

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



May, 2004

First Class

Please send exchange bulletins to:

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Stillwater, MN 55082

May 18th - Is this month's meeting date.

***The program:
Pete's Trip to Washington DC***



St. Croix Rockhound's

LEAVERITE NEWS

Vol. 29, Issue 5; May, 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	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
	LeRoy Betlach	(715) 425-5948
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 Directors		()
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!

May 18th : The St. Croix Rockhounds club meeting at the StoneBridge Elementary School at 7:15 pm. The program is ***“Pete’s Trip to Washington DC”***. Included will be photos of the Smithsonian mineral & meteorite collection.

COMING ATTRACTIONS.

May 18th: St. Croix Rockhounds meeting at Stonebridge Elementary School at 7:15 pm – this is the final meeting of the school year. Next meeting will be the picnic in August. Next regular meeting is on September 21st

May 28-30th: California Federation Show in Mariposa, California

June 19th: Rock Swap Meet at Osseo United Methodist Church, 2190 8th Ave in Osseo, MN

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

July 10-11th: Anoka County G& M Club show at the Har Mar Mall.

July 23-25th: Northwest Federation Show in Boise, Idaho.

August 1-8th: Keweenaw Week in Houghton, MI. For info contact Steve Whelan: 906-337-2599.

September 21st: St. Croix Rockhounds meeting at Stonebridge Elementary School at 7:15 pm – SILENT AUCTION

September 24-26th: South Central Federation Show in Houston, TX

October 2-3rd: Anoka County G& M Club show at the Har Mar Mall.

Minutes of the Saint Croix RockHounds April 20th, 2004

The meeting was called to order by President, Vic Martinsen at 7:20. Sixteen members were present.

The **Treasurer's report** was approved as read by Elaine Martinsen.

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

Committee Reports:

Library- no report

Program- Tonight's program is a video called "Dinosaurs of Africa" presented by Pete Rodewald.

Refreshments- Thanks to Jeanne Blom and Pete Rodewald for providing treats.

Treats for the May meeting will be brought by Marie Newlander and Susan Dustin.

Show- Bill Cordua reported that our recent show was a success due to the enthusiastic members who educated the public and displayed a variety of quality materials.

New Business- none

Field Trip- A date of June 18-20th has been set for a trip to the Keewenaw Peninsula in Michigan. Pete Rodewald and Vic Martinsen will be the "tour guides" and will make arrangements.

Sunshine Committee- no news

The meeting was adjourned at 7:40 pm.

Respectfully submitted,

Susan Dustin, Secretary

Marie Newlander will be having cataract surgery on the day of the May meeting, we wish her well.

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



Celebrate!

May's birthstone –Emerald. This brilliant green stone reinforces love and creates harmony in the family.

May's Birthdays :

Jeanne Blom – 5th

May's Anniversaries:

Bill & Janet Cordua – 16th

June's birthstone – The Moonstone protects against danger at sea and is thought to bring financial gain and protect against turbulence. Another stone for June, the Pearl, is said to preserve modesty, chastity and purity.

June's Birthdays:

Janet Cordua - 8th

Dave Klinkhammer – 18th

Shari Frankenburg – 26th

June's Anniversaries:

Elaine &

Victor Martinson – 24th

June &

Reuben Shalander – 7th

July's birthstone – The Ruby protects its wearer from fear and financial stress while its strength banishes evil spirits.

July's Birthdays :

Dick Blom – 15th

Bob Carlson – 23rd

July's Anniversaries:

none

August's birthstone –The Sardonyx is said to create courage and make the most timid brave. A present day addition is the Peridot, a clear, normally green stone of gem quality Olivine.

August's Birthdays :

June Shalander – 23rd

August's Anniversaries:

Jeanne & Dick Blom – 15th

Brad Bonse – 25th

Iris Agate Color Phenomenon by Pete Rodewald with editing help from Wayne Sukow and Bill Cordua

The colors we commonly see when gazing upon the agates we find and eventually polish to our own standards of perfection, are from natural **pigmentation**. These pigments are due largely to a variety of trace elements deposited, most commonly, and coinciding with the formation of cryptocrystalline chalcedonic/quartz bands. Another source of pigmentation is from a method called **chromatography**. In this situation groundwater, well after agate creation, permeates in the porous microcrystalline quartz carrying trace elements which “paint” vast areas of a nodule, internally and externally. This painting occurs with disregard of pre-existing bands, stains and colors. Man-made chromatography is utilized to also stain agates with richly saturated dyes under pressure. Iris coloration, on the other hand, is not based on pigmentation (neither natural nor chromatography).

In nature’s scheme of light and color there are four major ways the laws of physics permit the separation of light into component wavelengths. Each wavelength represents a primary color.

1-Selective absorption and reflection allows fire trucks to absorb all wavelengths but red, so we observe only red. Grass is green because chlorophyll reflects only green and so on. This is pigmentation. Blue skies occur via another method of absorption and reflection called **scattering**. The sun, the ultimate light producer, sends streams of multi-wavelength visible and invisible rays bombarding the atmosphere, all traveling at equal speed in space. Upon contact with air, dust and moisture, the different waves of light travel at differentiating speeds through the atmosphere, separating and spreading in all directions to result in white light, this is also called diffusion. Blue, however, the shortest wavelength of the visible spectrum is affected most by the Earth’s atmospheric scattering. When we look towards the heavens in daytime we then observe blue skies because that wavelength is scattered away from the direction of the sun towards the viewer. At sunrise and sunset, the red end of the visible spectrum is prominent because blue is scattered away from the viewer and only the red is left.

2-Interference of light is the result of when light travels through translucent or transparent substances of different densities and subsequently reflected back through again. Oil slicks on water, soap bubbles, iridescent minerals, iridescent bird feathers, the colorful dove on credit cards and mother of pearl are all examples of natural and man made uses of light interference. Many creatures of the sea utilize interference as a coloration method.

3-Refraction is the prism effect, and is another common cause of spectral display. Rainbows and sun dogs result from light entering water and ice particles, then emerging in separated wavelengths to reflect off particulates in the air back to the eye. When light enters a raindrop it is bent, then again as it passes out. Here blue is bent the most and red, on the opposite end of the wavelength scale is bent the least.

4-Diffraction is light spreading around an obstacle such as an edge. The light is bent in the process. Diffraction has the opposite effect of refraction in that red is bent the most and blue the least. Consider the man-made compact discs (CDs for short). The CD is a form of a **reflected diffraction grating**. CDs have multitudes of microscopic edges in grooves. Each edge bends the light in unison with the next edge, so we see brilliant colors from so many edges so close together. With iris agate a similar situation occurs with a difference. The difference is that iris is a form of **transmitted diffraction grating**. While some diffuse reflecting occurs, most of the light passes through the material but in the process is bending around innumerable nearly parallel groupings of microscopically acicular (needle-like) quartz fiber crystals which transmits colors to the adoring eye. ...continued on next page

Iris Agate Color Phenomenon continued... Iris quality of color saturation is regulated mainly by fiber density. Overlying dense fiber populations result in more diffused colors while a lack of fiber density produces weaker colors. Slab thickness often has an effect on color intensity also. If iris qualities in an agate are at maximum levels, then slab thickness is less of a concern up to within reason. Too, thick always reduces color intensity. With marginal iris qualities, thinner slabs are imperative. Occasionally the quartz fibers may cross each other at shallow angles (rather than being parallel) which deplete coloration by diffusion (competing affects) of multiple gratings. To repeat, the thinner the slab cut the better the resulting colors, but as stated, not always.

Thicker iris slabs allow for more absorption while there are more overlapping colors from added diffraction gratings which result in whitish, weaker color. When fibrous quartz crystals occur uniformly parallel, color output is greatly enhanced and a 1/8 to 3/16 inch thicker slab may produce satisfactory color saturation.

Fibers in iris producing bands on the exterior of nodules are commonly parallel, but are more coarse and less dense than is desirable resulting in poorer blotchy iris production. Brazil agates are the most common examples of this feature.

Cutting slightly variable thicknesses of slabs when opportunity strikes, to create several slabs from one specimen, is advisable if quality is uncertain.

To recap, if one encounters optimum fiber denseness, relatively parallel fiber crystal growth combined with a slab cut no greater than 3/16 of an inch thick and most importantly a cut which is essentially 90 degrees to band direction – and finalized with a good polish, one has the pot of gold at rainbows end. Figuratively speaking of course.

St Croix Rockhounds Membership List

Last Name	First Name	Address	City	State	Zip Code
Betlach	LeRoy & Helen	W10499 Co. Rd. FF	River Falls	WI	54022
Blom	Dick & Jeanne	3428 Juliet Drive	Woodbury	MN	55125
Bonse	Brad	PO Box 404	Stillwater	MN	55082-0404
Cordua	Bill & Janet	414 N. Lewis Street	River Falls	WI	54022
Dustin	Susan & Bill	7171 Mid Oaks Ave N	Stillwater	MN	55082
Flynn	Dave & Wendy	1127 Bergmann Dr	Stillwater	MN	55082
Frankenberg	Mike & Shari	4915 Bedford Road	Mound	MN	55364
*Howard	Dorothy	8723 Promenade Lane, #119	Woodbury	MN	55125
*Jirhan	Howard	11 Adams Lane	Bella Vista	AR	72714-2410
Kask	Earl & Freya	3551 Kelvin Ave. N.	Lake Elmo	MN	55042
Kimball	Floyd & Eloise	4290 Northbrook Blvd	Stillwater	MN	55082-1204
Klinkhammer	Dave & Avis	2085 E. Hawthorne	St. Paul	MN	55119
Kressly	Fred	808 Woodland Lane	New Richmond	WI	54017
Martinsen	Victor & Elaine	1938 Co. Rd. I	Somerset	WI	54025
Newlander	Rudy & Marie	10790 62nd St. W.	Stillwater	MN	55082
Olson	Doug & Robert	211 Interlachen Way	Stillwater	MN	55082
Parsons	John & Sandy	28605 Johnson Lane	Chisago City	MN	55013
Rawlings	Lin & Doreen	850 Woodduck Drive	Woodbury	MN	55125
Rodewald	Pete	N 7604 Co. Rd. QQ	River Falls	WI	54022
Shalander	Reuben & June	14826 Oakhill Rd. N.	Scandia	MN	55073
Sukow	Wayne	3156 Eakin Park Court	Fairfax	VA	22031
*White	Phyllis	5590 Norwich Pkwy, #108	Stillwater	MN	55082
Whitmore	Clark	288 Meadow Lane	Vadnais Heights	MN	55127
*Zimmerman	Adine	720 Victoria Court	Stillwater	MN	55082

*Life Members

Got cloud or haze on a cabochon? - Yes, it is possible to cloud or haze a cabochon in the final polishing step. I feel there are at least two reasons this happens. Some stones will haze under the influence of most polishing compounds due to their physical structure. These are usually soft materials below seven on the Mohs scale, such as obsidian, sodalite, malachite, varascite, etc. A good rule of thumb is: any stone that will dull and haze when used in a ring or pendant will also do so during the polishing stages. When you run into one of these babies that just must be added to your personal collection, your best buy is to stay with diamond all the way.

However, in most cases this problem occurs because of the person holding the dop stick. Improper sanding can leave a nap or fuzzy surface; a buildup of heat can create a flow early in one of the sanding stages, sealing over and locking in the dull haze you are trying to overcome. This part of the problem can happen with most lapidary material. So avoid all heat buildup in your sanding operations.

It is absolutely essential to have a clean stone before polishing. Be certain extender fluid, soap, oily finger residue, etc., is removed. Any contaminates will mingle with the polishing agent and become part of the stone's surface. What should be a sparkling, flawless gem is cloudy and hazy and not an object of beauty. Only by going back and resanding to remove all traces of this microfilm can the problem be corrected. *Via SCFMS Newsletter 9-10/94*

When tumbling softer, hard to polish material: don't start with the coarse grit. Start with the second grit, and go one grit finer than the #3 grit used on agates. In polishing, fill the tumbler 3/4 to 7/8 full so the stones will roll and not fall. This way you will not have the stones beating the polish off the ends. Also, cerium oxide will polish better than regular tumbler polishing agents. It does not take very much cerium to do this job, about 1/2 as much as the regular tumbler polish. *from Chats & Chips, via SCFMS Newsletter 1-2/95*

Eliminating Flats by Ted Robles - A while back someone was saying that he was having problems with getting flats on his cabs, that there was insufficient give in his wheels, and it didn't seem to make any difference no matter how much pressure he applied. That was his first mistake. Diamond and carborundum are two different animals. Relatively speaking, about the same difference as between quartz and chalk. If you lean into a diamond wheel, you will get lousy results (flats, etc.) on your stone, and your wheels will wear out long before their time. On diamond, you try to do your cutting, and everything else, by almost not touching the wheel. Use essentially no force. Don't grind the stone, let the diamond wear it away, but keep it spinning. The technique is simply use the whole face of the wheel, and keep your cab moving. Any time you stop, you just bought a "flat". Can't help it! It's the same principle as sharpening a knife on an emery wheel. If you don't want notches in your blade, you keep it moving. Happy grinding! *from the Rockpile 9/02 via the Oshkosh Quarrier via the Fractured Agate 10/02.*

Did you know? Some stones create more gas tumbling than other, probably because of the chemical content of the different minerals and rocks. Adding baking soda will help control much of the gas build-up. Early hobbyists used fillers such as rice hulls and wood and leather chips, but these created unpleasant odors in the workshop because of their bacterial contents. Soap powder can be used in tumbler to act as a wetting agent and to thicken the slurry. *from the Coral Geode 12/02 via Deming Rock Chips 09/03*

When Gluing a Gem Stone to a broach bar, glue the bar above the center. That way the stone will lay flat when worn. *from Genesis Times 06/02 via Gulfport Gems 1/03 via Deming Rock Chips 09/03*