

Livingstones

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Livingston Gem and Mineral Society

August 2014

President's Message

It's August and only a month and a half until the show, but more on that later. I want to thank all of you that braved the cold weather (in July!) to attend the picnic at Epley Park. We had some good food, but not a lot of conversation. This month's picnic will be at Gayland and Jill's house. If you have not been to a picnic please plan on attending this one. You will not be sorry. As usual it is the third Tuesday of the month, at 6 PM. Directions will be in this newsletter and at the shop.

I am happy to announce that the club's website is up and running. While it is still "under construction", the essentials are there, along with a downloadable flyer for the 2014 show. the address is: livingstongemandmineralsociety.com. I am also very proud to announce that the Midwest Federation's Executive Board Meeting will be held at our annual Gem and Mineral Show in September of 2015. The Midwest Federation is our parent organization, and encompasses 11 states. This is a very prestigious honor for our club.

And now back to the show. Chuck and I are calling an informal meeting for August 12th, at 12 noon. We will discuss how things are shaping up for the show, and answer your questions to the best of our abilities. With that in mind, please reserve display cases early; when they are gone, they are gone. Please sign up to work at a table during the show. As a club member you get the benefit of all the club offers; we only ask for a couple of hours of your time. It is not fair for a handful of members to get stuck doing all the

work. Please take show flyers home with you to distribute in your area. Many stores have a bulletin board or will let you hang a flyer in the window if you ask nicely. Please also donate an item for the raffle and/or the silent auction. The raffle case is already up and the silent auction case, I am sure, will be shortly.

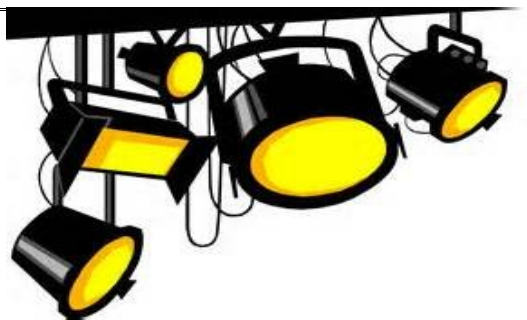
There are many people to thank for their hard work in the past month, and when you see them, thank them for what they do for this club. Bob Kalis changed the motor on the Cerium wheels after the old motor started smoking and sparking a couple of Wednesdays ago. Bill Micol took 4 boxes of fossils from the material the club purchased last year and cleaned, identified, and made boxes and labels for them. Now we can sell them on the club table at the show. Hazel Morgan brought a friend, Doug Vaughn, and they spent 6 hours cleaning, rearranging, identifying, and labeling the fluorescents display. We also have a box of fluorescents that can be sold on the club table. Chuck has kept busy replacing belts on the sanding machines. Lastly, I want to thank Gayland for cleaning and replacing oil in the saws. I also want to thank the anonymous moppers, who see a problem and fix it without being asked.

Bryant



Workshop Hours

Monday: 10 a.m. to 1 p.m.
Tuesday: 9 a.m. to 9 p.m.
Wednesday: 10 a.m. to 9 p.m.
Friday: 10 a.m. to 2 p.m.



Show Planning

**Tuesday, August 12 at noon
at the shop.**

Please come to discuss the show and
find out where you can help!

Do you have your display case ready?

Many hands make light work!

2014 Officers and Chairpersons

President: Bryant Hiiter, 248-889-3974
Vice President: Gayland Allen, 810-275-3444
Secretary: Sheila York, 810-695-0509
Treasurer: Peggy Petito, 248-887-8847
First year Director: Margaret Edmundson, 248-634-5046
Paul McEwen, 810-735-5832
Second year Directors: Ed Oller, 810-241-8801
Third year Director John Petito, 248-887-8847
Hospitality: Venus Sage, 810-458-4290
Sunshine: Isla Mitchell, 248-685-7804
Shop Chairperson: Chuck Amberger, 248-787-6586
Newsletter and Membership:
Isla Mitchell, 248-685-7804
imvm.1@netzero.com
Show Chairman and Historian:
Chuck Amberger, 248-787-6586
Library: Bryant Hiiter, 248-889-3974
Webmaster: Emily Saling
General Membership Meetings are held monthly
on the 3rd Tuesday at 6 p.m. (Except in January
and February when board meetings are held in
the shop at 1 p.m.)



Do you know?

What is the difference between a meteoroid, a meteor, and a meteorite?

A **meteoroid** is a small piece of cosmic debris in outer space. It becomes a **meteor** (aka shooting star) when it begins burning up upon entering the earth's atmosphere. Any part of it that survives and crashes on the earth's surface is a **meteorite**.

Our Mission

The Livingston Gem and Mineral Society is a nonprofit organization and member of the Midwest Federation of Mineralogical Societies and the American Federation of Mineralogical Societies.

Our purpose is to promote, through educational means, public interest and increased knowledge in the fields of mineralogy, archaeology, paleontology, and the lapidary arts.

Bits and Pieces

For transporting rocks from one part of the country to another, rockhounds are almost as good as glaciers.

MMS Tumbler 5/92

Life is like a grindstone. Whether it grinds you down or polishes you depends upon of what you are made.

MMS Tumbler 1/93

A diamond is a hunk of coal that made good under pressure.

Mineral Memos 2/89

The weight of rocks collected is proportional to the square of the distance from your car and doubles for every 10 degrees of the hill you must climb.

Glacial Drifter 10/90

The difference between a nodule and a geode is that a nodule has 100% fewer cavities.

The Nugget 12/87



Upcoming Events

August 5-9, 2014

Keweenaw Mineral Days

hosted by the A.E. Seaman Mineral Museum, Keweenaw Gem & Gift and Red Metal Minerals

Museum is at Michigan Technological University
1404 E. Sharon Ave, Houghton, MI

September 5-7, 2014

Toledo Gem & Rockhound Club Jewelry, Gem & Mineral Show & Sale

Stranahan Great Hall, 4645 Heatherdowns Blvd.,
Toledo, Ohio
Fri. 2-8, Sat. 10-6, Sun. 11-5

September 12-14, 2014

Tulip City Gem and Mineral Club's Rock, Gem, Fossil and Jewelry Show

Holland Civic Center, 150 W 8th Street, Holland, MI
Info at www.tulipcity.org



The **2014 LGMS Show** is scheduled for

September 20 and 21

(Setup on September 19)

Thanks for helping to distribute the flyers which are available in the shop.

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LGMS, Hartland Consolidated Schools, 9525 E. Highland Rd. Howell, Michigan 48843-9098.

CHEMICAL COMPOSITION OF GEMSTONES

THE COLOURS OF GEMSTONES ARE AFFECTED BY DIFFERENCES IN CHEMICAL AND ATOMIC STRUCTURE, LEADING TO THE ABSORPTION OF DIFFERENT WAVELENGTHS OF LIGHT. THEIR HARDNESS IS MEASURED ON THE MOHS SCALE, WHICH RUNS FROM 0-10.

 <p>ALEXANDRITE Al_2BeO_4 Hardness: 8.5 Colour caused by chromium ions replacing aluminium in some sites. Colour varies in different light.</p>	 <p>AMETHYST SiO_2 Hardness: 7.0 Their colour is caused by iron 3+ ions replacing silicon in some locations in the structure.</p>	 <p>AQUAMARINE $\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$ Hardness: 7.5-8.0 Colour caused by iron 2+/3+ ions replacing aluminium ions in some locations in the structure.</p>	 <p>DIAMOND C Hardness: 10 Colourless; can be faintly coloured by the trapping of nitrogen atoms in the crystal.</p>
 <p>EMERALD $\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$ Hardness: 7.5-8.0 Colour caused by chromium ions replacing aluminium in some locations in the structure.</p>	 <p>GARNET $\text{Mg}_3\text{Al}_2(\text{SiO}_4)_3$ Hardness: 6.5-7.5 Colour caused by iron 2+ ions replacing magnesium ions in some locations in the structure.</p>	 <p>OPAL $\text{SiO}_2 \cdot n\text{H}_2\text{O}$ Hardness: 5.5-6.0 Many colours which are caused by interference & diffraction of light passing through the structure.</p>	 <p>PEARL CaCO_3 Hardness: 2.5-4.5 Produced in the soft tissue of shelled molluscs. The thinner the layers of the pearl, the finer the lustre.</p>
 <p>PERIDOT Mg_2SiO_4 Hardness: 6.5-7.0 Colour caused by iron 2+ ions replacing magnesium ions in some locations in the structure.</p>	 <p>RUBY Al_2O_3 Hardness: 9.0 Colour caused by chromium ions replacing aluminium ions in some locations in the structure.</p>	 <p>SAPPHIRE Al_2O_3 Hardness: 9.0 Colour caused by titanium and iron ions replacing aluminium ions in some locations in the structure.</p>	 <p>SPINEL MgAl_2O_4 Hardness: 7.5-8.0 A variety of colours are possible, caused by impurities such as iron, chromium and nickel.</p>
 <p>TOPAZ $\text{Al}_2\text{SiO}_4(\text{F,OH})_2$ Hardness: 8.0 Pure topaz gems are colourless & transparent, but tinted by impurities they can have a variety of colours.</p>	 <p>TOURMALINE $\text{Na}_3\text{Li}_3\text{Al}_6(\text{BO}_3)_3(\text{SiO}_3)_6\text{F}_4$ Hardness: 7.0-7.5 Colour caused by manganese ions replacing lithium and aluminium ions in some sites.</p>	 <p>TURQUOISE $\text{Al}_6(\text{PO}_4)_4(\text{OH})_8 \cdot 4\text{H}_2\text{O}$ Hardness: 5.0-6.0 Colour caused by the presence of copper ions coordinated to the hydroxide ions and water.</p>	 <p>ZIRCON ZrSiO_4 Hardness: 7.5 A range of possible colours that depend on the impurities present. Colourless specimens are popular diamond substitutes.</p>

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 For more information & references, see www.compoundchem.com/2014/06/28/gemstones



Alexandrite....Aluminum, Beryllium, Oxygen
 Amethyst.....Silicon, Oxygen
 Aquamarine....Beryllium, Aluminum, Silicon, Oxygen
 Diamond.....Carbon
 Emerald.....Beryllium, Aluminum, Silicon, Oxygen
 Garnet.....Magnesium, Aluminum, Silicon, Oxygen
 Opal.....Silicon, Oxygen, Nitrogen, Hydrogen, Oxygen
 Pearl.....Calcium, Carbon, Oxygen
 Peridot.....Magnesium, Silicon, Oxygen
 Ruby.....Aluminum, Oxygen
 Sapphire.....Aluminum, Oxygen
 Spinel.....Magnesium, Aluminum, Oxygen
 Topaz.....Aluminum, Silicon, Oxygen, Fluorine, Hydrogen
 Tourmaline.....Sodium, Lithium, Aluminum, Boron, Oxygen, Silicon, Fluorine
 Turquoise.....Aluminum, Phosphorus, Oxygen, Hydrogen
 Zircon.....Zirconium, Silicon, Oxygen

Livingston Gem and Mineral Society
9525 E. Highland Road
Howell, MI 48843-9098



Potluck Gathering on Tuesday, August 19, 2014 at Jill and Gayland Allen's home

**16143 ½ Knob Hill Dr, Linden, MI 48851
810-735-4403**

Directions: From the club, take M-59 east to US-23. Go north on US-23 for 12 miles to exit 79, Silver Lake Road. Turn left on W. Silver Lake Road. Go 3 miles entering Linden and continue on west through Linden for 2.7 miles. (Silver Lake Rd is labeled Broad St. in Linden – Watch your speed!) Turn left onto Knob Hill Drive as you come up a hill with road curving right. First Merit Bank is on the corner. Go ½ mile and 16143 ½ is on the left. Gayland will be guiding parking of cars. If you are coming from Howell, take M-59 to Argentine Rd, turn left on Argentine Rd and go 12 miles north to the blinking light in Argentine. Turn right on Silver Lake Rd and go 1 mile to Knob Hill Dr on the right at the First Merit Bank. Turn right on Knob Hill Dr and go ½ mile to 16143 ½ on the left. If using GPS leave off the “1/2” on the street number.