

# **President's Message**

Greetings from Austin, Texas! As I sit here outside our hotel in Austin, I can't help but feel guilty about not being in Michigan to experience the lovely late winter weather going on back at home. I flew down to Austin for a six-day stay to enjoy a little break from the winter weather and spend some time with my wife in the city where she is currently working. Never having visiting Austin before, I was looking forward to seeing what there was in the way of rock hounding opportunities there. I did some searching online and found that most of the good collecting areas in Texas were far to the west of where we were staying. There are some marine fossils to be found around Austin: however, as most of you know I am an agate and jasper junky so I didn't take the time to pursue the fossils. I did manage to visit several rock shops in Austin and surrounding towns that were not too far to drive to. I will bring some of my rock shop finds in to the workshop. Arriving back in Michigan to about a foot of snow was quite a change from the 72 degree weather in Texas the day we left. I am looking forward to those 72 degree days here in Michigan!

With March upon us, it's time to start thinking about all the outdoor activities we will be enjoying in the coming months. We will be looking for volunteers to host our summer potluck meetings during the summer months. These meetings are always a pleasure to attend and are usually accompanied by tailgating rock swaps and sales. As most of you are aware the club has acquired quite a few rocks from the estate of Bill Horton, in addition to the material we already have from earlier estate acquisitions. I am thinking it would be nice to have some of this material available for members to purchase at one or more of the summer meetings or have another auction in the workshop. There is also the field trip to Rockport Quarry to keep in mind. If you are interested in attending and have never been

to Rockport before, I highly recommend this great collecting site. This large limestone quarry has a great variety of marine fossils many of which are preserved in fine detail. See Ed Oller for details on the date and time of the field trip.

As I stated in the February newsletter the meeting in March will be an important one to attend for all club members. We will be discussing issues that will affect the future of our club. Our rent has been increased by 100 percent effective March 1<sup>st</sup>. Our cost to hold the annual show will be increasing this year and every year in the future! At the February board meeting, a number of proposals were discussed to find ways to increase revenue for the club. If you are interested in hearing about and voicing your opinion on the proposals, please make it a priority to attend the March membership meeting. We will be voting on these proposals at the March meeting so I am looking forward to seeing a lot of our members there. I would like to thank all of those members who volunteered to bring snacks or refreshments to the upcoming meeting. With all the business we will be discussing I'm sure many of us will be hungry by the time the meeting is over! We also have some of our newer club members who will be giving a demonstration on some of the neat glass work and unique jewelry they create at the meeting. Hope to see you all there!

Rob Kalis



# Summary of Board Meeting February 16, 2016

Bob called the meeting to order at 12:37 p.m. Sheila gave the treasurer's report, which reflected that the club is in good financial shape. The report was unanimously accepted as given.

Shop matters: Bob thanked Ed for working so hard on the machines, especially the cerium polisher. We are waiting for a quote on replacing the pans and hood on the cerium machine and we are also looking into replacing the felt wheels on the cerium polisher. We plan to ask Isla about upgrading the office computer to Windows 10. Ed brought to our attention a donation of stained glass by AnnMarie's father. It is on the glass bead table.

Show: After meeting with Michelle, Bob stated that we basically have two options: option 1, to rent the gym for \$50 an hour, pay custodians to lay down and pick up the floor tarps or, option 2, to rent the building's common area for \$32.50 an hour and not deal with tarps thus saving on custodial fees. Ed has met with Chuck, past show chairman, regarding using the common area for our show.

Rent increase: Since our rent has doubled, Bob has come up with 4 options to offset the cost to the club. He will present them to the general meeting in March. They include (1) raise yearly dues by \$5.00 a year (this received unanimous support from the board), (2) increase the daily workshop fee to \$2.00 per day, (3) increase the admission price at our annual show, (4) increase the dealer's fee to \$250 starting in 2017.

Ed announced a field trip to Rockport State Park on 6-11-16. Meeting ended at 1:38 p.m.

Submitted by Bryant Hiiter

## **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.

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### **2016 Officers and Chairpersons**

President: Bob Kalis, 734-320-3648 Vice President: Patty Fountain, 810-844-3970 Secretary: Lori Keefer, 248-459-3196 Treasurer: Sheila York, 810-695-0509 First year Directors: Sharon Krautheim, 810-701-3776 Dennis Gougherty. 810-986-9671 Second year Director: Margaret Edmundson, 248-634-5046 Third year Director: Ed Oller, 810-241-8801 Hospitality: Venus Sage, 810-458-4290 Sunshine: Anna Pernicano, 248-486-4048 Shop Chairpersons: Ed Oller, 810-241-8801 Sharon Parker, 517-548-0675 Newsletter and Membership: Isla Mitchell, 248-685-7804 imvm.1@netzero.com Historian: Chuck Amberger, 248-787-6586 Library: Bryant Hiiter, 248-210-6138 Webmaster: Emily Saling General Membership Meetings are held monthly on the 3<sup>rd</sup> Tuesday at 6 p.m. (Except in January and February when board meetings are held in the shop)



#### How to Cut Obsidian

Gold Sheen: To get the most out of mahogany gold sheen obsidian, saw with the bands, as if they were a stack of plates, and you wish to unstick them. Watch for "fire spots" in gold sheen. It is not plentiful, but opal-like colors do sometimes occur in mahogany gold sheen.

Iridescent: There are two types of iridescent obsidian. In cutting both correctly, the orientation of the color is most important. One type of obsidian is banded and the color lies in the bands. On the unbanded types of obsidian the surface has to be chipped to find the color. The banded type will have several colors or shades, while the unhanded types will have only one color. Cut the banded material parallel to the bands to get effect. To get rainbow effect, cut the stone at an approximate 15 degree angle across the bands.

Midnight lace: Lace patterned obsidian should be cut across the surface pattern that you desire to reproduce. Though obsidian is comparatively soft, it is still very important to sand away all scratches before going to polish. Some advise that wet sanding be done, since obsidian is heat sensitive and very brittle. For final polish, felt with cerium oxide is the choice. Should you be faceting some particularly gemmy obsidian try serium oxide on Lucite, but keep it wet. Rainbow Obsidian: Cut parallel to flow layers. These can be seen by examining fractured surfaces using an overhead single lamp bulb. As these are not always straight, it may be necessary to turn the stone slightly in the saw. Examine each slab set with either water or saw oil to see if the correct angle has been obtained. Safety Tip: After obsidian is sawed, be sure to bevel the edges all around on your fine grinding wheel to keep them from flaking and chipping. Wear goggles or glasses at all times; if a small chip of glass (obsidian) got into your eye, it would be hard to remove as it is transparent and hard to see even with a powerful magnifying glass, and the edges may cut your eve to a great extent before it could be removed. Grinding Obsidian Cabs: Approach your grinding wheel with the material at a slight horizontal angle. If brought straight in, it may be a "shattering" experience, as obsidian fractures conchoidally and this is a sure way to do it.

Polish on Obsidian: Keep the polishing wheel wet. A dry polishing will result in blisters and scratches. Obsidian is relatively inexpensive, easy to obtain and soft. With proper understanding of its glassy properties you can obtain some beautiful results. Author unknown, via Golden Frog 2/05, via Prospector Newsletter 10/07



#### **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.

## **Upcoming Events**

March 5 (11 a.m. to 6 p.m.) and 6 (noon to 6 p.m.), 2016 **The Roamin' Club's Special Auction** Schoolcraft College, Visatech Center Bldg, 18600 Haggerty Road, Livonia, MI Info: 248-348-5093 or 248-981-9673

March 19, 2016

Midwest Mineralogical and Lapidary Society's Annual Metro Rock Swap St Johns Lutheran Church, 13115 Telegraph Rd, Taylor, MI Lou Talley 734-253-8532 or itslley1970@gmail.com

March 18, 19, 20, 2016

Michigan Gem and Mineral Society Annual Show

Jackson County Fairgrounds, American One Event Center, 200 W. Ganson, Jackson, MI Info: 517-522-3396 or <u>www.mgmsrockclub.com</u> or <u>info@mgmsrockclub.com</u>

April 7-9, 2016

Indian Mounds Rock & Mineral Club Annual Show

Roger's Plaza, 28th St at Clyde Park, Wyoming, MI

Contact Kreigh Tomaszewski, (616) 243-5851; kreigh@gmail.com www.indianmoundsrockclub.com

April 29, 30 and May 1, 2016

Kalamazoo Geological and Mineral Society's 57<sup>th</sup> Annual Rock, Gem, Fossil and Mineral Show Kalamazoo Expo Center, 2900 Lake St, Kalamazoo, MI



Final Notice, 2016 Dues are overdue!

Tear off and mail to Sheila York, Treasurer, LGMS, 9525 E. Highland Rd, Howell, MI 48843

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# 2016 Livingston Gem and Mineral Society Dues

Name

Please note any changes in address, email address or phone number

# **Obsidian is very cool stuff**

It's a common misconception that obsidian is a type of silica glass. It is glass but it is NOT pure SiO2; it is (usually) rhyolite magma that is now a glass--it has become "supercooled", cooled below its normal crystallization temperature, but without any crystals forming. Its composition is the same as that of granite; so it only contains about 70-75 percent by weight SiO2, and the rest is Al2O3, Na2O, K2O, plus smaller amounts of oxides of Ca, Fe, Mg, Ti, etc.

A common statement is that obsidian is glassy because it "cooled very quickly", and we tell this to people so we can give a simple explanation, but in reality this is only partly true. Some obsidian deposits are rhyolite lava flows that are quite thickup to 10s of meters--and there is no way that such a large mass of lava could really cool "unusually quickly". The real reason it becomes obsidian is that the rhyolite magma that formed it was very "dry"--low in water content--because the presence of water facilitates crystal growth; and, the original rhyolite magma must have been completely liquid and contained no crystal nuclei; if there were any, they would have served as nuclei for further crystal growth, and the rock would have become gray and opaque, rather than completely glassy.

I'm sure that the brown color in mahogany obsidian is some form of iron oxide, hematite or "whatever", in very tiny particles, and these seem to form along boundaries between flow layers in the obsidian--giving mahogany obsidian its typical banded/streaky appearance. And a last point explaining the black color of typical obsidian makes an interesting story but it takes a little time to tell it, and the explanation of its black, but still translucent, color, seems to be contradiction. The dark gray or black color is due to absorption of light by iron ions that are present (though only in a very small amount) in the glass; this contradicts the usual wisdom that "dark-colored minerals are high in iron content"--because typical obsidian contains only a trace of iron, no more iron than other forms of rhyolite, such as pumice, which can be almost snow-white. The black color is due to the high transparency of the glassy obsidian, which sounds like another contradiction. When rhyolite is devitrified (not glassy), full of tiny crystals with grain boundaries and fractures between them, the crystals scatter or reflect the light that enters it, and light does not penetrate very far into the rhyolite rock; being reflected back out after only penetrating a small fraction of a millimeter, there is not much opportunity for any wavelengths of the light to be absorbed by the coloring-agent ions in the rhyolite (iron, manganese, titanium), so the surface looks almost white. But in obsidian, being very transparent, light can penetrate for a considerable distance without encountering irregularities that would reflect it, so, with a much longer "optical path", there is much more opportunity for the iron and other colored ions to absorb some of it. Light may penetrate, let's say, for 2 centimeters into the obsidian, as compared to perhaps 2/100 of a millimeter in a crystalline rhyolite--a difference of a factor of 1000, so 1000 times as much light will be absorbed by the trace of iron that is present. That's why obsidian looks black, though you can still see light (which will look brownish-gray) through a thin edge of it. And if one crushes & grinds the obsidian to a powder--the powder will be almost white, just like common rhyolite or pumice is; because now the fine particles reflect and scatter the light as described above, as soon as it hits their surface.

Pete Modreski, Executive Editor, Rocks & Minerals magazine, via The Rockhound, May 2011



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*General Meeting* Tuesday, March 15, 2016 at 6 p.m. At the shop