

Livingstones

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Livingston Gem and Mineral Society

September 2014

President's Message

Wake up boys and girls, it's SHOWTIME! September is here and the show is only 3 weeks away. If you need a showcase put your name on it now; they are going fast. Also, please consider donating something to the raffle case or the silent auction case, or both. If you can, please come and help us set up on Friday, September 19th, at 1 p.m. In years past we have been able to get into the gym as early as 12:30 or as late as 2:00; we just don't know when pickleball will be through, and the floor laid down. Please also consider staying for an hour after the show closes Sunday, to help us tear down and move everything back into the shop.

Please also be aware that the banquet is next month. There is more information about the banquet elsewhere in this newsletter so I won't say any more here.

I would like to thank Sheila York and Gayland and Jill Allen for opening their homes for our summer picnics this year. I'm sure everyone who attended joins me in saying THANK YOU!

We will have a cleaning bee on Tuesday, September 16, starting at 1:00 P.M. This will continue until 3:00, or until everyone is too tired to continue, whichever comes first. Work CAN resume from 3-6 Tuesday, and 10-9 Wednesday, but you MUST CLEAN UP EVERYWHERE YOU GO! There will be NO working on the machines Friday morning! Hundreds of people will be in the shop Saturday and Sunday, and we want to make a good impression on them.

Club meeting Tuesday, September 16, at 6:00 P.M. I forgot to get volunteers to bring snacks for afterwards. Please see me if you will volunteer to bring something, otherwise we may all have to share a can of Pringles.

Bryant

Workshop Hours

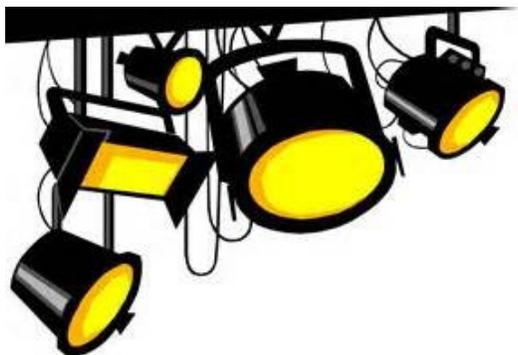
Monday: 10 a.m. to 1 p.m.

Tuesday: 9 a.m. to 9 p.m.

Wednesday: 10 a.m. to 9 p.m.

Friday: 10 a.m. to 2 p.m.





Our show is September 20 and 21 !

Are you preparing your display case?

Have you signed up to volunteer?

Help set up on Friday afternoon beginning about 1 p.m.

During the show, sign up for 2 hours of volunteering at the table of your choice.

After the show, help clear the gym for an hour or so on Sunday.

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.)

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.



To our summer potluck hosts:

Sheila York for opening your inviting home and grounds on a pleasant summer evening and giving us the opportunity to check out the club's collection of rocks.

Jill and Gayland Allen for making a huge crowd feel welcome on a rainy evening and allowing us to visit Gayland's wonderful rock collection. Gayland says that he and Jill really enjoyed having us (the head count was 41!) and after everyone had gone, Jill said "Well, next year" so, according to her, we will do it again.



LGMS Annual Banquet Tuesday, October 14, 2013

at 6 p.m. in the Senior Center

\$14.00 per person

make your reservation with Vi Porritt
810-235-6286 or

vporritt@comcast.net

Come to enjoy good food, great company
and an interesting speaker!

Jeffrey Anderson will be our guest speaker.

According to Gayland, “for those who have never met Jeff, all I can say is you don't want to miss this. He will be doing a presentation on Diversity of Agates and Thunder Eggs. He will also have an assortment of agates for sale so, for those who are looking to add to their collections of agates, make sure you personally talk with Jeff”.

Information from the Petrified Forest National Park

How did the trees become petrified/ permineralized? The permineralization of the wood was accomplished by silicification, meaning that the wood was replaced by silica. Another kind of permineralization occurs via calcification, where the wood is preserved with calcite rather than silica, but there is not any calcified wood in the park.

The Chinle Formation has a lot of volcanic ash in it. This volcanic ash contains a lot of glass. Glass is made of silica (SiO_2) and weathers very easily, meaning that the silica is readily dissolved in water. However, the silica does not stay in solution for very long, particularly when it encounters acidic conditions at which point it will reprecipitate (form a solid) from the ground water as chert. Chert is a form of silica that has a very stable crystal structure. Any organic tissue that is buried in sediment decays at least a little bit, at least until the oxygen in the surrounding pore water is consumed. The decay process releases carbon dioxide, which combines with water to form carbonic acid. Thus, the waters around a log are slightly acidic, so that if the water also contains silica, the silica will precipitate (be transformed from a liquid state to a solid) out and become incorporated into the wood's cell wall. The ground waters were very active in the Chinle system, meaning that there was new water and silica flowing through the sediments and around the logs constantly, so the logs could be preserved.

In places like Long Log, the largest logs are flattened somewhat. The reason for this is that the cell structure was silicified in the outside of the logs first. This means that silicification started on the outside of the log while, on the inside, the wood continued to rot. At the same time, the log was flattened as rivers deposited the weight of more and more sediment on top of it. Eventually the whole log was silicified, but not before the original cell structure was lost to rotting in the interior of the log.

What is not very well understood is how the very fine detail of the cell structure is preserved. It would appear that very small (less than cell sized) gradients in acidity created very small reprecipitation gradients, with the effect that the wood was replaced on almost an atom-by-atom basis.

Upcoming Events

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

September 13-14, 2014

Muskallonge Lake State Park (about 28 miles northwest of Newberry in the UP)

Seventh Annual Agate Show, "Rock On With Lake Superior Agates"
Saturday 10-5 pm, Sunday 10-3 pm
Information: 906-658-3338

OUR VERY OWN !

The **2014 LGMS Show** is scheduled for
September 20 and 21
Saturday 10-6, Sunday 10-4
(Setup on September 19)

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

October 10, 11, 12, 2014

Greater Detroit Gem, Mineral, and Fossil Show

Macomb Community College, 12 Mile and Hayes, Warren, MI
Info: www.michmin.org

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

COPPER FACTS

Symbol : Cu

Copper is a *native element*. The crystal system of native copper is cubic. It has a metallic luster and a specific gravity of 8-9 with a hardness of 2-1/2 to 3 and can be easily scratched with a knife. Native copper has no cleavage and its fracture is hackly. This element is heavy, ductile and malleable. Native copper is copper red on fresh fracture but may be greenish or bluish or tarnished if weathered. It is often found with small amounts of arsenic, antimony, bismuth, iron, and silver.

Copper Ores

Malachite (pronounced mala-kite) is usually a bright green color and has a nonmetallic luster. It has a light green streak and can always be scratched with a knife. Malachite, a copper carbonate, is an important ore of copper and is a good indicator of copper deposits. In its pure form it contains 57% copper; the rest is made up of carbonate and water.

Azurite also is a copper carbonate. Its streak is light blue. Malachite and azurite frequently occur together and are found in the upper weathered (oxidized) zones of copper ore bodies. Azurite is the scarcer of the two has a soft blue color.

Chalcopyrite is an iron-copper sulfide. It has a brass yellow color. It is distinguished from pyrite by being softer and yellower. Its golden glint when in small specks in quartz often is mistaken for gold. The glint will disappear when turned at certain angles to the light while gold appears the same at all angles. Chalcopyrite is the primary ore of copper and is prevalent wherever copper ore is being mined below the surface zone.

Chalcocite is a copper sulfide. It is one of the highest grade and most important ores of copper and is opaque with a dark lead gray to black color. Chalcocite is often associated with and shows alteration to azurite, bornite, covellite, malachite, and native copper. Important deposits are found in Arizona's Bagdad, Jerome, and Superior areas. Other localities include Bingham, Utah; Santa Rita, New Mexico; Ely, Nevada, and the Genesee Valley district in California.

Bornite is a copper-iron sulfide. Its color is a natural bronze, but on exposure it tarnishes to the variegated colors that have caused it to be nicknamed Peacock ore. It is rarely found on the surface but is prevalent in deeper levels of copper mines.

Turquoise is a hydrous aluminum phosphate with copper. To be desirable for gems the color should be green blue. The color is due to the presence of copper and is found near the surface of copper deposits. Sometimes it may appear as an outcrop.

Chrysocolla has various shades of blue to green and is a hydrous copper silicate. It is often found with azurite and malachite. Although its color is attractive, it is too soft to make good gem stones. Be aware of this fact when buying jewelry. Sometimes chrysocolla is passed off as turquoise.

From the Mineral Information Institute , www.mii.org p 42

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



General Meeting at the shop
Tuesday, September 16, 2014 at 6 p.m.

Please come early to help clean the shop
in preparation for our Annual Show.
Cleanup begins at 1 p.m.