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

First Class

March, 2007

Please send exchange bulletins to:

Doug Olson, Editor
211 Interlachen Way
Stillwater, MN 55082

March 20th – *"German Agates"*

March meeting will be held at the University of WI – River Falls Campus – see map inside

St. Croix Rockhound's
LEAVERITE NEWS
Vol. 32, Issue 3; March, 2007

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	Pete Rodewald	(715) 425-5561
Vice President	Brad Bonse	(651) 439-6832
Secretary	Doug Olson	(651) 430-9035
Treasurer	Lin Rawlings	(651) 735-4691
Program Committee	Mark Rasmussen	(651) 275-0607
	Bill Cordua	(715) 425-9544
	Victor Martinsen	(715) 247-3700
Show Committee	Bill Cordua	(715) 425-9544
Refreshments	Freya Kask	(651) 777-6371
Librarian	June Young	(651) 429-3887
Historian	John Parsons	(651) 257-2724
Sunshine Committee	Marie Newlander MN	(651) 439-7809
Tour Director	Susan Dustin	(651) 430-3933
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! -March 20th : St. Croix Rockhounds club meeting will be at University of Wisconsin River Falls campus. Meeting time will be 7:15 pm. The program will be "German Agates" a show on CD.

COMING ATTRACTIONS

March 20th: St. Croix Rockhounds club meeting will be at the Stonebridge Elementary School

March 31st: St Croix Rockhounds Annual Show at Valley Creek mall in Woodbury.

March 30-1 Mid-America Paleontology Society, National Fossil Exposition XXIX**,** Western Hall, Western Illinois University, Macomb, IL;. Contact: David J. Kaplan, 313-961-1606, email: aa1609@wayne.edu, Web site: http:// midamericapaleo.tripod.com.

April 14-15th: Anoka County Gem & Mineral Club at the Har Mar Mall, Rosedale, MN.

April 17th: St. Croix Rockhounds club meeting will be at the Stonebridge Elementary School

May 19-20th: WI Geological Society 50th Annual show at Hart Park in Wauwatosa, WI.

June 5-10th: AFMS/RMFS in Roswell, NM

July 7-8th: Anoka County Gem & Mineral Club at the Har Mar Mall, Rosedale, MN.

June 15-17th: California Federation show in Lancaster, CA.

August 3-5th: Northwest Federation convention in Butte, MT

August 11-12th: MWF convention in Houghton, MI (during Copper Country week 4-12th)

October 6-7th: Eastern Federation convention in Newark, NY

June 20-22, 2008: MWF convention in Lincoln, NE.

Minutes of the St Croix Rockhounds
February 20th, 2007

The meeting was called to order by president, Brad Bonse at 7:20 pm. 19 members and one guest were present. The guest was Alicia Miller from New Richmond.

Treasurer's Report-Lin Rawlings reports an ending balance of $1624.19 to be soon ravaged by paying insurance. The report was approved.

Minutes of the January meeting were approved, although Brad Bonse pointed out that Vic's name was spelled wrong in the committee lists. Next club meeting will be on March 20 at 7:15 at University of Wisconsin in River Falls. The program will be on "German Agates".

Programs: Mark Rasmussen is not available and may not be for awhile. Pete will run a program on German Agates from a CD for th March meeting. We need an assist for the April and May programs as well as for the October and November programs. Pete has offered to run a quiz on 50 species of agate for April.

Tours – director Susan Dustin was not present. Brad noted that the New Year's day trip to Miller's Pit was successful. Pete Rodewald says that he wants to take a trip up in June to look for copper agates. A vote was taken for a date to visit the Zumbrota River to search for cold water agate. It will be on April 28th and there were 11 names on the sign-up sheet. Susan did leave the message that she wants to arrange a trip to South Dakota.

Show Committee- Bill Cordua announced that our annual Rock and Mineral Show at the Valley Creek Mall will be on March 31. He is looking for volunteers to help set up and man/woman the club table.

Refreshments- Tonight's treats were provided by Pete Rodewald and Marie Newlander. Next month Bill Cordua and Helen Betlach have volunteered to bring refreshments.

Sunshine-Brad Bonse's wife had surgery and is "doing good".

Old Business – Officer Selections:

President – Pete Rodewald
Vice President – Brad Bonse
Treasurer – Lin Rawlings
Secretary – Doug Olson

Committees will be as before. The slate was accepted and approved.

Find of the Year - Winners are: (keepsake awards will be presented in March)

Open Class – Pete Rodewald's Copper crystals w/cuprite from Crystal Mine
Fossil Class – David Flynn's fossil snail from Somerset, WI
Lake Superior – Pete Rodewald
Polished – David Flynn's Eye agate
Jewelry – Carol Jensen's Necklace of Australian opal and labradorite

Respectfully Submitted,
Doug Olson, Secretary

If paying dues by mail, send to treasurer:
Lin Rawlings
850 Woodduck Rd
Woodbury, MN
55125

Celebrate!

March birthstone: If you can picture the cerulean blue waters of the Mediterranean, you will understand why the birthstone for March is named Aquamarine. Derived from the Roman word "Aqua," meaning water, and "mare," meaning sea, this pale blue gem does indeed resemble the color of seawater. The ancient Romans believed that the Aquamarine was sacred to Neptune, the god of the sea, having fallen from the jewel boxes of sirens and washed onto shore. Early sailors wore aquamarine talismans, engraved with the likeness of Neptune, as protection against dangers at sea.

The association with water led to the belief that the Aquamarine was particularly powerful when immersed. Water in which this gemstone had been submerged was used in ancient times to heal a variety of illnesses of the heart, liver, stomach, mouth and throat. Aquamarines were also used to reverse poisoning and to aid in fortune telling.

March Birthdays:

Avis Klinkhammer 4th
John Parsons 14th
Sandy Parsons 18th
Kerry Rasmussen 22nd
Doug Olson 27th
Rodney Harvey 31st

March Anniversaries: None

MINING MATCH

Submitted by Bob King

____	An excavation of limited area compared with its depth made for finding ore
____	An unfilled cavity in rock
____	A mineral that can be mined for profit
____	A person who shovels ore into mine cars
____	An underground excavation from which ore has been extracted either from above or from below a level
____	The portion of mining ground staked out by a claimant
____	The portion of washed ore regarded as too poor to process
____	A horizontal passage by which a mine is entered
____	Washing earth or crushed rock in a pan
____	A linear mineralized filling in rock
____	A structure above a mine shaft
____	The top or roof of an underground passage
____	The end or surface where work is being or was last done in a mining operation
____	An alluvial or glacial deposit containing particles of a valuable mineral
____	A method of mining in which a bank of gold-bearing earth or gravel is washed away by a powerful jet of water
____	A fracture in rock
____	Washing auriferous (gold bearing) earth through long races or boxes
____	Material that overlies a deposit of useful material
____	A horizontal underground passage that is open a both ends
____	To dissolve mineral or metals out of ore

1. ADIT
2. BACK
3. CLAIM
4. FACE
5. HYDRAULIC MINING
6. JOINT
7. LEACH
8. MUCKER
9. ORE
10. OVERBURDEN
11. PANNING
12. PLACER
13. SHAFT
14. SLUICING
15. STOPE
16. TAILINGS
17. TIPPLE
18. TUNNEL
19. VEIN
20. VUG

Scoring: All correct = mining engineer, 19-17 = geologist, 16-14 = prospector

Answers: 13, 20, 9, 8, 15, 3, 16, 1, 11, 19, 17, 2, 4, 12, 5, 6, 14, 10, 18, 7

from pick and pack 07/06

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GEM AND MINERAL CLUB OF STILLWATER, MN

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DEMONSTRATIONS

EDUCATIONAL DISPLAYS

VALLEY CREEK MALL, WOODBURY
I-494, West on Valley Creek Drive

SATURDAY, MARCH 31, 2007

9 A.M. - 5 P.M.

REGULAR CLUB MEETINGS 3RD TUESDAY SEPT. THROUGH MAY, STONEBRIDGE ELEMENTARY SCHOOL, W. ELM STREET, STILLWATER, MN AT 7:15 P.M.

Minnesota's geology reveals road signs to diamond riches

Don't start digging yet, but a study suggests a treasure trove lies beneath the state

BY PAUL TOSTO Pioneer Press

They rarely yell "Eureka!" in the diamond exploration game. But surprising details from a just-released survey of Minnesota has the state's top geologist saying: "Maybe."

An exhaustive study by University of Minnesota researchers and an Australian mining company discovered geological markers across Minnesota similar to those in Canada that have led to huge diamond strikes over the past 10 years. Held in secret for two years as part of a rare deal the U signed in 2004, the newly published findings reveal patterns researchers didn't expect — mineral arrows that may point to pipes of kimberlite, the underground rock formations where diamonds are most commonly found.

"We did find something and it's like the first hints" that led to diamond-field discoveries in Canada, said Harvey Thorleifson, head of the Minnesota Geological Survey and a world-renowned diamond geologist. It's no "X marks the spot" discovery. It will take several years to trace back the mineral markers to see if they lead to kimberlite and, perhaps, diamonds.

Thorleifson called the findings significant but compared them to a hunting dog picking up the scent of a fox: Sometimes the fox is never found. He plans to unveil the findings next week at an international prospector's convention in Toronto.

A diamond strike might seem unlikely in Minnesota. Scattered exploration in the central part of the state 20 years ago failed to find a mother lode. But geologists have long seen Minnesota's glaciated terrain as potentially fertile diamond territory, and chemical and computer testing of soils to find diamond markers has improved dramatically.

Hired in 2003 to lead the Minnesota Geological Survey, Thorleifson helped develop many of the indicator-minerals tests as a scientist in the Geological Survey of Canada. That work helped establish Canada's booming diamond industry, which didn't exist 10 years ago.

Thorleifson's reputation and the potential to discover a billion-dollar industry were compelling enough that the U in 2004 agreed to let the mining company, WMC Corp., withhold publication of the study's most sensitive findings for two years.

Diamonds form in rock that is about 2.5 billion to 3 billion years old. They rise to the surface in explosive eruptions and can be found in the carrot-shaped formations of kimberlite, named for Kimberly, South Africa, where it was first discovered in the late 1800s.

Diamonds have been found around North America, including Wisconsin, but mining was nearly nonexistent. That's changed over the past 20 years as geologists began examining the sandy sediments of land scraped by glaciers.

Because kimberlite is soft, some of it can catch in the glacier and leave a trail traceable to its source.

Geologists sample soils, looking for kimberlite indicator minerals, such as garnets. After a few hits, they follow the trail in the direction the glacial ice came from; if the number of markers increases, they may lead to kimberlite — and, maybe, to diamonds.

That's how it has played out in Canada, now one of the world's fastest-growing diamond producers.

Garnets with just the right chemical makeup were the survey's "complete surprise" in Minnesota, Thorleifson said. Found in a couple of spots, including near the Twin Cities, the garnets held levels of magnesium and chromium that flag them as particularly good markers to lead the way to kimberlite.

It's possible they may point the way to a kimberlite plume between the Twin Cities and Duluth or western Wisconsin, he added.

Canada began producing diamonds in 1998 when the EKATI diamond mine opened in the Northwest Territories. Two other mines have opened nearby since 2003.

With this multibillion-dollar business, officials say, Canada is now the third largest producer of rough diamonds by value after Botswana and Russia. At least two more Canadian mines plan to open in coming years.

Initial results here are exciting because they mirror those found in the early days of diamond exploration in northwestern Canada. Thorleifson and others, though, say there's a long road ahead.

"The report looks thorough and is a good first step in assessing the potential for diamond deposits and other mineral deposits in Minnesota," said Brooke Clements, vice president for exploration at Ashton Mining of Canada in Vancouver.

Clements, who explored central Minnesota in the mid-1980s with another firm, cautioned that the samples in this newest report had no more than one grain of each of the mineral species that might lead to kimberlite.

"While there are examples of instances where kimberlite pipes were discovered after an initial sample had only one indicator grain, more work is required to assess the significance of these results," he said.

The next steps involve follow-up soil surveys that likely will include northwestern Wisconsin to see if the markers will lead to kimberlite formations, Thorleifson said. That process will take several years of work and consultation with other geologists.

"There is a source out there somewhere," said Thorleifson. "Sometimes it's kimberlite but there are no diamonds … or you might have a kimberlite with beautiful diamonds that might be too deeply buried. Sometimes you can't find it."

Paul Tosto covers higher education and can be reached at ptosto@pioneerpress.com

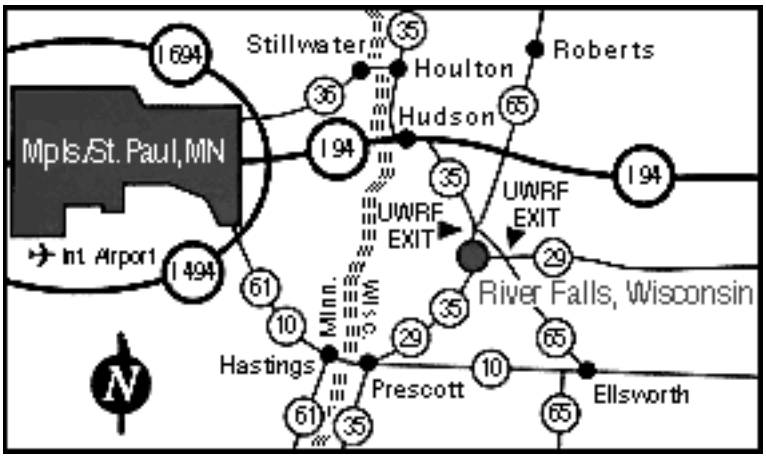
St. Croix Rockhounds special meeting in River Falls – March 20

The program at the March 20, 2007 Meeting will be a Power Point presentation on German Agates. This stunningly illustrated presentation was created by Doug Moore of the Heart of Wisconsin Gem and Mineral Society, and was a top award-winner in the 2006 American Federation program competition. It describes the many classic agates and agate localities in Germany, which were highlighted at the 2005 Munich Mineral show.

This meeting will be held at the University of Wisconsin - River Falls due to the temporary unavailability of our normal facilities. On campus, we will meet in Room 332 in the Agriculture -Science Building on the U.W.R.F. campus. Directions are below.

Directions to the March 20 meeting.

Take I-94 east into Wisconsin. Take Exit 3 towards River Falls. In about 7 miles you will see an exit for Main Street - River Falls. DO NOT TAKE this. Continue on the four-lane another few miles to the traffic light at the intersection with Route 29. Go right (west) at this light. In about a mile you will see a flashing yellow pedestrian-crossing sign. Go another 0.1 mile to the next entry into campus (South Third Street) and turn left. Follow this road around to the Agriculture Science Building. The building is easy to recognize. It features a planetarium near the road and greenhouses in the back. There are several convenient parking lots nearby. Parking restrictions are not in force after 4:30 P.M. The program will be in Room 332 Ag. Sc. Signs will be posted at the building entries with directions to room 332.



St Croix Rockhounds Rock Show Coming Up!

The club rock show will be on March 31 from 9 A.M.- 5 P.M. at the Valley Creek Mall in Woodbury, Minnesota. This is the place where the show has been the last several years. The Mall is easy to find at 175 Weir Drive, Woodbury, MN. Go on I-494, exit west on Valley Creek Drive and turn right.

The mall will be just ahead on the left. Once again the Easter Bunny will put in an appearance, so there should be a good crowd of families. The mall will be open by 7 A.M. Saturday for set-up. Please contact me if you wish table space. A sign-up sheet was at the last meeting, and will also be at the March 20 meeting.

We could use some more displays. It's a lot of fun and a great way to meet folks and show off your collection and skills. If you want to participate, but don't want to display, I also need some folks to mind the club table. There will be a lot of give-aways for interested people including flyers about the club, old newsletters and rock-related puzzles for the kids.

Why do they recommend that a separate barrel be used for polishing?

Contamination from the grit. Somehow you almost never get it all, no matter how hard you try

My two vibratory tumblers usually take about 3-4 days on 220, 12 hours on 400, 1 to 1 1/2 days on 600 & 1 day (chance polish at 12 hours) for the polish. I change the grit/polish every 12 hours, washing the muck out into a 5 gallon bucket to settle/evaporate. You can pour off the clear water on top after it sets several days. You don't want to dump the muck down the drain unless you like plumbers. The rest will evaporate and can be put in the trash.

Contamination between grit size changes isn't as crucial but try to wash your stones & barrel well anyway. *via MWF newsletter via Rock Chips 7 & 8/00*

Cleaning Sawed Stones: don't use laundry detergent to clean oil from material that has just been sawed. Use dishwashing detergent instead. Laundry detergents contain bleaches that may affect colors on many gemstones and slabs. Dishwashing detergents do not have bleaches and are balanced to break down oils, fats, and grease. Comment: Dawn detergent was used, recently, to clean up a spill of animal fat when a trailer truck overturned on an Interstate Highway near Cincinnati, OH. *from Pueblo Rockhounds, May 2006 via Pick and pack 06/07*

Display Stand: save the inner plastic rings from scotch tape rolls. They make handy stands for spheres. *from Rocky Mountain Federation News, 5/06 via Pick and pack 06/07*

Pedestal: to display large rocks on a pedestal, remove the top and bottom of a tuna can and spray the can black. *from Rocky Mountain Federation News, 5/06 via Pick and pack 06/07*

Software Downloads: here is a great freebie! I use this labeling program all the time. It has pre-designed mineral label formats and you can easily design your own. You can do anything from micromount labels to sophisticated business cards. Ososoft's Freeware Specimen Labeling Software for Rock Collectors can be downloaded at www.rockhounds.com/rockshop/minerallabel.shtml. *from Lake George Gem and Mineral Club Newsletter, 2/06 via Pick and pack 06/07*

Sphere Making Tips *By Dan Imel*

First Tip: From a recent trip to another club show, I picked up the following tip: One of their club members had told a member to use a ball chain in a loop long enough to reach into the cup of slurry below with a little sitting on the bottom. It sits on the sphere at the front of one of the cups. It drags the slurry back up to the cups. Seemed to work really well, but I suspect you have to wait until you have a slurry actually started. This has an advantage over machines with an automatic grit feed because it uses the grit over, not so much waste.

Second Tip: They had accidentally allowed grit to run back along the motor shaft and ruined a motor when it got into the gears. I was thinking about the problem and came up with the following solution. I love laundry detergent bottles, especially the 300 oz. size, because they have a fairly large flat area you can use. Either by hand with a utility knife or using a hole saw like you'd use to install a door lock (it can be much smaller), cut three circles of plastic from the detergent bottles, one for each shaft on a three-motor sphere machine, with a center hole slightly smaller than the shaft on the motors. Remove the cups on the sphere machine. Take an Oring that's tight on the shaft, and push it on ahead of the plastic washer you've made. Leave a slight gap in front of the motor. Place the washer on, then another O-ring to lock it in place to help seal things. No glue necessary. If the shaft is inclined so that the grit runs down the shaft, the washer and O-rings will block it from getting to the motor, much like a collar on a bird feeder helps stop squirrels from climbing up to the food. The spin of the motor will prevent the grit from getting back to the shaft on the other side of the washer. This solution shouldn't effect cooling of the motor either; and since the washer spins with the shaft, it shouldn't wear at all. The detergent bottle plastic doesn't readily degrade with use and is very durable. If you use a hole saw to cut your washers, use a block of wood as a backer for the saw to cut through to. *from The Quarry, April 2006 via Pick and pack 06/07*

Jade Polishing Agent: a little graphite mixed with chrome oxide and applied to a muslin buff makes a wonders jade polishing agent. When using chrome oxide for polishing, mix it with a solution of 1/2 water and 1/2 vinegar*. from Rock Chips, June '06 via pick and pack 07/06*

Polishing Peridot: Apply a drop of lemon juice or vinegar to speed things considerably. The slight acid seems responsible for the improvement. Rinse laps and splash pans with plain