

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



January, 2004

First Class

Please send exchange bulletins to:

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211 Interlachen Way
Stillwater, MN 55082

January 20th - Is this month's meeting date.

**Find of the Year and
Show and Tell**



St. Croix Rockhound's

LEAVERITE NEWS

Vol. 29, Issue 1; January, 2004

Member of:



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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	Dave Klinkhammer	(651) 776-8046
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
	LeRoy Betlach	(715) 425-5948
Refreshments	Freya Kask	(651) 777-6371
Librarian	Helen & LeRoy Betlach	(715) 425-5948
Historian	John Parsons	(651) 257-2724
Sunshine Committee	Marie Newlander MN	(651) 439-7809
	Esther Rodewald WI	(715) 425-5561
Tour Directors	Vi D'Angelo	(651) 665-9067
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!

January 20th: The Saint Croix Rockhounds January meeting will be held at the Stonebridge Elementary school starting at 7:15 pm. The program will be "Find of the Year" and "Show and Tell".

Come prepared to talk about you trips during 2003 and to show off your finds in the contest.

COMING ATTRACTIONS.

January 20th: St. Croix Rockhounds meeting at Stonebridge Elementary School at 7:15 pm

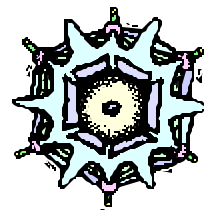
February 17th: Anoka County Gem and Mineral Club Har Mall Show17

February 28-29th: Anoka County Gem and Mineral Club Har Mall Show

April 3rd: St Croix Rockhounds show at the Valley Creek Mall in Woodbury, MN

April 23-25th: 2004 Midwest Federation Convention and Show in Cedar Rapids IA. See www.angelfire.com/ia3/cvrms for information

July 7-11th: AFMS/Eastern Federation Show in Syracuse, NY



**Minutes of the Saint Croix
RockHounds
December 9th, 2003 ?????**

Business was not conducted at the X-mas party.

The Legend of "Leaverites"
"Leaverites" are the most common of all stones. Some are older than others and many moons old. They generally cannot be used for much because of their ugly nature. These stones are said to be so ugly that only mother earth could love them and want them. They are truly the loneliest stones in the world. As legend would have it, one day long ago, a little boy and his grandpa were diggin' for gold. Each time the little boy chipped out a stone, he would show it to his grandpa and ask, "Is this gold?" His grandpa replied, "Na, that's just an ugly stone. Leave 'er right there." Later that day when the boy showed his grandpa some other stones he found, he asked, "Is this gold or are these some more of the leav-erite-there's?" From that point on, the little boy and his grandpa called those ugly stones "Leaverites" for short. Over the years, the "Leaverites" have become so lonely that they grow eyes and look for someone to take them home. *from SCFMS Newsletter Sept/Oc 2001, via Rockhound Rumbblings 8/03 via SCRIBE via Agate Explorer 12/03*



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



Celebrate!

January's birthstone – Garnet: The January birthstone stands for "constancy". To modern users, the garnet symbolizes a light heart, loyalty and enduring affections.

Ancient warriors believed that garnets brought victory. The Crusaders used them as protection against wounds and accidents.

The name "garnet" is derived from the Latin "granatum" meaning "pomegranate" because the crystals resemble the red color and seed-like form of this fruit. As with many precious stones, garnets were once believed to hold medicinal powers. In Medieval times, it protected its wearer against poisons, wounds and bad dreams, and cured depression. Red garnets relieved fever, hemorrhages and inflammatory diseases.

January birthdays:

Esther Rodewald – 22nd

January Anniversaries:

None

Now that I'm older...here's what I've discovered

- I STARTED out with nothing...I still have most of it.
- When did my wild oats turn to prunes and All Bran?
- I finally got my head together, now my body is falling apart
- Funny, I don't remember being absent minded.
- All reports are in. Life is now officially unfair.
- If all is not lost, where is it?
- It is easier to get older than it is to get wiser.
- The first rule of holes: If you are in one, stop digging.
- I went to school to become a wit, only got half-way through..
- It was all so different before everything changed.
- Some days you're the dog, some days you're the hydrant.
- Nostalgia isn't what it used to be.
- I wish the buck stopped here. I could use a few...
- It's not the pace of life that concerns me, it's the sudden stop at the end.
- Health is merely the slowest possible rate at which one can die.
It's not hard to meet expenses... they're everywhere.
- The only difference between a rut and a grave is the depth. *Via Betty Marrandino, Salk Valley Club, Dixon, IL, via MWF website*

FIND OF THE YEAR

Contest Rules (revised 1991)

The contest is open to all members of the St. Croix Rockhounds club. Absentee members may submit specimens through another member and junior members are eligible to enter the contest and to vote. However, there can be only one entry per person per class. There are five entry classes:

Lake Superior Agates: No lapidary work of any kind is allowed. Agates may be oiled.

Fossils: Specimens may be cut or glued together. Specimens may be treated or sprayed only to prevent deterioration and not to enhance them. They may not be polished.

Polished: Tumble or face polished but not spray polished. The specimens may also be cut or glued together.

Jewelry: The stone may be cut, shaped, polished and mounted. The featured stone must have been found and worked in this current year.

Open: Specimens may be cut or glued together but not polished or sprayed. Lake Superior Agates may NOT be entered in the Open class.



Note: all specimens must have been found in 2003. Polishing or lapidary work must also be done on the specimen during the year it is found and entered. Finally, the specimen must have been found in its natural setting (“in-situ”) by the person entering the specimen.

Also, please label all entries (approximately 2x3 inches) stating the category, material, and general location (county) of your find. On the REVERSE side of the label, print your name. Place the card, name side down, on the table adjacent to your entry. Thank you.

How fast can crystals grow?

Geologists are known for looking at slow moving events that take vast amounts of time. Some geologic events, though, happen very rapidly - floods, volcanic explosions, asteroid impacts to name a few. It is also a truism that in looking at igneous rocks, those with larger crystals have crystallized more slowly than those which have smaller crystals. What is meant by “slowly” in these contexts?

We can see lava flows cool rapidly. Dark glassy crusts form on them within seconds of eruption, and cool to the touch within days. When we look at the crystals in them they are generally very tiny, or in the case of volcanic glass, virtually non-existent. An exception is larger crystals brought up as passengers in the magma from below, where they presumably crystallized more slowly. There are very coarse igneous rocks called pegmatites. These are often granite and mineral grains in them can be many feet long. Near Keystone, South Dakota, for example, one can see pegmatites with single spodumene crystals in them over 46 feet long. This tempts one to jump to the conclusion that the growth was quite slow, perhaps taking millions of years. This is a misconception. Crystals can grow very fast given the right conditions. For example, large industrial quartz crystals can be grown in days in labs under controlled conditions. Good sized ice crystals can form on lakes or puddles overnight. And, apparently, giant crystals in pegmatites can grow astonishingly fast too.

A recent paper by geologists at the University of New Orleans (Webber, et. at. 1999) presents a detailed model for mineral crystallization in four pegmatites in California, including the Himalaya dike, famous for its large gem tourmalines. They gathered data on the temperature of the magma upon intrusion and the temperature of the surrounding rocks. They factored in such things as the rate of heat loss, thickness of the dike and the heat released as the crystals grew from the magma. Their calculations show that one pegmatite body 25 meters thick took around 9 years to crystallize, while the one meter thick Himalaya dike probably took about 5 days. This means that the largest gem tourmaline crystals of the Himalaya dike grew at about 4 cm. (about 2 inches) per day!

So how do the crystals get so big if they grow so fast? The compositions of pegmatites are such that they actually allow relatively few crystals to grow. The main culprit seems to be the presence of abundant water vapor, which retards the formation of crystal nuclei. Those crystals that are able to form will be able to grow large because they will have little competition for available chemicals. It's a bit like growing carrots in the yard. If the carrots are crowded together, you will get lots of carrots, but they'll mostly be tiny. If you thin and separate them, you'll get fewer but larger carrots. When a magma cools to the extent that it gets saturated or even supersaturated in a particular mineral, those few grains of that mineral that do form will grow big in a hurry. The water also helps in circulating chemicals through the magma to the sites where crystals are growing, helping them along.

If the magma suffers a pressure loss (cracked during an earthquake, let's say), and the watery fraction escapes, a lot of crystals will nucleate and grow all at once, making a relatively fine-grained rock. We see evidence for this in lots of pegmatites, where zones in these coarse bodies grade over short distances to masses of small intergrown sugary-textured crystals called aplites.

While Webber et. al.'s models are specific to the California pegmatites, the principles they outline likely apply in general to many pegmatites, as well as other igneous rocks. The windows we have in the past show us only flashes of time in the earth's long history.

-Dr. Bill Cordua, U. Wisconsin- River Falls

References:

Webber, K; Simmons, W.; Falster, A; and Foord, E, 1999, Cooling rates and crystallization dynamics of shallow level pegmatite-aplite dikes, San Diego County, California *American Mineralogist*, vol. 84, p. 708-717.

Stolen Gems *St Croix Rockhounds Leaverite News*

Cleaning Native Copper: Ingredients – one part sodium hydroxide, 30 parts salt, 20 parts distilled water. Make all measurements by weight. Use a glass container to hold this solution. Suspend the copper specimen by copper wire in the cold solution and occasionally raise and lower it for inspection. Shortly, the solution becomes bluish and the discoloration on the specimen begins to disappear, revealing the natural red-brown of the copper. The cleaning may take several hours to complete. When clean, rinse thoroughly in running water, then immerse in clean water for an hour or so. It is said this method gives excellent, safe results. The solution attacks and dissolves cupric oxide, but leaves undamaged both cuprite and metallic copper. *from Kettle Krier (Ben Schacht), via Quarry Quips via Agate Explorer 1/04*

If you have finished jewelry that is not being used, to keep the gold or silver from tarnishing, add a piece of black board chalk to the box. This absorbs the moisture, which is one cause of tarnishing. Make sure the jewelry is absolutely dry and that the box is sealed tightly. *From Arkansas Rockhound News, via The Rock Rattler via Quarry Quips via Agate Explorer 1/04*

To polish silver findings, fill a tumbler 1/3 full of shredded newspaper. Add findings and tumble DRY for a few hours. Use no polishing compounds. *from Magic Valley Gems 12/86, via Dust and Grit 2/96 via Stoney Statements*

Thinking of grinding and polishing with diamond? There are some things you should know. A one-half micron diamond powder is used for very fine polish and is equal to 50,000-grit. Grade number 3 is equal to 8,000-grit and is used for an ultra-fine finish. Grade number 30 is like 600-grit and is used for a rough finish. Grit sizes are based on the number of openings per square inch in a screen. Particle size is found by microscopic study. Determination of impurities is found by weight of sample and dissolved contaminants. National standards for grading micron powder are determined by the government. Working with diamond is significantly faster than with silicon carbide, so the cutter must be more vigilant to avoid unchangeable mistakes. *from Lapidary Journal 6/95 via Stoney Statements*

Field Trip Tip: On field trips, carry large plastic garbage bags. You can sit on it while digging, use it as a raincoat to cut wind and rain, and it makes a great spread for lunch, after which you then carry trash home in it. *from The Mirror 1/95, and Chip & Chatter 4/95 via Stoney Statements*

Closing Thoughts

- Love is grand – divorce is a hundred grand.
- I am in shape – round is a shape
- Time may be a great healer, but it is a lousy beautician [unless you are speleothem]
- Never be afraid to try something new. Remember, amateurs built the Ark. Professionals built the Titanic.
- Talk is cheap, because supply exceeds demand.
- Even if you are on the right track, you will get run over if you just sit there.
- Politicians and diapers have one thing in common. They both should be changed regularly, and for the same reason.
- An optimist thinks that this is the best possible world – a pessimist fears that it is.
- There will always be death and taxes; however, death doesn't get worse every year.
- I am a nutritional overachiever.
- If marriage were outlawed, only outlaws would have in-laws.
- Brain cells come and brain cells go – fat cells live forever.
- Age doesn't always bring wisdom. Sometimes age comes alone

from e-mail from Doug Moore via Rockhound News via Agate Explorer 1/04