THE STREAKPLATE

NORTHERN BERKSHIRE MINERAL CLUB
North Adams, Massachusetts

VOLUME 53 NUMBER 2
February-March 2011

Visit us on the web at http://nbmclub.webs.com

Meeting Place and Time

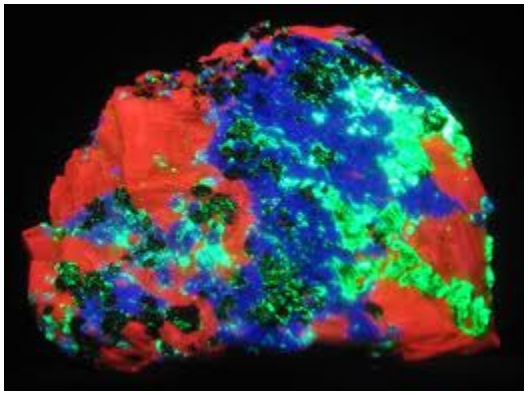
DATE: ***Thursday, March 17, 2011*** **TIME :** ***6:00PM***

LOCATION: **North Adams Public Library**
74 Church Street, North Adams

PROGRAM: **Two Presentations will be given.**

Bruce Henderson will give a talk on the Geological Timeline of the Earth.

Rob LaPorte will give a presentation titled "Quartz from around the world". Samples from well known collecting localities will be displayed.



Fluorescent mineral from Sterling Hill, New Jersey

Western Mass Mineral, Jewelry and Fossil Show

A club trip is planned to attend the Connecticut Valley Mineral Club's annual show at the Holiday Inn Ingleside off exit 15 in Holyoke, MA. The show date is Saturday and Sunday, March 26-27 from 10-5 Sat & 10-4 Sun. Admission is $4 and scouts and children 12 and under are free. The club trip is planned for Sunday morning and will leave North Adams at 8:30a.m. Contact Larry at 413-663-8430 or by email at lmichon@rcn.com if you would like to go. For more information visit the club's website at www.cvmineralclub.org

Rob LaPorte's talk on local collecting sites generates lots of excitement.

At our February meeting at the North Adams Public Library Rob LaPorte gave a talk on local mineral collecting sites. Rob brought in many examples of material that can be collected close to home and gave detailed information on how to find these sites. The meeting was well attended and everyone had an opportunity to hold the samples and ask questions. It's clear that we're all pretty sick of winter and can't wait to get outside in the field collecting. I really enjoyed this "show and tell" format and Rob plans on presenting more programs like this in the future.

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"The Club" was founded in 1959. The purpose of the club is to develop and educate students, the community, and our members in the field of mineralogy, including the formation of rocks and minerals, the collection of minerals, their identification and display, and in the lapidary art of cutting, polishing and faceting; and to serve the educational needs of the communities in which club members live.

…from the Constitution of The Northern Berkshire Mineral Club

Crystal Healing Corner

By: Darlene Bruzzi

~ JANUARY ~

This month's healing crystal is **MALACHITE**, the gem stone of Capricorn and Aquarius. For Capricorn, Malachite helps them to become aware of their deepest wishes, desires and feelings. For Aquarius, Malachite helps them to bring to the surface unconscious but vaguely formulated hopes and plans. It teaches Aquarius to believe in himself and to listen to his/her own body. It also stops reckless behaviour and thoughts.

Malachite works with the Heart Chakra, and is good for endurance, physical balance, eyesight and detoxing at the cellular level. Good also for the health of the pancreas, pituitary gland, blood, heart, spleen, teeth, and immune system. Malachite also eases birth and can help achieve a good restful nights sleep. It has antiseptic qualities so is a good choice for elixirs to assist tissue regenerating after surgery, restoring health after illness, drawing out toxins, aids digestion by stimulating the stomach and colon, reduces pain of arthritis and other inflammatory diseases, as well as inflammation due to bone fractures and sprains, asthma, rheumatism, tumors, and epilepsy.

On an emotional level, Malachite helps to clear the mind of mental confusion, bringing calm and balance. It helps to relieve depression and unnecessary worry. It brings creativity into focus so it can be manifested, acted upon. Malachite also helps one overcome the fear of confrontation and self-expression, or the fear of being seen or noticed. Malachite repairs the damage caused by past experiences with abusive individuals.

Spiritually, Malachite reminds us that we are here to co-create, that fate is just an illusion. An excellent grounding stone for meditation, Malachite connects us to Mother Earth and assists in bringing our dreams , wishes, and visions into physical reality. It helps us to establish boundaries with ourselves and others. Malachite protects us against power abuse on the psychic, energetic and emotional level.

Sources: THE BOOK OF STONES, by Robert Simmons and Naisha Ahsian, p. 247-248
THE CRYSTAL HEALER , by Philip Permutt, p. 49
CRYSTAL CHAKRA HEALING, by Philip Permutt, p. 84
HEALING CRYSTALS AND GEMSTONES, by Dr. Flora Peschek-Bohmer/ Gisela Schreiber, p. 21

~ February ~

AMETHYST----The gem stone of Pisces. Amethyst gives Pisces the strength and courage to open his heart and mind to love. It helps with creativity, express feelings, and organize thoughts into coherent lines.

Amethyst is the crystal for Crown chakra work, the Brow or Third Eye Chakra, and the Etheric or 8th chakra. This crystal has been in use since at least 25,000 years ago. Amethyst is also known to enhance one's physical environment, not only because of it's beauty, but because it makes one feel as though they are surrounded by a 'bubble of light'. Amethyst is especially recommended for healers of all professions and types, teachers, and truck drivers.

Amethyst balances the body and keeps healing spaces clear. Cleansing the crystals under running water for a minute or less while setting the intention of " clearing the stone ", is highly advised. It is excellent for spiritual protection and works wonderfully with MOLDAVITE, as Amethyst has the 'bubble of light shield', while Moldavite raises one's vibrational frequency so one is not resonating with lower, darker, negative energies. A great crystal to meditate with, it stimulates the higher chakra's, opening up for intuitive and psychic work and communicating with the Angelic realm. Amethyst enhances the aura, Spirit contact and self-esteem.

Amethyst is also useful in identifying the root causes of behavior, habits and emotional patterns which create the imbalances that cause disease. It helps those who are playing victim, to regain their power and re-align with their spiritual purpose; helps with OCD { obsessive compulsive disease }. It is helpful to those who do not feel at home on Earth and feel a longing for "home" on other worlds, systems or dimensions. Relieves tension , enhances psychic abilities, shamanic journeying and spiritual healing.

Physically Amethyst has been used to aid healing addictive behavior, helps balance the nervous system and brain. It helps with the symptoms of tinnitus, nerve disorders, or brain imbalances. Amethyst's energy also supports oxygenation of the blood especially when used with Hematite or Magnetite. Good for the health of the eyes, lungs, intestines, pancreas, liver, thymus, and immune system. Good for headaches, pain, infectious diseases such as HIV and AIDS, helps detoxing.

Source: Healing Crystals and Gemstones by Dr. Flora Peschek-Bohmer/Gisela Schreiber, p. 27 & 28
The Book of Stones by Robert Simmons & Naisha Ahsian, p. 28-30
The Crystal Healer, by Philip Permutt, p. 35

Whole Health Expo in April

If you are interested in alternative healing you should plan a trip to the Whole Health Expo in the Clarion Hotel, Northampton, Ma. on April, 16 & 17. They have several booths devoted to gems and minerals and their healing properties. This is good for anyone, especially if you want a professional overview of alternative healing with gems/crystals. They offer freee seminars all weekend on a variety of subjects. For more information go to www.wholehealthexpo.com, check the one for Northampton in April.

New Jersey's Fluorescence Capital of the World

By: David Vincent Jr.

A few years ago after becoming a rock hound, my wife Kathy and I were planning a trip to Eastern Pennsylvania for a family function. Through reading and searching the internet for rock or mineral points of interest I had found two sites close to our usual route of travel. Located in Northern New Jersey are the Sterling Hill Mining Museum in Ogdensburg N.J. and the Franklin Mineral Museum in Franklin, N.J. Both are located in a former mining area for ores of iron and zinc and only a few miles from each other. The last commercial mining operations were closed in the 1980's. Called The Fluorescence Capital of the World, the area is famous for the abundance of fluorescent minerals. In addition over 350 different minerals species are found here. We left early in the morning, planning to visit both of these famous attractions the same day.

Both museum sites have great collections of rocks , minerals, informative displays on mining and related subjects ,and collecting areas. Their most important draw would be the fluorescent minerals and how the minerals react to long and short wave ultraviolet light. Under normal lighting conditions these grey and mundane looking minerals are just rocks but under ultraviolet light they burst into vivid colors of red, green, orange, yellow, blue, and color combinations. The fantastic fluorescent mineral displays here are considered among the best in the world. Having no knowledge or interest in fluorescent minerals before our visit , it became easy to understand and appreciate the attraction of fluorescent minerals. We did visit both sites and found them to be inviting, accessible , having knowledgeable guides, and working toward a continuation of their efforts and connections to the rock and mineral collecting world.

We visited the Franklin Mineral Museum first. The museum consists of more traditional displays with galleries of display cases and exhibits under glass. Different collections ranged from Native American and historical items to fossils and minerals. The most impressive, of course, was their extensive collection of

fluorescent minerals , especially their 33 foot long exhibit under ultraviolet light. Out back of the museum was an area called the Buckwheat Dump, a mine area for ore not up to refining standards. For a small fee collecting was allowed here and use of an ultraviolet light located behind the museum was provided at the time of our visit. The high point of our visit was the large ultraviolet display and we consider the museum a worthwhile attraction for any rock collector.

A short distance away we visited the Sterling Hill Mine which was the last operating underground mine in New Jersey. Mining in the area had begun before 1739 and ended in the 1980's. Zinc ores were shipped by rail to other areas of the country for processing. Our mine tour began in the gift shop/snackbar area where there is an inside eating area. Richard Hauck, one of the two brothers who had purchased the historical mine to preserve it for the enjoyment of future generations, was our tour guide. Mr. Hauck gave a short presentation that was interesting and informative about mining and its importance, miner's lives and work and the inter-connections between the mining and mineral collecting worlds. It was evident that he was working diligently to protect the site and provide first class experiences. The tour then proceeded to a large building called the Changing House. This building is where the miners began and ended their work day by changing into or out of their work clothes. The Changing House now contains an excellent mineral collection and an extensive collection of mining related equipment, materials and artifacts. Larger pieces of mining equipment are located throughout the grounds. After the Changing House we moved to the mine entrance located at the bottom of a shear vertical rock wall. When the commercial operations ceased, the mine's water pumps were shut off causing most of the underground passages and miles of tunnels to flood. Those remaining above the water level portion of the mine is the route the tour followed.

The tour had numerous stops and our guide used every opportunity the describe the mines, mining techniques, ores mined, equipment, mine safety and information related to mine operations. Questions and inquiries were answered and explained. The experience provided a greater understanding of mine operations and the miner's way of life in an interesting and informative manner. Before we returned to the outside world we were given the opportunity to view a magnificent display of mineral fluorescence in an area called the Rainbow Room. As the name implies when the lights went out and the ultraviolet lights illuminated the rocky grey area, the walls and ceiling exploded into glowing bright colors. The exit from the mine was through a series of old mine foundations which had been transformed into rooms and galleries to show case the Thomas S. Warren Museum of Fluorescence, a collection of minerals and other items that react to ultraviolet light. Then we returned to the gift shop/snack bar and parking area. There is a collecting area here (for a small fee) and labeled specimens in the gift shop. One can also choose to look at the outdoor displays.

Kathy and I had a wonderful time at both museums and look forward to possibly doing it again. Anyone with an interest in mining, minerals, especially fluorescent minerals or doing something out of the ordinary would not be disappointed in a visit here. My favorite location was the Sterling Mining Museum.

For more information please check out these internet sites: http://www.franklinmineralmuseum.com/ and/or http://www.sterlinghillminingmuseum.org/

WHAT IS FLUORESCENSE ?

By: Jim Brace-Thompson

Light (actually electromagnetic radiation) moves in waves and is given different names (infrared, visible, ultraviolet, etc.) according to its wavelength. We're most familiar with visible light. Ultraviolet (UV) light moves in waves too short for human eyes to detect, but we can see its effects upon certain minerals. What appears to be a grey rock in visible light may glow orange or green under UV light, or a mineral of one bright color under visible light may appear a different color under UV. For instance, green fluorite may turn blue. Still other minerals, like ruby, may stay the same color, but appear more vivid. In all these cases, under UV light the minerals seem to glow from within.

The first person to describe this phenomenon was English scientist Sir George Stokes in 1852. He was working with fluorite, so he called the effect " fluorescence ". Certain mineral impurities will absorb UV light and convent it to longer, visible light waves, which are then reflected to the viewer as colors. At the atomic level, UV light causes electrons in some molecules to jump to a higher energy level. In falling back to their normal level, they give off the extra energy in the form of visible light.

UV light is a spectrum, or range, of wavelengths that is divided into shortwave and long wave UV. Most fluorescent minerals will respond with a color change under shortwave, and some will change color as you switch from shortwave to long wave. a great book for learning more is Harry C. Wain's "THE STORY OF FLUORESCENCE"(Raytech Equipment Co.,1965).

Of 3,600 minerals, only 500 fluoresce. To build a fluorescent collection, look for specimens of calcite, zircon, opal, ruby, scheelite, willemite, celestite, hydrozincite, barite, scapolite, aragonite and halite. A ***WARNING: DON' T LOOK INTO A FLUORESCENT LAMP !*** While long wave UV light is relatively harmless, shortwave UV can "sunburn" your skin and eyes. Although protective glasses can shield you from harm, you should limit time spent with UV light. BE SAFE , not sorry !

Identifying Rocks and Minerals

Submitted by: Jerry Wilson

Rock Physical Property Tests

Rocks are made of one or more minerals. Minerals are pure, solid, inorganic (nonliving) materials found in Earth's crust. Minerals are made of one or more elements. Elements are the most basic, naturally occurring substances on Earth. Elements cannot be broken down (except by radioactive decay).

If you think of a cookie as a rock, the flour, sugar, and chocolate chips are like the minerals that make up the rock. Depending on the recipe, you get different kinds of cookies. It is the same with rocks because each type of rock has a different combination (or recipe) of minerals.

Minerals all have chemical compositions and physical properties unique to that specific mineral. (A chocolate chip in an oatmeal cookie is the same as the chocolate chip in a peanut butter cookie). Even rocks with the same mineral ingredients may be different due to variations in the amounts of minerals (more flour, fewer chocolate chips) and the processes by which they are formed such as being burned, doughy, or just right. Common rock-forming minerals are feldspar, quartz, calcite, mica, and hornblende.

All minerals have value, but their value varies. The more rare a mineral is, the more valuable it is. The same goes with mineral use. If a mineral is used for many of different things like copper, it becomes valuable. Some minerals are mined for their beautiful properties, such as diamonds and other gems. Some are so valuable they are used for jewelry or decorations, like gold and platinum.

We use different characteristics to identify people, such as eye color, hair color, language, etc. Geologists do the same thing, using specific properties to identify rocks and minerals. Geologists use the following tests to distinguish minerals and the rocks they make: hardness, color, streak, luster, cleavage and chemical reaction.

Hardness
A scratch test developed by a German mineralogist Fredriech Mohs in 1822 is used to determine mineral hardness. He developed a hardness scale that helps to identify mineral properties. The scale measures hardness on a scale of 1-10. One being the softest mineral (talc) and 10 being the hardest mineral (diamond). Common objects of known hardness can be used to determine mineral hardness. These common objects are: your fingernail (2.5), a penny (3), a piece of glass (6) and a knife blade or nail. For example, if your fingernail can scratch the mineral, it has a hardness of less than 2.5, which is quite soft. If the mineral can scratch glass it has a hardness of greater than 6, which is very hard.

Color
Color can sometimes be helpful when identifying minerals. However, some minerals have more than one color, like quartz. Quartz can be blue, brown, pink, red, purple, and almost any other color, or it can be totally colorless. Therefore, geologists have developed a better way of using color as an identifying property. This property is called a streak.

Streak
Streak is the name given to the colored residue left by scratching a mineral across an abrasive surface, such as a tile of unglazed porcelain. The streak may not always be the same color you see in the hand specimen. A mineral with more than one color will always leave a certain color of streak. Hematite is a mineral that can be red, brown, or black, but it will always leave a characteristic reddish brown streak.

Luster
Another mineral property that geologists use to identify minerals is luster. Luster is the way in which the surface of a mineral reflects light. There are two main types of luster: metallic and nonmetallic. A metallic luster is shiny and similar to the reflection from a metal object, such as a faucet. A mineral that does not shine like metal has a nonmetallic luster. For example, the wall has a nonmetallic luster. There are many types of nonmetallic luster. A glassy luster is bright and reflects light like a piece of glass. A greasy luster has an oily appearance. An earthy luster is a very dull and looks like dirt. Waxy luster looks like the shininess of a crayon.

Cleavage
Cleavage is another property used to distinguish minerals. Cleavage is the tendency for minerals to break along flat planar surfaces. Cleavage is rated as good, fair and poor depending on the quality of the flat surface produced. Mica, for example, is a mineral that has good cleavage. It breaks into very flat sheets. Minerals that have very poor cleavage will only break along irregular surfaces. Quartz, for example, will break into pieces that have a seashell-like fracture plane. Others, like garnet, shatter with no distinguishable pattern. These are considered to have no cleavage at all.

Chemical Reaction
A weak acid is used to tell if rocks or minerals contain calcium carbonate ($CaCO_3$). If the specimen fizzes (giving off CO_2) when it comes in contact with acid, it is considered carbonate rich. If it does not contain calcium carbonate, it will not fizz. Calcite and aragonite are two minerals that will always fizz.

Check out this virtual streakplate at
http://academic.brooklyn.cuny.edu/geology/leveson/core/graphics/streak/streakex_1.html