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

THE GLACIAL DRIFTER

www.TopekaGMS 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. 66, No. 8
August 2023

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, 7:15 pm, First Congregational Church, 1701 SW Collins Ave, Topeka, KS 66604. 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

2023 OFFICERS AND CHAIRS

President	Brad Davenport	379-8700	Cab of the Month	Donna & Russell Hedge	620-660-1651
1st Vice Pres.	David Dillon	221-4315	Field Trip Coord.	Cole Collins	220-4027
2nd Vice Pres.	Cinda Kunkler	286-1790	Publicity	Donna Stockton	913-645-7677
Secretary	Stacy Haug	1-857-3350	Welcome/Registration	Harold Merrifield	633-9745
Treasurer	Millie Mowry	267-2849	Property	Chuck Curtis	286-1790
Directors	Doria Skinner	231-9347	AFMS Scholarship	Cinda Kunkler	286-1790
	Jim Baer	785-256-2432	Editor/Exchange Editor	Millie Mowry	267-2849
	Shirley Schulz	n/a	Show Chairman	Millie Mowry	267-2849
Historian	Cinda Kunkler	286-1790	Show Dealer Chairman	Dave Dillon	221-4315
Federation Rep	Chuck Curtis	286-1790	Show Secretary	Cinda Kunkler	286-1790
Corporation Agent	Millie Mowry	267-2849	Jr. Rockhound Leader	Jason Schulz	640-6617
Librarian	Amy Fluke	862-8876	Show Case Coordinator	Cinda Kunkler	286-1790
Web Master	Jason Schulz	640-6617			

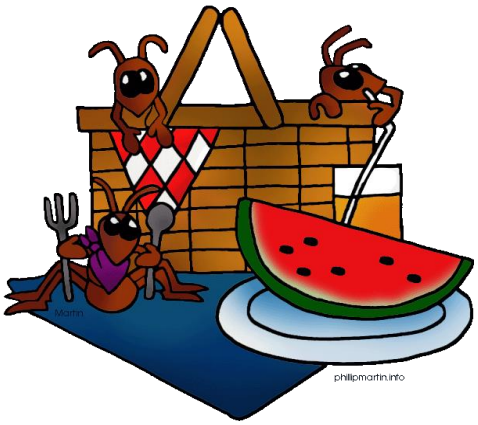
Area Code for all numbers is (785).

EXCHANGE BULLETINS WELCOME

For exchange newsletters contact the club via mailing address listed above or email at rock2plate@aol.com .

Fodder from the president. Aug./2023

Howdy all.
Ya know, our show is creeping up on us very quickly. I do hope you have us in ink on your calendars. Not just penciled in. Friday the 13th sounds daunting, doesn't it? With everyone's help there should be no problem. Set up takes all day and everyone needs to pitch in. Obviously, some of you will be at work so send us some of those positive vibes.
Saturday, the fun begins. We have nearly a full contingency of vendors on the slate. There are a couple of new ones this year that should be exciting. Can you say "Sluice"?
We will need all of you to pin down the hours you will be helping and get them on our schedule so we know who will be, where and when. We have been discussing the need for a little bit of training for those that will be working the door.
We have been entertaining a field trip down on the Arkansas river with Toby Davis with Midwest Adventures. He has multiple sites that he has access to. He has another couple of sites in Northern Oklahoma that they search for artifacts. He will cut us a reduced rate of $25/person. Chances are that we would do this after our show. We need to start seeing how many of us would be interested in going.
Tuesdays at the shops have been well attended and some great projects turned out each week. We are going to have to schedule a workday soon as the temperatures ease off.
Jason has promised to rework the schedule for Juniors classes. So keep an eye out for it.
Our last Summer covered dish dinner will be on the 25th of this month. The food at the last dinner was nothing short of marvelous. I will be interested to see what you all come up with this month.
I almost forgot. This year's Show Tee-Shirt design has been finalized and they are stunning. We do not have a price figured out yet but we will be taking pre-orders very soon if not already. Millie will be our contact lady for orders. And a great big thank you goes out to Donna Lee Hedge for her hard work and gracious patience for her design work. Not only for the shirts but also for folders, bumper stickers and posters. We will soon have Part II of the bumper stickers with show info. Make sure you get one
Brad



August 25th will be the last club Picnic at the First Congregational Church. We gather at 6 p.m. and eat at 6:30 p.m. The door at the Church is NEVER to be left propped open when entering or leaving! If no one is at the door - call Cinda 785-231-4635 for entry. Thank you!! Don't be late.

The General Meeting in September goes back to the gathering time at 7:15 p.m. with the meeting starting at 7:30 p.m. Only in the three summer months do we change the hours.

TTGMS Event Calendar

AUG. 2023			SEPT. 2023		
1	T		1	F	
2	W		2	S	
3	T		3	S	
4	F		4	M	
5	S		5	T	Brad's Shop Open 6-10 pm
6	S		6	W	
7	M		7	T	Jr RHDS 6 p.m. at FC Church 1701 SW Collins
8	T		8	F	
9	W		9	S	
10	T		10	S	
11	F		11	M	
12	S		12	T	Brad's Shop Open 6-10 pm
13	S		13	W	
14	M		14	T	
15	T	Brad's Shop Open 6-10 pm	15	F	
16	W	Publicity Meeting-Elmont Church 6:30 p.m.	16	S	
17	T		17	S	
18	F		18	M	
19	S		19	T	Brad's Shop Open 6-10 pm
20	S		20	W	
21	M		21	T	
22	T	Brad's Shop Open 6-10 pm	22	F	General Mtg First Congregational Church 1701 SW Collins Ave. 7:15 p.m. gather
23	W		23	S	
24	T		24	S	
25	F	Club Picnic First Congregational Church eat at 6:30 p.m. 1701 SW Collins Ave	25	M	
26	S		26	T	Brad's Shop Open 6-10 pm
27	S		27	W	
28	M		28	T	
29	T	Brad's Shop Open 6-10 pm	29	F	
30	W		30	S	
31	T				

As A Reminder !

If you are wanting to take a class in Silversmithing or wire wrapping you are to call either Jim Baer at 785-256-2432 or email him at jimbaer73@gmail.com, for wire wrapping contact Millie Mowry at 785-267-2849 or email rock2plate@aol.com the Monday before class to let them know you will be there.

JR ROCKHOUND Classes & Reminders

Here are reminders of the next months of classes: **First Congregational Church, 1701 SW Collins Ave., Topeka, KS.** Sign in starting at 6:00 pm and classes starting at 6:30 pm. 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

Next Class: Sept 7, 2023, Lapidary, Millie Mowry & Doria Skinner

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

Dillons Community Reward Program

The Topeka Gem & Mineral Society has enrolled with the Community Rewards with Dillon's Store. You can enroll your shopper's card at: www.dillons.com/communityrewards once you sign up it will take about 7 to 10 days to be activated and our Club to start earning the rewards. At the bottom of your Kroger receipt you will notice "At your request, Kroger is donating to 'your organization name'.

1. You will have to re-register each year.

If you have any other questions email DCR@dillonstores.com

Book Review From Our Librarian!

The book, Jewelry Making and Design, is an amazing "how-to" and will guide you in whatever direction you may want to explore. With 325+ illustrations, it shows you step by step how to make everything from beginner to advanced designs, along with step by step-by-step instructions.

Well worth the read, and can be checked out thru the TTGMS Library by sending an email to Amy at Jayhawk1072@gmail.com

To Our New Members

Ty Buschbom Betty Bolte Mike Phillips Claire Bowman
James, Courtney, & Luke Davis

T-Shirts for our 66th Annual Show will be ordered soon!
I need your size and how many you want……..We do not know the price yet, they will be black in color and fantastic in design by Donna Hedge……..Email me at rock2plate@aol.com or call me and leave me a message at 785-267-2849.
Millie

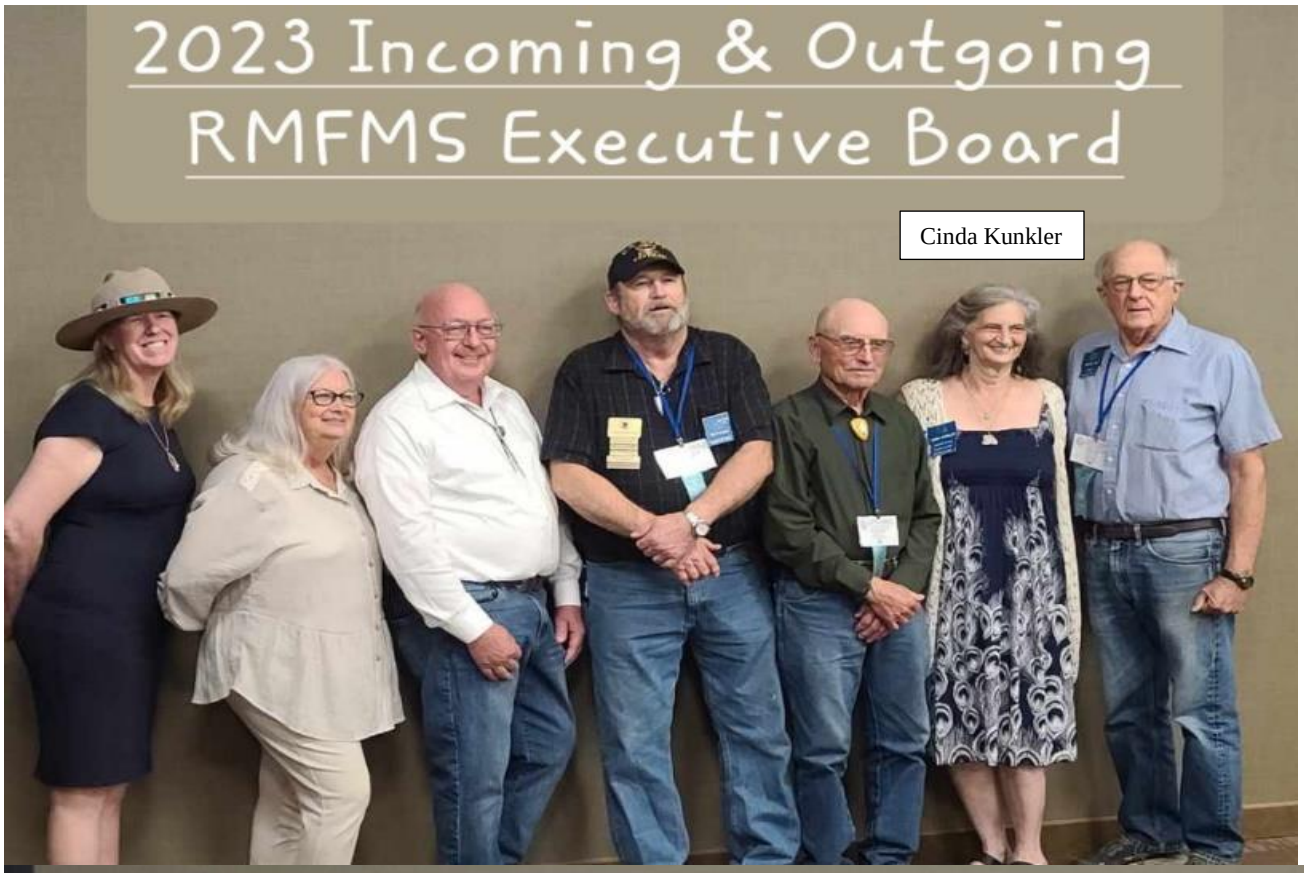
PUBLICITY REPORT

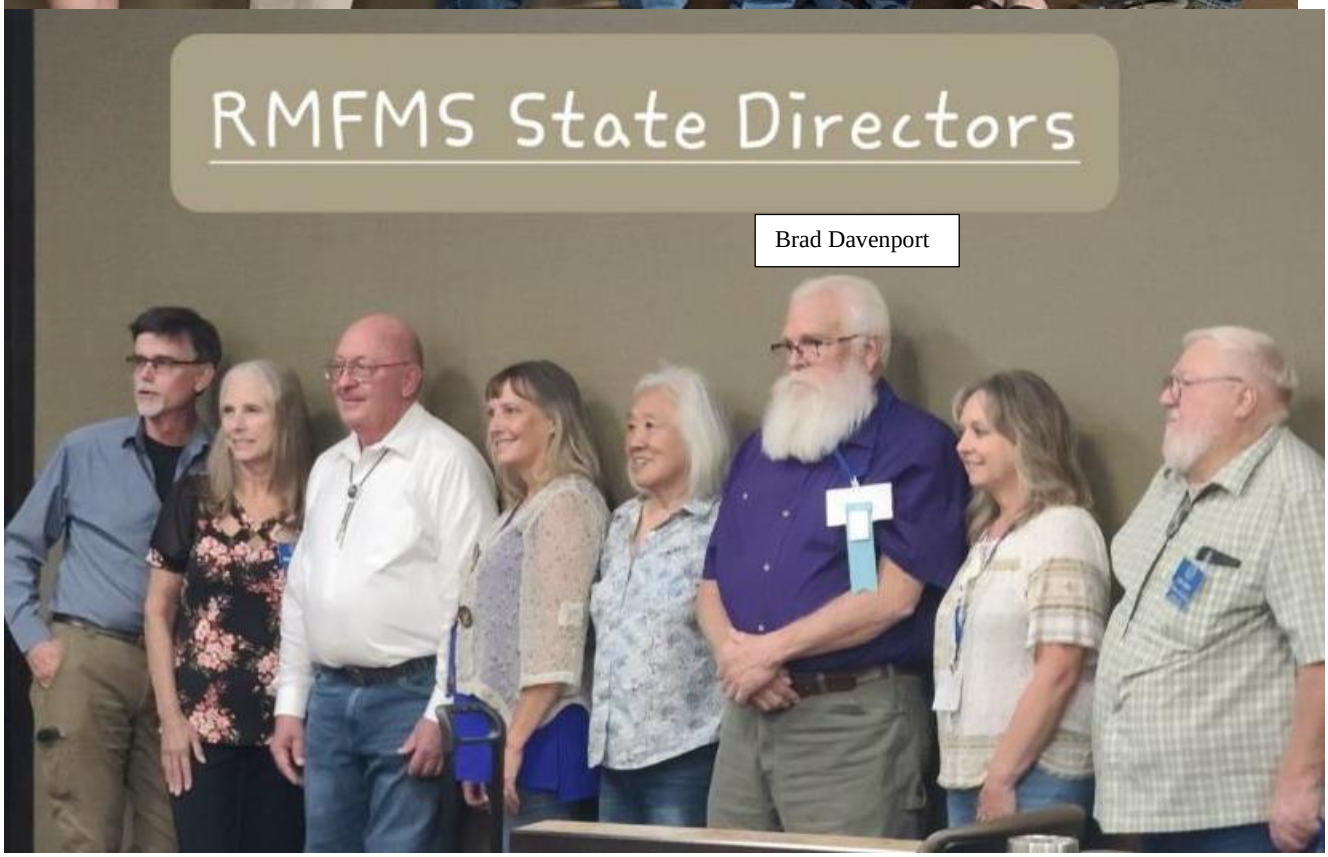
Fellow Rockers:
This month has found our Publicity Committee all over America digging in the dirt and attending meetings,
Publicity met last Wednesday at Elmont UMC and accomplished some business with renewed enthusiasm. Our show is soon upon us. We put the finishing touches on our next bumper sticker, Thank You Donna Hedge!
We are just about ready to have T-Shirts printed, as well. Next year we will have our shirts on our backs for the 4-H fair in 2024. So, we need to have the club vote on that new theme for 2024, soon. Please come to the next picnic with your ideas or send them to a committee member.
Sammy is our big sponsor getter. He came back from his extended rockhounding trip and got a large sponsorship from Calhoun Jewelry. He will continue to get these bigger sponsors. Thank you, Sammy!
We have also decided on the styles of 4 slightly different flyers to paper the city with about a month before the show. If 10 volunteers would take 10 flyers to businesses where people congregate, that would help tremendously!
We have our billboards designed and the generous donation from Calhoun's will go toward paying for the sponsorship and for advertising. Lamar saved us 4 locations and this is Publicity's biggest expense. We get the non-profit rate for us but these 4 billboards cost more than $2,000 for these billboards to be up for a month. The more sponsors the more billboards we can do along with other forms of media.
We do all the things we can think of that are free. We schedule interviews each year on the Red Couch Show on WIBW and this year we will be represented on KSNT. Sammy is working on other radio and Internet options.
The next thing is to visit businesses to ask for items to include in our Silent Auction and give aways for our bags, given to all who come through the front gate to attend our Glacial Drifters rock show. If you work for a company that has promotional items that we could include, please ask your boss or whomever handles promotional donations. You can say that their company will be included on a sign and announced. from the podium, during the show as a public thank you for their donation. You can accept monetary donations as well but please keep accurate records from whom you got the donations and when to pick them up. Get the address and phone number and specific name of the person you spoke with. Tell them that TTGMS is in a 501C3 tax category. This info will later be used to send Thank You notes and receipts. If they ask how many items are needed, tell them we have normal attendance of 500 people and let them decide what they can give. Let us know who you have gone to so that we don't bother businesses more than once.
Some of our committee people have been meeting at the library to discover what goes into Grant Writing. We have dreams for TTGMS. We would like a club van and a permanent clubhouse. So, although this is only a dream, we are pursuing what is needed to see these dreams come to fruition.
Our next meeting at Elmont UMC will be Wednesday, August 16, 2023, at 6:30 p.m. All members are welcomed to come to our Publicity Meetings. Bring your ideas to us. They excite us.
Check out the Outdoor Bank.Com . The Manhattan, KS bank is sponsoring a treasure hunt over the next few weeks. They are calling it "The Hunt" and the prize is $5,000. They will give out a clue each week until it is found. Hmmmmm! KSNT did a story. That was my idea. That is FREE publicity. I love FREE!
Have a great month telling everybody you see about our club. Remember: Who doesn't love a pretty rock?
Donna Stockton

Howdy Fellow Rockhounds,

Just a quick run-down on the annual Rocky Mountain Federation of Mineralogical Societies (RMFMS) business meeting and Natrona County Rockhounds Annual Show this past July 14-16, 2023 in Casper, WY.
As you all know, the lovely and talented Ms. Cinda Kunkler is the RMFMS Historian and as a member of the Executive Committee she dutifully attended the various meetings and recorded the proceedings. The House of Delegates business meeting was attended by Cinda, our illustrious President (and Kansas State Director) Brad Davenport, Doria Skinner (Director, TTGMS), and myself. This year, unlike last year, we did have a quorum and were able to discuss and vote on numerous Federation matters.
Cinda and I make these annual meetings our yearly vacation and are always pleased to meet up with old friends. And we very much enjoy the field trips that are often arranged by the hosting club. This year we went on several trips and were joined by our very own Sammy Wall who was on the tail end of his yearly rock hounding excursion. Great treasures were found by all!
We encourage other club members to add the annual RMFMS show to their yearly adventures. I think I can safely say we all had a Great Time!!! Next year's meeting will be in our backyard – Oklahoma City, OK on Halloween weekend. Grab a costume come on down!

Chuck Curtis, RMFMS Federation Representative





Pictures from *TRMS T-TOWN ROCKHOUND August 2023*

Ken's Chemistry Corner: All about Thallium!

-Thallium (Tl) was discovered in the 1860's. Cesium and rubidium had just been discovered using the new method of flame spectroscopy invented by Kirchhoff and Bunsen (of 'Bunsen burner' fame). Elements with strong emission lines could be detected this way, usually alkali metals like sodium (yellow) and potassium (violet), or alkali earth metals like barium (green) and strontium (red). The most important industrial chemical at the time was sulfuric acid, and chemists of the time carefully studied how best to produce it. Pyrite was used as a sulfur source to make sulfuric acid, and a new substance was occasionally found in the pyrite that gave off a bright green emission. It was named thallium from the Greek 'thallos', meaning a green shoot or twig.

-While thallium is in the same periodic group as aluminum and gallium and occasionally has similar chemistry, it is a bit of an oddball. It prefers to act like an alkali metal, mimicking much of the chemistry of potassium instead of the rest of its group. It is actually quite abundant in the Earth's crust, but is it widely scattered throughout potassium containing minerals like clays and granites, which it is not feasible to recover it from. Even today it is obtained as a by-product of roasting pyrite ore for sulfuric acid production and from smelting lead and zinc ores.

-Minerals enriched in thallium include the rare minerals crookesite (thallium copper selenide), hutchinsonite (thallium lead arsenic sulfide), and lorandite (thallium arsenic sulfide). The only place on Earth where ores are actively mined for thallium is the Allchar deposit in Macedonia (north of Greece). This deposit is estimated to contain 500 tonnes of thallium and is the source of these rare minerals.

-Biologically, thallium also tries to act like potassium. Many important cells in the body, particularly muscles, use potassium pumps that shuttle sodium and potassium across the cell membrane to function.

Thallium acts like potassium and gets concentrated in these cells, interfering with other proteins that use potassium to power the cell. This is bad. Thus, the most common use of thallium is as a non-specific poison for unwanted guests, typically rodents and ants, but occasionally humans. It has gained notoriety (along with arsenic) as 'the poisoner's poison' and 'inheritance powder', which has led to it being banned as a pest poison in most of the world.

-Still, thallium does have some important uses. Its primary use in modern times is in semiconductors. Thallium sulfide's electrical conductivity changes on exposure to infrared light, which has led to its use in detectors for infrared instruments. Other uses include gamma ray detectors with thallium doped sodium iodide crystals, selenium semiconductors doped with thallium to increase performance, and electrodes for dissolved oxygen meters. Thallium compounds have also been shown to be some of the highest temperature superconductors.

-Thallium is used to manufacture glasses with high infrared transmission and in lenses with very high indices of refraction. It can also be used to make a glass that is very dense but has a low melting point.

Curiously, a mercury-thallium alloy freezes 20 degrees below mercury itself (at -60 degrees Celsius), which makes it useful for very low temperature thermometers.

-The radioactive isotope Thallium-201 was often used in nuclear medicine because of a short half-life (73 hours) and easy production onsite at the diagnostic lab in portable equipment. It has been mostly replaced by technicium, but it is still used in cardiac stress tests. Cardiac cells have many sodium-potassium pumps (one reason why thallium is so toxic), but small amounts of radioactive thallium will concentrate in the heart cells and allow it to be imaged. This can determine the overall health of the heart, because dead cells or cells that don't properly oxygenate during exercise will be 'cold' on the image. Source: The Sooner Rockologist July 2023

How Tsavorite Was Discovered

Tsavorite is a new gemstone of brilliant green colour and a real competitor to the emerald, also less expensive. It was first discovered in 1968 in Tanzania and then in 1971 in Kenya.
Millions of years ago East Africa was covered by seas and certain sediments sank to the bottom. When the oceans receded and high pressure and temperature worked on these sediments, parts of them became crystallized. There are two main types of rocks in which green vanadium grossularite garnet, or Tsavorite, occurs, namely crystalline limestone and graphite-gneiss.
After the first Tsavorite was discovered in Tanzania in 1968 the government of this country refused to issue licenses for mining and export. A Scottish geologist, Campbell Bridges, then believed that it was, at least in theory, possible to extend a line from the Tsavorite-bearing rock strata in Tanzania across the border into neighboring Kenya. At the end of this line he secured land and began to dig. In 1971 he was successful in finding another deposit of tsavorite. The government of Kenya granted him the necessary licenses; however, this took time and in the meantime, Bridges had to be careful to keep the location of the mine secret.
He did so by covering up all the windows in his wagon and by blindfolding his native workers every time he drove them to and from the place, and also by zig-zagging and driving in circles and taking another route each day. All these special efforts paid off finally. Another problem became a cute when production started. Bridges discovered soon that some of the workmen had stolen a few of the stones already mined. Now he had to find a way to prevent this in the future. He caught a young python and placed him on top of his stones. No more thefts.
The mine is located near the Tasvo National Park, one of the largest wild animal reservations in the world, and not far from the Tsavo River. For this reason, the new gemstone has been named "Tsavorite".

Source: A reprint from The Glacial Drifter Sept. 1984

Cinnabar And Mercury

Cinnabar, sulfide of mercury, is the common ore of mercury. It is both heavy and soft, and is usually mixed with impurities such as clay, iron oxides and bitumen. It occurs in sedimentary formations such as slates, sandstone, limestone and sometimes decomposing serpentine: and is a deposit from hot alkaline solutions. Associated minerals are calcite, quartz and some barite and fluorite.
Cinnabar has an ancient history with man. It has been found as a pigment in painting of cave dwellers 100,000 years ago, also in ancient Chinese art work as a color in their lacquer.
Cinnabar deposits are found in many parts of the world, the most famous being in Almaden, Spain. This deposit is unusually large and deep – over 1000 feet, and has been mined for over 2000 years. A deposit at Mt. Amaitas, north of R- - e, has been reported to have cinnabar crystals associated with long slender gray-black crystals of stibnite. A similar reference has been made to specimens from the Red Devil Mine in Alaska.
Some bright red twin beauties, nearly an inch across, have been reported from Hunan Province in China. Hopefully, with new trade relations with China, some of them may appear in this country. The best-known deposits in this country are at Terlingua (Big Bend country) in Texas, and in the coastal ranges of California.

Mercury – (A/K/A Quick Silver) – is the only metal that occurs as a liquid in the crust of the earth. In its native form, it occurs as small globules in cavities and fissures.
Mercury has quite a variety of uses. As it conducts electricity, it is used in lamps and fluorescent lighting, also in scientific instruments such as thermometers and barometers. Scientists in early experiments found that sea-level atmospheric pressure would support a column of water 34 feet high, which was quite impractical. By using mercury, with its high specific gravity (13.2 times an equal volume of water), a column of 29.53 inches registered the same pressure.
Other uses for mercury are in pesticides, drugs in treatment of disease, and in dynamite caps. It is important as an amalgam in the recovery of gold and silver. This was especially true during the gold rush days.
Mercury poses an environmental problem, but tests on mastodon bones 15,000 years old indicate 1 p.p.m. (part per million) which is about the same as today.

Source: A reprint from The Glacial Drifter, January 1986

Don't forget to order your T-Shirts for this year's show.
Do you need a name badge? Now is the time to order that also. Let Millie know.