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. 62, No. 08,
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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.**

www.TopekaGMS.org

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President	Mike Cote	220-3272
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Show Case Coordinator	Cinda Kunkler	286-1790

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.

Words from Our Top Rock!

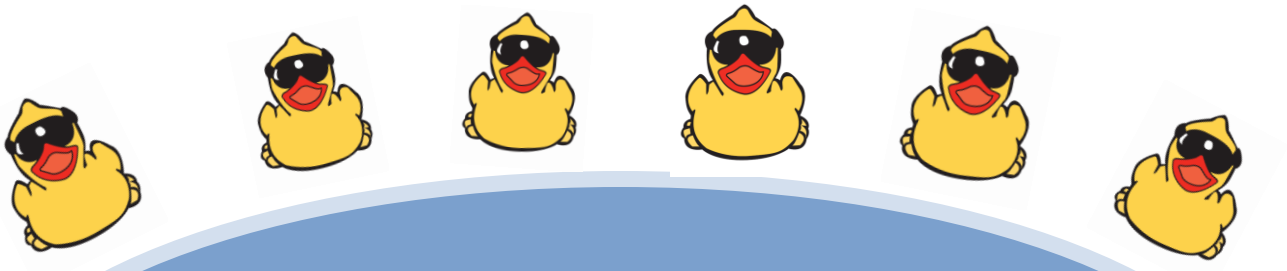
Lessons at the Barn are CLOSED until September 10th. because of the heat. See you then.

The last Club picnic will be August 23rd. at Millie's, 6:30 p.m. We will be filling 400 grab bags for The show and need your help. It is real easy and Cinda and Millie keep everything organized.

Don't forget to go online and adopt a Duck for the Duck Race in September. It is a great way for our club to make some money.

Mike Cote`

We need your **BEST CHOICE UPC Labels** --- Bring them to the monthly meeting, and give them to Cinda Kunkler.



IT'S THE LAST ONE! August 23rd, we meet at Millie's home around 6:00, eating at 6:30. This gives us all a chance to get acquainted. Her address is 1934 SW 30th St, Topeka. Please bring a dish to share, place setting and yourself, guests are welcome (that includes grandchildren if you are watching them). Bring a rock if you want help identifying, surely someone can help with that! Millie provides coffee & tea the schedule for the fall meetings. DON'T MISS IT!

JR ROCKHOUND Classes & Reminders

Here are reminders of the next few months of classes: Topeka Shawnee CO Public Library sign in starting at 6:00pm and classes starting at 6:30pm. 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

- Sep. 5, 6 – 8:45 p.m., Marvin Auditorium Room 101A, Showmanship, Pat Gilliland
- Oct. 3, 6 – 8:45 p.m., Marvin Auditorium Room 101A, Earth Resources, Will Gilliland

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

Rockhounding the La Plata River

By Ezekiel Peoples

On vacation we went to Durango, Colorado. If you go to Colorado to go rockhounding go to La Plata River and Canyon. You can find several types of quartz, pyrite, mica, and many types of rocks there.

La Plata Canyon is located outside of Durango. We headed west on Highway 160 to County Road 124, then went north and followed the La Plata River. There are many different areas to pull off along the road to park and hike or take short walks to collection sites.

You should probably have a four-wheel drive vehicle, like a Jeep. We drove with a two-wheel drive van which wasn't a good idea because we had to turn around due to the road being too rocky. You should go in July because it wasn't too cold or hot. This past year the area had lots of late snow so early May would not have been a good time.

We found clear, rose, and smoky quartz. There were also rocks with pyrite at La Plata River. There were some cool rocks on the other parts of the river. One place we stopped was a waterfall. This was lovely because the water was calm in some parts so you could see quartz left in the water after the thaw of the snow. Another place we searched along the river was a calm part of the river. You could see through the clear water. The surround ground was covered in rocks left from earlier snow melt.

Colorado was a good choice for rockhounding. There were lots of various types of rocks and minerals there. You might find lots of amazing rocks and minerals to add to your collection. Don't forget to pack your lunch, water, and some spare shoes because yours will get wet.

The program for September will be a Silent Auction. Cinda said that everyone should bring something for the Club to sell. This is a fun way to clean out the shed!

Also she will report on the RMFMS Convention.

TGMS Event Calendar

Aug. 2019		Sept. 2019	
1T		1S	
2F		2M	
3S		3T	
4S		4W	
5M		5T	Jr Rockhounds TSCPL rm 101A Wire Wrap Class @ Millie's 1-3 p.m.
6T		6F	Family First Friday Brookwood 5 p.m.
7W		7S	
8T		8S	
9F		9M	
10S		10T	Barn Open 6 p.m. for lessons
11S		11W	
12M		12T	Wire Wrap Class @ Millie's 1-3 p.m.
13T		13F	BOARD MTG., 7 P.M. Millie's
14W		14S	
15T	Wire Wrap Class @ Millie's 1-3 p.m.	15S	
16F		16M	
17S		17T	Barn Open 6 p.m. for lessons
18S		18W	
19M		19T	Wire Wrap Class @ Millie's 1-3 p.m.
20T		20F	
21W		21S	
22T	Wire Wrap Class @ Millie's 1-3 p.m.	22S	
23F	No Meeting at Washburn—Club Picnic @ Millie's 6:30 P.M. Potluck	23M	
24S		24T	Barn Open 6 p.m. for lessons
25S		25W	
26M		26T	Wire Wrap Class @ Millie's 1-3 p.m.
27T		27F	General Meeting Washburn Stauffer Hall rm 138, 7:30 p.m. Silent Auction – bring something & report on RMFMS Convention
28W		28S	
29T	Wire Wrap Class @ Millie's 1-3 p.m.	29S	
30F		30M	
31S		31T	Barn Open 6 p.m. for lessons

If you are interested in Wire Wrap Classes, contact Millie, 267-2849 or rock2plate@aol.com

LESSONS AT THE BARN ARE WEATHER PERMITTING – CLOSED UNTIL SEPTEMBER 10TH.

No general meeting at Washburn Univ. during month of August.
See you at the potluck picnics at Millie's house. See page 2.

Check out the calendar on our web site
www.TopekaGMS.org

Adopt me at www.topekaduckrace.org

Topeka Gem & Mineral Society

Has joined the Sertoma Great Topeka Duck Race for 2019
Go to www.topekaduckrace.org or see Millie for an envelope.
To adopt a duck for $5.00 each.
A family of 5 for $20,
A flock or 12 for $50 and
An 'oodle' of ducks (27ducks) for $100.00

The race is September 14, 2019 at Lake Shawnee
Check out all the Great Prizes you can win.

Our Team name is "Topeka Gem & Mineral Society"

See all of us at www.topekaduckrace.org under Topeka Gem & Mineral Society, Help us win the Race!

Our annual Show is just around the corner. We need everyone's help during the show and sign-up sheets are available now if you want to 'Pick Your Time' you want to work a shift. Call Millie to get on the lists or come to the August picnic, or the Sept meeting. Remember if you do not work the show, you will have to pay to get in.

Apple Pie Snickerdoodle Cookie Bars

Apple pie and cookies with no utensils required! These are a great dessert to pack up for a summer picnic. Or, warm up a cookie bar and top it with vanilla ice cream for an a la mode treat!
Ingredients; One 16.5 oz. tube of Pillsbury refrigerated sugar cookie dough One 20 oz. can of apple pie filling Cinnamon sugar (1/4 cup of granulated sugar & 4 teaspoons of ground cinnamon).
Instructions: Press 2/3 of the cookie dough into the bottom of an 8x8 or 9x9 baking pan. Sprinkle with 2/3 of the cinnamon sugar. Spread the apple pie filling over the cookie base. Take small amounts of the remaining cookie dough, flatten it slightly and place over the pie filling. It will not cover the pie filling completely. Sprinkle with the remaining cinnamon sugar mixture.
Bake in a 350* oven until the cookie dough is baked - took about 35-40 minutes. Allow bars to cool and cut into squares. (Recipe from facebook.com)

Adopt Me Please……..

NephriteJade /Wyoming Jade

Article from: Wyoming State Geological Survey, University of Wyoming Education

Nephrite jade (*also known as"Wyoming Jade"*), the Wyoming State Gemstone, was first described in the Granite Mountains area of central Wyoming in 1936 (Sinkankas, 1959; Sutherland, 1990). The most intense jade exploration and mining activity occurred there between about 1940 and 1960 (Madsen, 1978). Recent exploration activity indicates renewed interest in Wyoming Jade.

Gemologists apply the term jade to two distinct and unrelated mineral species: jadeite and nephrite. These two types of jade resemble each other so closely that they are essentially indistinguishable in most hand specimens isolated from their geologic environment of origin. Positive distinction between the two jades often requires the aid of tests such as p e t r o g r a p h i c, specific gravity, chemical, and/or x-ray diffraction analyses (Hausel and Sutherland, 2000).

W y o m i n g Jade is nephrite Jade; jadeite is not known to occur in Wyoming. Most of the high-quality jade found in Wyoming has been extracted from alluvial deposits in and around the Granite Mountains of central Wyoming. Jade's specific gravity of 2.9 to 3.02 is not great enough to concentrate usable-sized pieces into well-defined placers. Wyoming Jade is considered to be some of the finest nephrite in the world, against which material from other deposits must be compared (Sinkankas, 1959). Wyoming's nephrite jade varies from translucent to opaque, and ranges in color from off-white (rare) to apple green, emerald green, leaf green, olive green, black, and green and white "snowflake jade" (Hausel and Sutherland, 2000). Detrital nephrite jade is found over a wide area of central Wyoming, from the southern end of the Wind River Range on the west to the Platte River near the town of Guernsey on the east, and from Sage Creek Basin along the Sierra Madre on the south to near the town of Lysite on the north.

Physical properties

Nephrite is an amphibole made up of extremely dense and compact fine grained fibrous t r e m o l i t e -actinolite, whereas jadeite is a pyroxene of the augite series composed of fine-grained, compact massive aggregates of interlocking crystals. The felted fiber (nephrite) or interlocking crystal (jadeite) textures of these two different minerals both result in a toughness and durability much greater than anticipated from their moderate hardness (5.0 to 6.0 for nephrite and 6.5 to 7.0 for jadeite). This moderate hardness combined with great toughness makes jade, regardless of whether it is jadeite or nephrite, relatively easy to saw and carve into delicate but extremely durable objects of art and adornment (Sinkankas, 1959). Because of its fibrous aggregate structure, nephrite has no cleavage. If broken, nephrite shows a brittle and irregular fracture that produces a dull to splintery fractured surface unless accompanied by inclusions of other minerals such as mica (Sinkankas, 1959). Nephrite may occasionally show a direction of separation if it has developed schistosity (Bauer, 1969).

Geochemistry

Nephrite is a calcium magnesium silicate [$Ca_2(Fe,Mg)_5Si_8O_{22}(OH)_2$] intermediate in composition between actinolite [$Ca_2(Fe,Mg)_5Si_8O_{22}(OH)_2$] and tremolite [$Ca_2Mg_5Si_8O_{22}(OH)_2$]. Bauer (1969) provided a chemical analysis of nephrite from Eastern Turkestan that shows a small amount of sodium present within the mineral (1.28 percent Na_2O in that particular specimen). Madsen (1978) also noted minute amounts of sodium in some analyses of Wyoming nephrite. It is most likely that other elements occasionally substitute within the nephrite structure depending on its specific environment of formation. Harlow and Sorensen (2001) cite an uncommon emerald green color in nephrite as resulting from the presence of chromium within the crystal lattice. The typical green color of nephrite derives from the presence of iron within the crystal lattice. In the absence of iron, nephrite is almost colorless, but appears cloudy white because of its micro-fibrous structure. Black nephrite generally results from excess iron (Sinkankas, 1959).

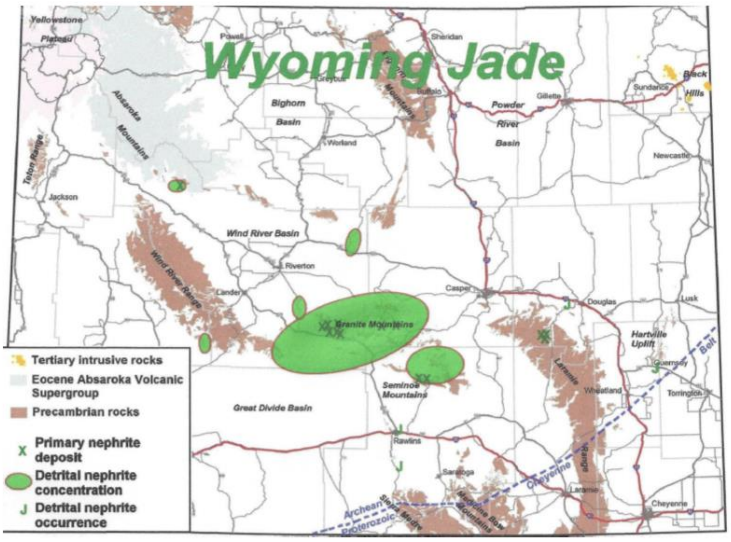
Mineral associations

Nephrite is associated with actinolite and tremolite as a member of the same mineral series. It is also associated with clinozoisite, pink zoisite, epidote, chlorite, white plagioclase, and mica as byproducts related to metasomatic alteration (link to glossary) of amphibolite (hornblende) to nephrite (Hausel and Sutherland, 2000). Other minerals found in association with nephrite include graphite, chromite, magnetite, calcic garnet, diopside, apatite, rutile, pyrite, datolite, vesuvianite, prehnite, talc, serpentine polymorphs, and titanite (Harlow and Sorensen, 2001). Foreign mineral inclusions within nephrite are common and may include those previously mentioned, along with various black iron minerals, micas, quartz, and, at one California location, fine specks of gold (Sinkankas, 1959).

Genesis and geology

Nephrite, a product of metasomatism and alteration, occurs as sheets, lenses, and nodules along or near contacts between dissimilar rock types in strongly metamorphosed zones (Sinkankas, 1959). It also occurs in or adjacent to faults and fault zones. Nephrite in Wyoming is found within granitic gneisses and granites where enclosing or intruding amphibolites have been altered. Sherer (1969) investigated nephrite jade in Wyoming and suggested that it developed from metasomatic alteration of amphibole during metamorphism. Disrupted blocks of amphibolite became trapped as xenoliths in quartz feldspathic gneiss, and were subsequently altered to nephrite by fluids derived from regional amphibolite-grade metamorphism. Amphibole, primarily hornblende, reacted with hot metamorphic fluids to produce actinolite (nephrite jade), clinozoisite, and chlorite. In the Laramie Range, this alteration was concentrated along shear zones and fractures where it resulted from the emplacement of quartz diorite, vein quartz, or pegmatite. Water loss at sites of nephrite development stopped the alteration process that otherwise would have eventually converted nephrite into serpentine. Wallrock alteration accompanied nephrite development, bleaching leucocratic granitegneiss adjacent to the jade to produce a mottled pink and white granite-gneiss halo with associated secondary clinozoisite, pink zoisite, epidote, chlorite, and white plagioclase pervasively altered to mica (Hausel and Sutherland, 2000). Once formed, nephrite jade is
much more resistant to erosion than its enclosing rocks, and is often found in residual and alluvialposits as rounded boulders and cobbles. Alluvial jade tends to be solid, flaws and weak or impure zones having been removed during erosional processes. Because of nephrite's durability, cobbles and boulders often survive transport over great distances from their source. They may also take on a natural polish from fluvial abrasion and from wind-driven sand in desert areas such as the Granite Mountains. Naturally polished pieces of nephrite jade exhibit a high-gloss, waxy surface and are known as jade slicks (Hausel and Sutherland, 2000). When not in the form of slicks, nephrite pieces may be covered with a cream to
reddish brown oxidized weathering rind that hides the jade's true color. Experienced jade prospectors learn to recognize this weathered surface, and can often recognize jade that others have overlooked.

From : Wyoming State Mineral and Gem Society February 2013, No.1; http://wymineralandgemsociety.org; via Pueblo Rockhounds Jan 2014.



Wyoming Jade, cut but not polished, 6 cm, Larry Frank specimen

Wyoming Jade, natural polish, 17cm, Larry Frank specimen

Thomsonite

Thomsonite was created from lava flows of the Keweenawan Period, over 600 million years ago. Gases within the lava seams between the lava flows turned into hollow pockets when the lava hardened. Over hundreds of thousands of years, these hollow openings filled and solidified, forming Thomsonite.

The unique combination of volcanic activity and certain chemicals and minerals is responsible for why the gemstone formed in this location along the North Shore (Michigan).

Thomsonite is found in the Kilpatrick Hills of Scotland; in the north of Ireland; Saxony, Germany; the Faroe Islands; Kern County, California; Cape Lookout, Oregon; and in the Lake Superior region. It can also be found on beaches between Tofte and Grand Marais, on the Coo-Lake County line, on Island Royal, Michigan and near Saxon Falls and the Montreal River Gorge on the Keweenaw Peninsula in Michigan.

The color and texture of Minnesota's Thomsonite makes it unique as gem-quality stones are found only in a limited area of Lake Superior's shoreline about 5.5 miles southwest of Grand Marais.
Being a rare mineral, belonging to the zeolite group of minerals, which has over 35 different recognized members. Thomsonite is one of the rarer zeolites. It forms tight acicular radiating clusters and sphericules as well as some blockier crystals and is found in the vesicles or bubbles of volcanic rock, as are most other zeolites.

Dr. Thomas Thomson, first described the mineral in 1840. Thomson discovered it in the Kilpatrick Hills of Scotland, and Thomsonite has been named after him.

The Minnesota Geological Survey was established in 1873 and headed by Newton Winchell, who taught in the winter and conducted surveys in the summer. Two of his students, young professors from the University of Minnesota, S.F. Peckman and C.W. Hall, spent their vacation in 1879 along the north shore of Lake Superior studying rocks. A report they published in 1888 is the first printed reference to Thomsonite.

Pure Thomsonite is snow-white and sometimes translucent. Other compounds such as ferric and or ferrous iron or copper are responsible for the various colorations within the gemstone. Commonly found colors are pink, tan, white, red and brown. Thomsonite has green, gray, black or green eyes. Green eyes are the most highly prized and least found.

Thomsonite specimens are usually small. A little finger nail sized stone with a good radiating pattern can be considered a nice specimen. Look for white, chalky, small round or almond shaped nodules in Thomsonite. Thomsonite is also called: Eyestone [eye agate] or Lintonite which is an agate like variety of Thomsonite with alternating bands of pinkish and green, that appear eye like. This name is applied in particular to pieces with green zones in them and from the Lake Superior region of Michigan and Minnesota.

Source: The Badger Diggin's 5/19, via WGMS Rockhounder Aug 2019