quinine.

Source: Wikipedia Free Encyclopedia

Editor's Note: <http://raytechgemprocessing.com/support/pdfs/downloads/StoryofFluorescence.pdf> has a booklet on Fluorescence that is a good teaching tool that can be downloaded or saved to your computer.

We need your **BEST CHOICE** UPC Labels --- Bring them to the monthly meeting.



Painting With Stone

By Val Cyzak - reprint from the Drifter Vol. 33. No 8 Oct 1990

Painting with stone cannot be considered a new art form. It may have been over-looked for hundreds of years, but early cavemen did this type of painting in a crude form. It can be a laborious task which requires much stamina and the never-ending desire to turn out a work of art.

The First Step in painting with stone is collecting suitable colors of stone to be pulverized. This can be very frustrating since all stones with color do not retain that color when pulverized. A scratch test may be made on the back of a ceramic tile to determine which stone will leave a streak of color.

The Second Step is crushing and sifting the stone to the desired consistency. The stones are broken down as finely as possible with a hammer on stainless steel (safety goggles, please! – Ed.), then ground by hand in a mortar and pestle of a material that will not discolor the stone. This mortar and pestle may be of glass, porcelain or ceramic. I do not use the iron mortar and pestle as the color of the stone seems to take on a dirty look when being ground in it. The fine stone is then sifted several times through nylon to the fine texture one desires. This stone may then be placed in containers and labeled for future use.

The Third Step is selecting a suitable subject to be painted. The canvas board, Masonite, which has been prepared with gesso (an artist medium) or suitable material of your choice, may be used. After a light pencil sketch is made, you may combine the sifted stone with an acrylic polymer medium or a binder of your choice, select an artist brush for oil painting and begin. If the consistency is too stiff or too thick, a few drops of water may be mixed with the stone. One of more colors may be mixed together to get the desired result. Plastic jar covers are very useful as a palette, as these may be discarded when through painting for the day.

Do not rinse the stone mixture down the drain, as this may result in trouble.

STONES THAT MAY BE USED FOR COLOR			
Psilomelane	Black	Purpurite	Purple
Anthracite Coal	Black	Orpiment with Realgar	Yellow
Gypsum	White	Sulphur	Yellow
Cinnabar	Orange	Opalized Wood	Yellow
Hematite	Red	Limonite	Yellow
Minium	Orange	Malachite	Green
Turquoise	Blue	Green Petrified Wood	Green
Lapis Lazuli	Blue	Goethite	Red Brown
Shattuckite	Blue	Rhodochrosite	Pink
Chrysocolla	Blue	Azurite	Blue

ICE FISHING

It was a cold winter day. An old man walked out onto a frozen lake, cut a hole in the ice, dropped in his fishing line, and waited patiently for a bite. He was there for almost an hour, without even a nibble, when a young boy walked out onto the ice, cut a hole in the ice not next to him. The young boy dropped his fishing line and minutes later he hooked a Largemouth Bass.

The old man couldn't believe his eyes but chalked it up to plain luck.

But, shortly thereafter, the young boy pulled in another large catch.

The young boy kept catching fish after fish. Finally, the old man couldn't take it any longer. "Son, I've been here for over an hour without even a nibble. You've been here only a few minutes and have caught a half dozen fish! How do you do it?"

The boy responded, "Roo raf roo reep ra rums rram."

"What was that?" the old man asked.

Again the boy responded, "Roo raf roo reep ra rums rarm."

"Look," said the old man, "I can't understand a word you're saying."

The boy spit the bait into his hand and said, "You have to keep the worms warm!"

Internet Humor

Hunting Gems

G	F	E	N	O	T	S	E	M	I	L	P	E	Q	J	F	O	H	W	R
R	L	K	A	R	E	P	S	A	J	G	F	U	E	G	P	N	U	P	I
A	M	U	S	P	Y	G	Z	A	K	D	A	T	A	H	N	S	X	G	L
P	Q	P	X	Z	R	Z	I	S	D	R	O	L	J	N	X	U	B	R	U
H	Z	H	I	F	T	R	U	I	T	Q	E	S	C	G	B	T	I	E	Z
I	F	M	C	E	O	O	A	Z	E	Y	M	F	L	R	S	N	P	V	A
T	S	D	G	N	T	M	G	M	A	Y	E	E	F	B	A	I	M	Y	L
E	U	I	P	H	O	A	A	P	O	U	R	T	E	V	W	L	P	R	S
M	I	A	B	N	V	N	G	A	T	U	A	I	L	F	Y	F	A	E	I
A	J	E	D	L	G	A	L	A	P	O	L	L	D	Y	B	P	S	M	P
R	X	D	E	A	G	A	E	I	E	K	D	A	S	K	B	B	G	E	A
B	N	A	N	A	B	M	L	D	L	N	D	H	P	M	M	U	W	E	L
L	D	E	R	A	E	N	T	A	N	I	O	A	A	N	J	D	R	F	I
E	S	N	S	R	I	G	A	G	R	E	E	T	R	K	I	U	L	O	N
E	E	T	C	C	D	E	E	Q	R	O	L	T	S	Q	Q	L	T	W	R
T	E	U	K	H	W	O	D	G	D	D	C	B	I	E	A	I	O	T	M
R	R	E	Z	J	N	X	O	A	V	A	A	G	N	N	D	G	J	A	J
Y	L	M	U	Y	O	L	Y	S	J	F	V	W	W	R	A	O	A	K	K
S	L	F	X	N	D	A	C	I	M	D	A	V	M	M	O	R	L	F	X
R	T	S	Y	H	T	E	M	A	X	C	L	P	K	Q	U	H	G	R	W

There are 35 names of gems and minerals in this puzzle. With patience you can find them by reading across, backwards, up and down or diagonally.

- | | | |
|-----------|--------------|-----------|
| Agate | Graphite | Limestone |
| Alabaster | Gypsum | Lodestone |
| Amethyst | Halite | Manganese |
| Coral | Hornblende | Marble |
| Diamond | Iron | Mercury |
| Emerald | Jade | Mica |
| Emery | Jasper | Nickel |
| Flint | Jet | Onyx |
| Feldspar | Kaolin | Opal |
| Garnet | Lapis Lazuli | Quartz |
| Gold | Lava | Ruby |
| Granit | Lead | |