

GEMS

NEWSLETTER FOR MARCH 2014



**KALAMAZOO GEOLOGICAL &
MINERAL SOCIETY**

AFFILIATED WITH THE MIDWEST FEDERATION & AMERICAN FEDERATION OF MINERAL SOCIETIES

Hello Rockhounds,

Winter is still hanging around. Thankfully we have access to field trips like the Alabastine Mine to allow some collecting during the winter months.

Other hobby related things to do during the long winter months may include:

- Organizing and/or thinning out your collection.
- Tracking and identifying your specimens. You can mark each specimen with an identification number and code. Then, keep a file with a description of each specimen with reference to the identification number.
- Create labels for each specimen in your display case.
- Maybe you can use your creativity to make unique jewelry or crafts.

Just a few reminders:

- Block out time to work at the show. May 1-4. Contact our Show Chair - Jerry VanNocker, with times you are available and a station or stations you would like to work.
- Please solicit donations on behalf of the Club. Letters to be given to prospective donors are available at our Club meetings.
- Prepare your display for the show.



Rock On,
Bill Mitchell
KGMS President

MARCH 2014 CLUB MEETING

Our March Club Meeting will feature a presentation by Jack Fuller. The topic will be "Agates" (What else would Jack talk about?). Jack's presentations are always informative and enjoyable. Please join us at our meeting. As always, bring is specimens to share. DOOR PRIZES for March meeting: Polished Greenstones for the JRS. & the adults!
COURTESY OF: Marve Starbuck



Do I smell
birthday
cake?

HAPPY BIRTHDAY!!

- 3rd DUSTIN PETERSON**
- 6th GABY DHASELEER**
- 14th TERRY BUDER**

FROM YOUR EDITOR:

A need for Articles!!

Have you come across any interesting articles or tid-bits regarding our hobby? Would you like to write an article for the GEMS about a topic of interest to you? I'm always looking for content for the newsletter. I'm still looking for club members to tell their story of "How I became a Rockhound" or "Why I joined KGMS". Please submit any such article to me at rockin_gem@yahoo.com



NOTE: If I know who wrote an article, took the photo, website link, etc. I will give them credit/list the link. If I have posted something without the credit and you know who it is, please let me know and I will fix it.

Thanks!
Diane

TIME TO THINK ABOUT THE ANNUAL 2014 KGMS GEM & MINERAL SHOW!

Work the KGMS Show!

KGMS Rock, Gem and Mineral show is less than 9 weeks away and it is time to sign up to work the Show. Volunteering for the show is a lot of fun! If you have not marked the May 2 - 4th show dates in your calendar do it now!

Thursday, May 1st, is set up day, all KGMS members that are available will be needed to help and this is also the day members' set up their show displays. We will be in Expo South at the Kalamazoo Fair Grounds. You will need to enter from the east side of the building. We will be unloading the KGMS trailers from the south loading doors. Dealers will be loading from the east loading doors.

Friday 9-4 is Kids' Day with the show officially opening to the general public at 4:00 PM.

For 2014 the leaders for the various activities will be contacting you directly to sign you up for working the show, Fri.-Sun. I have listed the Activity Leaders below so those of you with work preferences may contact them directly. You will likely receive a call from each of the Activity Leaders, you can limit this somewhat by signing up for two or three activities at the March general meeting.

The KGMS annual Kalamazoo Rock, Gem, Fossil, Jewelry and Mineral Show requires the participation of all of us to keep it going. If this is something you feel is valuable for the community please help us support it!

ACTIVITY LEADS FOR THE 2014 KGMS ROCK AND MINERAL SHOW

Geode Cracking -- Tony Payne
269 962-4912

Silent Auction - Marve Starbuck
269 352-7403

Gold Panning - Terry Buder
269 271-0285

Gold Mine - Ken Ahrens

Games, Make it take it - Sherri Crum
kgms_rockshow@yahoo.com

Petoskey Stone Polishing - Elizabeth Schau
269-344-7198

Specimen Table - Bill Mitchel mitchellvickybill@sbcglobal.net

Hospitality - Kathy Smith

Registration/ticket sales - Karen Wyatt and Kathy Grueter

SHOW NEEDS/REMINDERS!

Silent Auction

This is a very popular area with our patrons. Periodically during the show we will have auctions where our members and guests can bid on really cool specimens, lapidary items, equipment etc. This is an opportunity for members to sell items they have acquired. Maybe you are running out of storage space and need to create space for what you will be collecting on upcoming trips. How it works - bring in items you wish to sell or donate to the show (it is helpful if you bring items in on Thursday (set up day)), complete a bid form, and set the minimum price that you think it is worth. For items in the Silent Auction we ask that items have a minimum value of \$2. When it sells you receive 80% of the selling price and the Club retains the other 20%. The Club asks that each member to donate at least two (2) items to the Silent Auction. You can try to sell as many as you want.

Game Prizes

Kids are a big part of our show. Our game area is very popular, particularly during Kid's Day. Each year we give out thousands of prizes. Where do these prizes come from? The prizes are generally donated to the Club from members. Each prize is bagged

and labeled. So if you have smaller specimens that could be used as game prizes, please let us know and we can get specimen bags to you.

Door Prizes

Periodically during the show we have door prize drawings for our patrons, both adult and kids. We are always looking for donations. If you have specimens, books, crafts, nick-nacks, that would make a nice door prize, please bring them to the show.

Specimen Table

Most of the material at the Specimen Table sells for 25 to 50 cents, but we have \$1 and \$2 corners. All of the material is donated by Club members. So if you have **clean** material, please bring it in.

Here is a list of the NEW promotions we are doing for the 2014 KGMS SHOW:

Mineral trading cards mini flyers

WMU geology club has been asked to help promote the KGMS show on the WMU campus.

Astronomy Society will be asked to promote the KGMS show. They will have a booth at the 2014 KGMS Show.

Grand prize e-mail addresses from the 2013 show will be used to promote the 2014 show

along with the e-mail addresses collected from the Kalamazoo Fair and Kingman Museum events.

YouTube video advertisement.

Car door magnet signs for members to advertise the show.

4 road side billboards advertising the show for a week in April.

Four page, magazine size, and style, flyer to be placed in waiting rooms and lobbies as early as February.

Again, please think about how you can help market the show. Do not hesitate to e-mail Jerry VanNocker (jerry@travelinginspain.com) or call 269-979-3348

NO CROSSWORD THIS MONTH - HERE'S A MINERAL LIST INSTEAD!

MICHIGAN MINERALS A - Z

Did you know that in Michigan you can find a mineral that starts with almost every letter of the alphabet? Below are some of these minerals. Sorry not enough room for all the photos! You can download a pdf file of this list with color photos at: the WMU CoreKids link. SOURCE: WMU - MGRRE CoreKids www.wmich.edu/corekids Adapted from: Michigan Department of Environmental Quality, Geology.com

Anhydrite - Used in soil conditioner, plastics, and paints. Found in Bay, Berrien, Gratiot, Houghton, Isabella, Kalamazoo, Kent, Keweenaw, Macomb, Manistee, Marquette, Mason, Mecosta, Midland, Monroe, Muskegon, Newaygo, Ogemaw, Ontonagon, Osceola, St. Clair, and Wayne Counties

Beryl - Used in gemstones. Found in Baraga, Dickinson, and Marquette Counties

Copper - Used in coins, Jewelry, cooking utensils, and wiring for electrical equipment. Found in Alpena, Baraga, Dickinson, Gogebic, Gratiot, Houghton, Iron, Kent, Keweenaw, Marquette, Ontonagon, and Tuscola Counties.

Diamond - The world's most popular gemstone, also the hardest mineral, used for cutting, drilling, or grinding. Found in Cass, Ingham, Iron, and Kent Counties.

Epsomite - Epsomite is used for Epsom salts, in the production of paper and sugar, and in pharmaceutical products. It is found in Wayne County.

Flourite - Used in toothpaste, pottery, ceramics, and as paint pigment. Found in Bay, Dickinson, Eaton, Gogebic, Houghton,

Isabella, Kalkaska, Keweenaw, Marquette, Monroe, Ontonagon, Wayne, and Wexford Counties.

Gold - Used in dentistry and medicine, jewelry and art, medallions, coins, and computers. Gold wire can be made thinner than a human hair! Found in Allegan, Antrim, Baraga, Charlevoix, Dickinson, Emmet, Gogebic, Ingham, Ionia, Iron, Kalkaska, Kent, Leelanau, Livingston, Manistee, Marquette, Montcalm, Newaygo, Oakland, Oceana, Ontonagon, Ottawa, St. Joseph, and Wexford Counties.

Halite - Also known as salt. Used in food seasoning and preservation, photography, soap, and as a highway de-icer. Found in Alpena, Bay, Houghton, Huron, Ionia, Iosco, Iron, Kent, Keweenaw, Mackinac, Marquette, Monroe, Newaygo, Ogemaw, Ontonagon, and Wayne Counties.

Illite - Used in food supplements and for manufacturing brick and tile. Found in Baraga, Houghton, Iron, Marquette, and Ontonagon Counties.

Jacobsite - Found in Marquette County.

Kaolinite - A fine, white clay used as a filler in many products, for coating pages in magazines and newspapers to prevent ink from running, and as a whitener and abrasive in toothpaste. Found in Gogebic, Houghton, Iron, Keweenaw, and Marquette Counties.

Labradorite - Found in Dickinson, Houghton, Iron, Keweenaw, and Marquette Counties.

Magnetite - Used in making steel, nails, kitchen appliances, furniture, tools, bridges, buildings, automobiles, construction equipment, and railroads just to name a few things! Found in Baraga, Dickinson, Gogebic, Houghton, Keweenaw, Marquette, and Ontonagon Counties.

Neotocite - Found in Gogebic, and Iron Counties.

Olivine - Used as gemstones, in bricks, and in refractory sand. Found in Houghton, Iron, Keweenaw, and Marquette Counties.

Pyrite - Also known as "fools gold" used in explosives, fertilizers, and insecticides. Found in Alger, Alpena, Antrim, Baraga, Branch, Calhoun, Clare, Dickinson, Eaton, Gogebic, Gratiot, Houghton, Huron, Iron, Jackson, Keweenaw, Marquette, Monroe, Newaygo, Ogemaw, Ontonagon, Presque Isle, Saginaw, Washtenaw, and Wayne Counties.

Quartz - Used to make glass, also used as an abrasive in some sand papers. Found in Alger, Antrim, Arenac, Charlevoix, Chippewa, Dickinson, Gogebic, Houghton, Huron, Iron, Keweenaw, Luce, Marquette, Monroe, Ontonagon, Schoolcraft, Van Buren, and Wayne Counties.

Rutile - Used as a coating on welding rods. Also used in pigments for paints. Found in Iron and Marquette Counties.

Silver - Used to take a picture with cameras, in chemistry, jewelry, and electronics. Found in Baraga, Dickinson, Houghton, Iron, Keweenaw, Livingston, Marquette, and Ontonagon Counties.

Talc - Used in baby powder, facial makeup, ceramics, paints. Found in Dickinson, Gogebic, Iron, and Marquette Counties.

Uraninite - Used to prepare fuel for nuclear reactors. Found in Dickinson, and Iron Counties.

Vladimirite - Found in Keweenaw County.

Wollastonite - Used in asbestos, siding, roofing tile, and ceramics. Found in Dickinson and Keweenaw Counties.

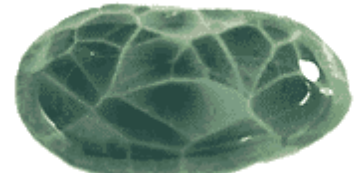
Xenotlite - Found in Keweenaw County.

Zircon - Used in metals and gemstones. Found in Dickinson, Houghton, Keweenaw, Marquette, and Ontonagon Counties.

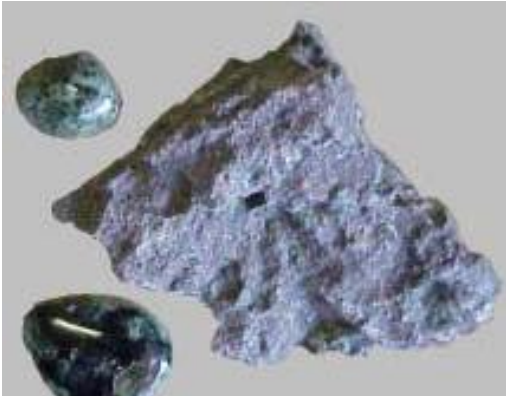
MICHIGAN'S STATE GEMSTONE

PUMPELLYITE

The State Gemstone is chlorastrolite, a variety of the mineral pumpellyite. It also goes by the common name of greenstone or Isle Royale greenstone. The term greenstone can be confusing, in that it is both a rock and a mineral term.



Enlargement of a polished specimen



Polished and in matrix

Chlorastrolite is found chiefly as small rounded beach pebbles showing a finely radiating or stellated pattern of slender crystals. The masses, colored pink to green to black or mottled, are derived from nodular vesicle fillings in the amygdaloidal basalts of the copper country and were formerly found in relative abundance, particularly on Isle Royale beaches. Chlorastrolite was named the "Official State Gem" of Michigan by the Seventy-Sixth Legislature (Act 56, PA 1972, effective March 30, 1973).

Pumpellyite is closely related to the epidote family. It is widespread low-grade Metamorphic mineral (particularly in glaucophane schists) and a hydrothermal mineral in altered mafic igneous rocks (like basalts and diabases). Originally the mineral was described in 1901 by Murgoci under the name of lotrite from the southern Carpathian Mountains. The writer was enabled to examine the

handwritten notes of his former Harvard professor, Charles H. Palache, who in 1920 made the first systematic study of the secondary minerals in the altered copper lodes for the Calumet and Hecla Copper Mining Company. Palache notes the widespread and abundant nature of a "green zoisite." Shortly after this initial study, Palache realized his green zoisite was not a zoisite but believed it to be a new mineral closely related to the zoisite-epidote family. Unfortunately he had not encountered Murgoci's (1901) description of lotrite. Palache submitted a manuscript to Calumet and Hecla describing the "new" mineral proposing to call it "kearsargeite." B. S. Butler didn't like the name and Palache changed the manuscript by crossing out kearsargeite and penciling in "pumpellyite," in honor of Raphael Pumpelly, a noted 19th century U.S. Geological Survey geologist who made many contributions to the knowledge and understanding of copper minerals and the copper deposits of the Keweenaw Peninsula. Chlorastrolite is now known to be a variety of pumpellyite. This was first verified by W. B. Griffiths at the University of Michigan in the late 1940's (personal communication) Previously, chlorastrolite had been considered 1) an independent species, 2) a variety of prehnite, or 3) a variety of thomsonite.

In general, pumpellyite is abundant in all the amygdaloidal lodes and in all fissures. It is present but not abundant in the copper conglomerates and felsites. It forms in vugs and, with quartz, has also replaced large volumes of the host rocks. It may occur in amygdules by itself, as needles in quartz, associated with chlorite, and in the same amygdules with epidote (from which it is not easily distinguished). Much of the pumpellyite is bluish-green in contrast to the epidote, which is yellow-green. Its most common occurrence is as a replacement of rock in flow tops, yielding a hard, dense, greenish-gray to bluish-green lode material that makes up a large part of the mined parts of the Isle Royale amygdaloid (Butler and Burbank, 1929; Stoiber and Davidson, 1959).

Keweenawan pumpellyite has the following habits: 1) Radial Stout prismatic, euhedral crystals usually enclosed by quartz; in fragmental amygdaloidal flows and in veins. 2) Radial groups of needle-like crystals, either alone or with chlorite as amygdule fillings in "footy zones" of flows. 3) Felty masses of cryptocrystalline grains replacing parts of flow tops and ashy layers, with primary igneous textures preserved.

Where to find Chlorastrolite

Houghton County: Calumet and Hecla mine, Centennial mine, LaSalle mine, Baltic mine, Quincy mine, Hancock

Keweenaw County: Isle Royale mine, Ahmeek mine, Isle Royale, Delaware mine, Eagle River, Central mine, Copper Falls mines, Iroquois mine, Mohawk, Medora mine, Northwestern mine, Seneca (Gratiot) mine, Clark mine, Copper Harbor, South of Eagle Harbor.

NOTE: NOT SURE WHERE I GOT THIS ARTICLE FROM, BUT IT WAS DATED 2009!

REPLACEMENT AND RECRYSTALLIZATION



PHOTOS ABOVE & BELOW: Flourite replaced Crinoids & Corals



Replacement occurs when the shell, bone or other tissue is replaced with another mineral. In some cases mineral replacement of the original shell occurs so gradually and at such fine scales that micro-structural features are preserved despite the total loss of original material. A shell is said to be recrystallized when the original skeletal compounds are still present but in a different crystal form, as from aragonite to calcite.

Recrystallization changes the internal physical structure of a fossil. Recrystallization changes the microstructure of the original minerals; they often reform as larger crystals. The composition of the mineral does not change, only the crystal structure. For example, many shells originally composed of calcium carbonate in the form of the mineral aragonite recrystallize into the more stable form of calcium carbonate called calcite.



Gem Carnelian replaced gastropod

UPCOMING EVENTS

MARCH

14-16th, The 52nd Annual Show, "Rock Your World", Michigan Gem & Mineral Society

Jackson County Fairgrounds, American One Event Center, 200 West Ganson, Jackson, MI 49201

Contact Sally Hoskin - Show Chair MGMS at 517-522-3396 mgmsrockclub.com or info@mgmsrockclub.com

15th, Saturday, at 1pm, Preparation: Tools & techniques used in fossil preparation.

At the Oshtemo Branch Library, 7265 W Main, Kalamazoo, 49009, Joe Koniecki will speak on Fossil Discussion of different techniques that are used depending on the fossil itself or the rock in which the fossil is imbedded. Examples of before (pictures) and after (either picture or actual specimens), will be reviewed and how the final look was obtained. There will be some discussion of restoration and therefore "fakery" of fossils. Joe's web site is www.crinus.info/ The Oshtemo branch has free parking.

MAY

6th, KGMS MEETING:

Adrian Quint will do a presentation about the Geology of the UP.

APRIL

26th Saturday, Field Trip to the Alabastine Gypsum Mine, (Michigan Natural Storage Co.),

1200 Judd S.W., Grand Rapids, MI., 10:00 am to 4:00 pm This is just a reminder, for more information check your email as Jack sent a large email about this trip.

TREASURER'S REPORT: TIME PERIOD 2/1/2014 TO 2/28/2014

INCOME				
DATE	DESCRIPTION	Dues 501(C)(3)	SHOW	DEPOSIT
2.3.14	d'Jar Meteorites - Show deposit		\$100.00	\$100.00
2.4.14	2014 membership renewal - Will and Cathy Smith	\$13.50		
2.4.14	2014 membership renewal Charles/Carrie Fross, 2 badges	\$21.50		
2.4.14	2014 membership renewal - Dorothy Marusek	\$10.00		
2.4.14	Tailgate Swap Proceeds	\$167.00		\$212.00
2.28.14	Checking account interest	\$0.00		\$0.00
	TOTAL	\$212.00	\$100.00	\$312.00
2.28.13	Savings interest	0.00		Quarterly
2.28.13	Certificate interest	0.00		

EXPENSES

CHECK #	DATE	PAID TO	AMOUNT
2397	2.4.14	Portage Senior Center - February meeting	\$30.00
2398	2.10.14	Adams Outdoor Advertising - 4 billboards	\$600.00
		TOTAL	\$630.00

BALANCES

	CHECKING	CERTIFICATE	SAVINGS
BEGIN. BALANCE	\$8,005.35	\$6,128.85	\$3,092.53
+ INCOME	\$312.00	\$0.00	\$0.00
-EXPENSES	\$630.00	\$0.00	\$0.00
TRANSFERS	\$0.00	\$0.00	\$0.00
ENDING BALANCE	\$7,687.35	\$6,128.85	\$3,092.53

NOTES: Beginning balance is as of 1/31/2014
 Savings includes Scholarship funds = \$1000.00
 Trailer fund = \$341.88
 501(C)(3) = \$ 0.00

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www.kalamazoorockclub.org

MEETINGS

Monthly meetings are the first Tuesday of each month except: January, July and August
Location: Portage Senior Center
320 Library Lane Portage, MI 49002
Phone: 269-329-4555

Work bees/Picnic Dates

TBA in July and August

2013 KGMS ANNUAL SHOW

(May 2nd, 3rd & 4th 2014)

Always the weekend before Mother's Day at the Kalamazoo County Expo Center 2900 Lake Street (Kalamazoo Fairgrounds) Kalamazoo, MI 49048
phone: 269-383-8778
website:
www.kalcounty.com/parksshow_calendar_expo.php

CLUB DUES

Due by December 31st
Family \$15.00/year
Single \$13.50/year
Senior/Couple 60 yrs \$13.50/yr
Senior/Single 60 yrs \$10.00/year
Student \$8.00/year

AFFILIATED WITH

AFMS: American Federation of Mineralogical Societies
website: www.amfed.org

MWF: Midwest Federation of Mineralogical and Geological Societies
webpage: www.amfed.org/mwf

MICHIGAN ROCK CLUBS PAGES

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HAPPY ST. PATRICK'S DAY!
GET YOUR GREEN ON!!!