

Livingstones

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Livingston Gem and Mineral Society

January 2013

Vice President's Message

Let me first welcome everyone to a new and exciting year of lapidary arts. If you have not already paid your 2013 dues please see Peggy, our treasurer, or one of the officers right away.

As this is the time of New Year's resolutions, I have a few suggestions. In the coming year resolve to try something new. If you are always grinding away on rocks, why not learn silversmithing or wire wrapping? Is the cost of silver too high? Try working in copper or nickel or brass. Think you've seen and done it all when it comes to the lapidary arts? Learn how to make glass beads.

We are starting to teach the 4-H children on Mondays this month. Please volunteer as an instructor if you can. Try it, you'll like it. See Chuck Amberger, Ken Blake, or myself for more information. Have a safe New Year.

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.
Thursday: open for cleaning only
(check with Ken)
Friday: 10 a.m. to 2 p.m.

About 50 members and their families celebrated at our annual Christmas Party in December. Many thanks to those who set up the room, those who cleaned up and, especially to those who cooked the great food.
Good food, good fun, good friends!

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William Penn (1644-1718)



Show Chairman and Historian:
Chuck Amberger, 248-787-6586
Library: Bryant Hiiter 248-889-3974
Website: Livingstongemandmineralsociety.com
Email: livingstongemandmineralsociety.com
Website managed by Rhonda Hagerman
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 pm)

Golden Facts

- * Sometimes a “gold” nugget is actually a mixture of gold and silver. Gold mixed with silver is very pale yellow. Mineral collectors call this mixture electrum.
- * Most gold deposits in the world have a half-ounce of gold in every ton (2000 pounds) of rock! Gold is so valuable that mining it is still worthwhile.
- * Gold is used by dentists to fix teeth because it does not break down under the conditions in your mouth. (Ask your relatives if they have any gold teeth.)
- * Polished gold is like a very shiny mirror. Because it reflects heat and light so well, it is used on spacecraft and satellites as a radiation shield.
- * Gold is useful in medicine. Injections of gold salts are used to treat arthritis and gold nanoparticles are effective against some kinds of cancers.

Via Rock and Gem, July 2001, via The Rockpile, September 2011

Snow day closings?

For information on snow days,
call Hartland Community Education,
810-626-2150,
or watch your local news channel.
If Livingston County schools are closed,
so is the shop.



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.

Turquoise

Gem Profile, 12-14-12, by Layna Palmer, Wire-Sculpture.com

This time we're going to explore a material that is a stone, a gem and a color; Turquoise! This remarkable stone is one of the oldest known gemstones in use for jewelry-making in the world beginning with beads found in Iraq that date to 5000 B.C. to the death mask of Tutankhamun and has also been found in burial sites dating from 3000 B.C. Turquoise was also worn by ancient Persians and Aztec Kings with finds of inlaid skulls, and ceremonial masks.

What does Turquoise Mean? The word Turquoise is an Old French word meaning "Turkish" which is where the Europeans first found the gem mined from the Khorasan Province in Iran for sale in the bazaars of Turkey. Although Turquoise is the word we've used for several centuries, Pliny the Elder called it Callais, the miners in Iran searched for Priouzeh, and the Aztecs carved their power statues of Montezuma from Teoxihuitl.

The Colors of Turquoise The most prized color of Turquoise in antiquity, and now, is the intense blue most commonly associated with Turquoise as a color, but is very hard to find naturally in a stone. In ancient times, the best mines producing the finest colors of turquoise were found in Persia, but in the late 1800s, miners re-discovered Aztec mines in Arizona and the Western United States. The turquoise from these mines rivaled any found in Persia and exceeded the quality in many cases. Today the United States has become the largest producer of gem-quality turquoise with the finest specimens being from Arizona and Nevada. The color of the stone comes from copper, and varies depending on the concentration of copper in the chemical formula. Turquoise that is greener in color has a higher concentration of iron.

Turquoise Facts Chemically Turquoise is made of Copper, Aluminum and trace amounts of Iron in what is called a "hydrous phosphate"; its chemical formula is $\text{Cu}(\text{Al}, \text{Fe}^{3+})_6(\text{PO}_4)_4(\text{OH})_8 \times 4\text{H}_2\text{O}$. Turquoise is a very soft stone ranging from 0 - 6 on the Mohs' scale with most of the stones falling in the 5-6 range, or about as hard as the glass in your windows. It has a perfect cleavage and conchoidal fracture with crystals being rare to form in the stone.

How Turquoise Forms Turquoise forms as a secondary mineral by percolation through acidic aqueous solutions where the primary rock is volcanic with high levels of limonite, iron oxide and copper. In other words; water, which has been heated under the earth, rises upward through limonite rock and creates turquoise in the cracks and crevasses of weathered rock. This occurs in arid regions like the American Southwest and the Middle East.

Famous Turquoise Mines Speaking of mining, the most famous copper mines in the world are found in Arizona with the Kingman and the Sleeping Beauty mine being the most well-known. However, we can't leave out Blue Bird, Castle Dome or Ithaca Peak. Nevada is the other major producer of high quality turquoise in the United States where the turquoise is found as nuggets in fractures and as breccias. Most of Nevada's mines are along a thrust fault that runs through the northern part of Elko County extending southward to the California border. Nevada turquoise comes in a variety of colors from the intense blue that is so sought after to greens and yellow. California, Colorado and New Mexico also produce beautiful gems with some of the oldest mines being in New Mexico.

There are several great websites for planning a trip to any of these mines and some of them are open to the public for tours and to purchase product produced and cut at the mine. There are also several museums in Arizona and California which have exhibits of stone hammers and tools used by ancient peoples to mine turquoise. A cache of Hohokam and Navajo hammers from around 600 A.D. was found in the Kingman mine along with charcoal and skin water containers. Very cool! These items are on display at the Mohave Museum of History and Arts and the Arizona State Museum in Phoenix. (continued on page 5)

Turquoise Legends and Symbolism The Aztecs have a legend that when the rains came, the people rejoiced and danced. As their tears of joy mixed with the rain, the water soaked into the earth and created the "sky stone". Turquoise is still used as a stone of power by the Indians of North America who believe that it opens a direct connection to the sky and is used in the sacred bundles of the medicine man because of the healing powers it possesses.

From ancient times, turquoise has been used and valued as a stone of power. Turquoise is the stone of the Archangel Michael who symbolized protection, courage and truth. Turquoise was also used in Persia as a stone of protection and healing, with a legend that the person who was wearing turquoise would be protected from harm and an animal, like a horse, wearing it would be sure-footed and carry the rider safely.

Care for Turquoise Turquoise can change color over time and should be protected from extreme heat. Jewelry and should never be tumbled or placed in any type of ionic or ultrasonic cleaner. To prevent color changes and to reinforce the soft stone, many suppliers stabilize their turquoise. Stabilization is a very guarded secret among miners, lapidary and suppliers, but is used to harden the stone and make it last through generations.

The deadline for 2013 dues was December 31, 2012

Remit to: Peggy Petito, Treasurer, LGMS
9525 E Highland Rd
Howell, MI 48843

Tear off and mail

2013 Livingston Gem and Mineral Society Dues

Name _____

_____ adult member \$15

_____ family membership\$15

number of children 12-18 years _____

_____ annual workshop fee\$10

(each member who uses the shop must pay this fee)

_____ total payment

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

newsletter preference: _____ printed, _____ email _____ shop mail folder

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. This society was established in 1970. Annual dues are \$15 per person or family. Annual shop fees are \$10.00 per person. There is an additional fee of \$1.00 per day for workshop use. Annual dues and annual shop fees are due on January 1 of each year. The Livingston Gem and Mineral Society publishes The Living Stones. Non copyrighted articles may be reprinted provided that they are properly attributed. Newsletter deadline is the 1st of each month. Articles or correspondence can be sent to LGMS, Hartland Consolidated Schools, 9525 E. Highland Rd. Howell, Michigan 48843-9098.

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



No General Membership Meeting in January

Board Meeting on Tuesday, January 15, 2013 at 1 p.m.