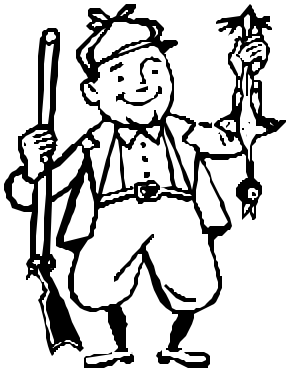
St. Croix Rockhounds
Doug Olson, Editor
211 Interlachen Way
Stillwater, MN 55082



November, 2004

First Class

Please send exchange bulletins to:

Doug Olson, Editor
211 Interlachen Way
Stillwater, MN 55082

November 16th - Is this month's meeting date.

The program: Agates from Germany

St. Croix Rockhound's

LEAVERITE NEWS

Vol. 29, Issue 9; November, 2004

Member of: AFMS & MIDWEST FEDERATION

ST.CROIX ROCKHOUNDS

MEETINGS: Club meetings are held the third TUESDAY of each month, at Stonebridge Elementary School on W. Elm. St. in Stillwater, MN at 7:15 P.M.. Everyone is welcome.

MEMBERSHIP: Full membership for a single person over 16 is $7.50 per year. Family membership is $10.50 per year.

OFFICERS:

President	Vic Martinsen	(715) 247-3700
Vice President	Mike Frankenberg	(651) 723-4467
Secretary	Susan Dustin	(651) 430-3933
Treasurer	Elaine Martinsen	(715) 247-3700
Program Committee	Peter Rodewald	(715) 425-5561
	Bill Cordua	(715) 425-9544
	Victor Martinson	(715) 247-3700
Show Committee	Bill Cordua	(715) 425-9544
Refreshments	Freya Kask	(651) 777-6371
Librarian	Shari Frankenberg	(651) 723-4467
Historian	John Parsons	(651) 257-2724
Sunshine Committee	Marie Newlander MN	(651) 439-7809
Tour Director		( )
Liaison Officer	Freya Kask	(651) 777-6371
Newsletter Editor	Doug Olson	(651) 430-9035

The purpose of our organization is to bring together rock and mineral enthusiasts on a regular basis through membership and through pooling of individual knowledge, talents and skills, to improve the lapidary skills of participating members. Affiliation: American Federation of Mineralogical Societies and Midwest Federation of Mineralogical and Geological Societies.

COMING UP!

November 16th : The St. Croix Rockhounds club meeting at the StoneBridge Elementary School at 7:15 pm. The program is “Agates from Germany”.

COMING ATTRACTIONS.

November 16th : St. Croix Rockhounds meeting at Stonebridge Elementary School at 7:15 pm

November 20th: Rockhounder’s Estate Auction at Henry Auction Center in Foley, MN. For info try www.henryauctions.com or call 320-267-5952.

November 20-21st: Madison Gem and Mineral Show @ Alliant Energy Center. For info call 608-251-2601 .

December 7th: St. Croix Rockhounds meeting and x-mas dinner at the Old Country Inn Buffet in Maplewood starting at 6:30 pm.

December 10-12th: Southeast Federation Show in Norcross, Georgia

December 11-12th: Anoka Co Gem & Mineral club show at Faribo West Mall in Faribault, MN. For info call Stephan Huber 763-935-2083

February 26-27th: Anoka County Gem & Mineral club Har Mar Mall Winter Show in Rosedale, MN.

March 19-20th: Eastern Federation Show in Athens, Pennsylvania

March 19th: St Croix Rockhounds show at the Valley Creek Mall in Woodbury, MN

June 10-12th: California Federation Show in Roseville, California

August 16-21st: MWF/AFMS Show in Saint Louis, Missouri.

Minutes of the Saint Croix RockHounds
October 19th, 2004

President, Vic Martinsen at 7:20, called the meeting to order. The **Treasurer's report** was approved as read by Elaine Martinsen.

Minutes from the September meeting were approved as published in the Leaverite News.

Committee Reports:

Refreshments-Thanks to Wendy Flynn and Freya Kask for providing tonight's treats.

It was decided that for the November meeting we will have a "pot luck snack" where everyone brings a treat.

Sunshine Committee-no news

Newsletter-Doug Olson reminded members that ALL of us are invited to share articles for the club newsletter.

Library-no report

Old Business-none

New Business-Mike Frankenberg volunteered to write an ad which could be placed in several local newspapers as a way of attracting new members and visitors.

We also voted to have our annual Christmas party at Old Country Buffet on 12/7 at 6:30. Freya Kask will make the arrangements.

Program-Tonight's program is a presentation by Pete Rodewald on Makoshika State Park and Glacier National Park in Montana.

The meeting was adjourned at 7:25 pm.

Respectfully submitted,
Susan Dustin, Secretary

If you mail in your dues, please send them to:
Elaine Martinsen
1938 Co. Rd. I
Somerset, WI 54025

Celebrate!
November's birthstone is Topaz.

In ancient lore, it could be used to control heat. It was said to have the power to cool boiling water, as well as excessive anger. As medication, topaz was used to cure fever.

During the Middle Ages, the topaz was used mostly by royalty and clergy. A 13th century belief held that a topaz engraved with a falcon helped its wearer cultivate the goodwill of kings, princes and magnates.

Topaz was once thought to strengthen the mind, increase wisdom, and prevent mental disorders. It was thought to guard against sudden death. Powdered topaz added to wine was used to prevent asthma and insomnia. A cure for weak vision called for immersing the stone in wine for three days and nights, then rubbing the liquid on the eyes.

The Topaz symbolizes good fortune and longevity. According to legend, this golden stone possesses the power to cure many diseases.

Also, citrine, a transparent yellow quartz gem many of the best of which come from Brazil, is a current day birthstone for this month.

November birthdays:
Mike Frankenburg: 16th

November Anniversaries:
None known

Freya and Earl Kask's grandsons, Mark and Bill Benson have been called up by the National Guard and will soon be leaving for Kuwait – we wish them well and good luck.

If you have news – good or bad - please call Marie at (651) 439-7809.

Identifying Minerals - by Al Pennington *from Stoney Statements 02/04*

Minerals are chemicals. They are chemical elements or compounds found naturally in the crust of the earth. They are inorganic, in contrast to organic chemicals that are mainly carbon, oxygen, and hydrogen typically of living things. Only rarely will a single physical or chemical property identify a mineral. Usually more characteristics must be used. You can learn to use the simpler physical and chemical test.

OPTICAL PROPERTIES - These tests are primarily used by experts although amateurs should know about them because they are fundamental to precise identification.

1. X-rays sent through thin fragments or powders produce a pattern dependent on the structure of the molecules of the mineral

2. Pieces of rock or mineral are mounted on slides, ground paper thin and then examined through ordinary or polarized light. The bending of the light as it passes through the minerals gives patterns that aid in identification.

3. Fragments of minerals can be immersed in transparent liquids of different densities to measure their index of refraction. This is distinct for each mineral and is related to its crystal system.

CRYSTAL FORM - This is critical to mineral identification as it reflects the structure of the very molecules of the mineral.

1. Cubic (Isometric) System. This includes crystal in which three axes are of equal length and are at right angles to one another as in a cube. Examples are galena, garnet, pyrite, diamond and halite (rock salt)

2. Tetragonal System. This form has two axes of equal length and one unequal. All three axes are at right angles to one another, as in zircon, rutile, and cassiterite

3. Hexagonal System. This form has three axes at 120* angles arranged in one plane and one or more axis of a different length at right angles to these, as in quartz, beryl, calcite, tourmaline, and cinnabar.

4. Orthorhombic System. This system has crystals with three axes all at right angles, but all of different lengths. Examples are sulfur, barite, celestite, staurolite, cobaltite, and olivine.

5. Monoclinic System. This form has three unequal axes, two of which are not at right angles. The third makes a right angle to the plane of the other two as in orthoclase, gypsum, micas, augite, epidote, and hornblende.

6. Triclinic System. This system has three unequal axes but none forms a right angle with any other. Examples are plagioclase, feldspars, rhodonite, and chalcanthite

HARDNESS - The hardness of a mineral is usually used in a rough manner to identify it. There are many more precise ways of measuring hardness in laboratories.

However, for the amateur, Mohrs' scale of ten minerals is very useful:

1. Talc	5. Apatite	9. Corundum
2. Gypsum	6. Orthoclase	10. Diamond
3. Calcite	7. Quartz	
4. Fluorite	8. Topaz	

Remember these ten minerals by using an unusual sentence "The Girl Can Flirt And Other Queer Things Can Do".

…continued from previous page:

Gypsum is harder than talc but not twice as hard; fluorite is harder than calcite and less hard than apatite. If an unknown mineral sample will scratch all minerals in the scale up to 4 and is scratched by apatite, its hardness is between 4 and 5.

In the field these are some common tests for hardness. A fingernail is 2.5, a penny is 3.0, a knife blade is 5.5, glass is 5.5 and a steel file is 6.5.

SPECIFIC GRAVITY - is the relative weight of a mineral compared to the weight of an equal volume of water. Since the weight of an equal volume of water is identical with the mineral's loss of weight when weigh in water, specific gravity (Sp. Gr.) is quickly determined

CLEAVAGE - This method of mineral identification deals with the way some minerals split along planes related to their molecular structure. The perfection of cleavage is describe in five steps from poor as in Bornite to fair, good, perfect, and eminent as in micas. The types of cleavage are usually described by number and direction of cleavage planes.

Three examples are Cubic Cleavage: Galena; Rhombohedral cleavage: Calcite; and Basal Cleavage: Mica

FRACTURE - is the breakage of a mineral specimen in some way other than along cleavage planes. Not all minerals show good cleavage but most of them show fracture. Fresh fractures also show a mineral's true color. Five to Seven types of Fracture are known. Three of the most common are:

1. Conchoidal -- obsidian
2. Uneven -- arsenopyrite
3. Earthy -- clay

COLOR - this is the first of three characteristics that have to do with the way a mineral looks. In metallic ores it is a good clue to identification. But in quartz, corundum, calcite, fluorite, garnet and tourmaline color is due to impurities and this requires caution to use color for these minerals.

STREAK - is the color of the powered mineral. This test is used very often by amateurs in the field due to the ease of the test performed. The mineral is rubbed across a plate of unglazed porcelain (the back of a common bathroom tile) and the colors of the powered Streak compare to a color list.

LUSTER - this characteristic depends on absorption, reflection or refraction of light by the surface of the mineral.

Common Luster terms are Adamantine(brilliant), Vitreous(glassy) metallic, dull, earthy, silky, greasy, pearly and resinous.

ULTRAVIOLET LIGHT - Certain minerals when exposed to this invisible light are excited into a characteristic color. Excited can be described as absorbing the ultraviolet light and emitting longer light waves that we see as colors. Minerals that do this are fluorescent.

MAGNETISM - This property occurs in a few minerals and can be used for identification. As an example manganese, nickel, and iron-titanium ores become magnetic when heated.

ELECTRICAL PROPERTIES - These properties such as electrical charging are best examined in the laboratory.

RADIOACTIVITY - this is a fairly simple test since the Geiger counter indicates the presence of such minerals as uranium and thorium.

Information was collected from the following books : Golden Press's Rocks and Minerals -- 1957 Simon & Schuster's Guide to Rocks & Minerals –1978

Stolen Gems *St Croix Rockhounds Leaverite News*

Synthetic diamond will stick to a magnet but the natural ones will not. *from Glacial Drifter 4/89 via Agate Picker 10/04*

A little vinegar before polishing makes tiger eye glisten when polished. *from Glacial Drifter 4/89 via Agate Picker 10/04*

There are roughly 4000 known minerals, although about 200 are of major importance. Approximately 50 to 100 new minerals are described each year. *from Rock Vein 09/04 via Agate Picker 10/04*

Do you have trouble getting your specimens clean? After trying your normal solutions, try a regular automatic dishwasher compound such as CASCADE. Soak for a day or so in a concentrated solution. Rinse with clear water. *from Chips 'n Splinters 08/04 via Emerald Gems 10/04*

Obsidian in Iowa? All of Iowa, except the northwest 300 feet of the state is covered with sedimentary rocks. Lots of fossils there but no igneous (once molten) rocks. The northwest 300 feet (no kidding) is an exposure of the Sioux Quartzite – a metamorphic rock which was once a sandstone. Nevertheless, when I was a graduate student at the University of Iowa, people would send in certain unusual rocks they had found in their fields to the Geology department to be identified. Most of the time these rocks were received in the spring time. The rocks looked like volcanic glass – vaguely like obsidian. But there is no obsidian in Iowa. What were they? Answer: Haystack clinkers. Each spring the farmers would burn their old remaining haystacks. Some grasses have little sharp-edged spines on them made of silica. (This is why you can cut yourself on the edge of a blade of grass). This silica fused in the burning of the haystacks to form these peculiar glassy clinkers. *By Dr. Walter Youngquist in his "Chips from the Outcrop" a series of articles published in Emerald Gems from Emerald Gems 10/04*

Need a compass? If the sun is shining, and you have a watch with an hour hand, you have a compass. Set the watch face up and arrange a slender object, a match or a flower stem, upright at the rim of the watch in such a way that its shadow lays atop the hour hand. No matter what time it is, halfway from the hour hand to the figure 12 is south. *from Petrograph 04/04 via MWF Newsletter 11/04*

Working Jasper? You will find that jasper is much more troublesome to polish than agate because many varieties are "earthy" and porous, and many others contain hematite, which is very difficult to polish. If you are on a field trip, a good way to test the jasper is to wet it. If it absorbs the water and dries rapidly, throw it away. It will not polish. If it stays wet and does not dry right away, it contains a high amount of chalcedony (quartz) and will take a good polish. *from Breccia 09/04 via MWF Newsletter 11/04*

Templates - with a sharp pencil and a sharp cutting tool, you can make your own templates. Trace on a piece of lightweight Lucite any designs you particularly like. These patterns can be taken from the bottoms of good cabochons, from pictures in books, from ads in magazines or catalogues, or they can be original. An alternate material is sheet aluminum. For a special cabochon with mirror image halves you can cut only half of the pattern from the aluminum and after tracing it, reverse it for the match. This will work for hearts, shields, and teardrops. *from Southwest Gem, via Huntin' & Diggin' 4/95 via Stoney Statements*

Gems can be damaged by knocks or blows, excessive heat or rapid cooling, by radiation (strong sunlight), and by chemicals. Remember that just because a gem is hard does not mean it is strong enough to withstand these assaults. It may be brittle, it may have strong cleavage planes, there could be internal stress, or it could have inferior toughness. Handle all gems with care. *from Southwest Gem, via Huntin' & Diggin' 4/95 via Stoney Statements*