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

March 2008

First Class

Please send exchange bulletins to:

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Stillwater, MN 55082

March 18th – The Program is: "Naica Crystal Cave"

MEETING WILL BE IN RIVER FALLS

St. Croix Rockhound's

LEAVERITE NEWS

Vol. 33, Issue 3; March, 2008

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 18th : St. Croix Rockhounds club meeting will be at the University of Wisconsin in River Falls Wisconsin at 7:15 pm. The program will be a slide presentation on "Naica Crystal Cave" in Mexico which contains the largest crystal specimens (gypsum) in the world. Map to the meeting is in this newsletter.

COMING ATTRACTIONS

March 15th: St. Croix Rockhounds Annual Club Show; Saturday 9AM – 4 PM (Saturday before Palm Sunday), at the Valley Creek Mall in Woodbury, MN

March 14-17th: Annual Show, Cedar Valley Rocks & Minerals Society, Teamsters Union Hall, 500 J St SW, Contact: Marv Houg, 319-364-2868, m_houg@yahoo.com

March 18th: St. Croix Rockhounds club meeting will be at the University of Wisconsin in River Falls Wisconsin at 7:15 pm.

April 8th: Annual Silent Auction! Chicago Rocks & Mineral Society. Open to the public, no admission fee. . Salvation Army, 4056 N. Pulaski Avenue, Chicago, IL.

April 12-13th: Anoka county Gem & Mineral Club show at the Eisenhower Community Center, Hopkins MN.

April 19-20: Chippewa Valley Gem & Mineral Soc, Eau Claire Expo Ctr, Lorch Ave off Hwy 93, Contact: Roger Goss, Rgoss@cool.net, 715-723-0196.

May 3-4th: Cuyuna Agate and Mineral Show at Aitkin High School. Call Kat Thomas at 218-678-3298 for information or e-mail katmoose@emily.net

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

September 23-28th: AFMS/RFMS show in Humble (Houston), TX.

Minutes of the St Croix Rockhounds February 19th, 2008

The meeting was called to order by President Pete Rodewald at 7:20 .

The **treasurer's report** was approved as given by Lin Rawlings. Dues paid members were able to receive their membership card.

Show Committee: Our club rock and mineral show will be at Valley Creek Mall in Woodbury on Saturday March 15. Bill Cordua asked for help setting up the show on Friday March 14 at 6:30 . He asked that members who want to set up a display for the show on Saturday March 15 bring their displays to the Valley Creek Mall in Woodbury between 7:00-9:00 a.m. Flyers advertising the show were given to members to distribute in public places as soon as possible.

The March meeting will be held at University of Wisconsin River Falls on March 18th. A map will be placed in the next newsletter. The program will feature the largest crystal specimens in the world (gypsum) from the "Naica Crystal Cave " in Mexico .

Jo and Bill Weber were guests tonight.

Refreshments were brought by Marie Newlander and June Shalander.

The meeting was adjourned at 7:40 for the Find of the Year Contest.

Winners of Find of the Year were:

Open Class-Dave Flynn

Polished Rocks-Wendy Flynn

Lake Superior Agates-Dave Flynn

Submitted by Susan Dustin, substitute secretary

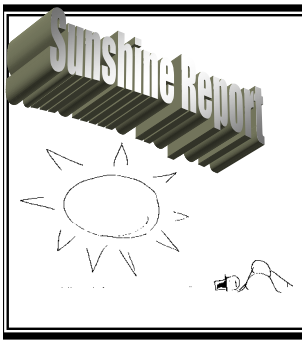
Celebrate!

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



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

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

AN ASTEROID TO HIT MARS?

Monday, January 07, 2008 By Leonard David

The possibility of an asteroid walloping the planet Mars this month is whetting the appetites of Earth-bound scientists, even as they further refine the space rock's trajectory.

The space rock in question — Asteroid 2007 WD5 — is similar in size to the object that carved Meteor Crater into northern Arizona some 50,000 years ago and is approaching Mars at about 30,000 miles per hour (48,280 kph).

Whether the asteroid will actually hit Mars or not is still uncertain.

Such an impact, researchers said, would prove an awesome blow for planetary science since NASA's Mars Reconnaissance Orbiter (MRO) and a flotilla of other spacecraft are already in position to follow up any impact from orbit.

"An impact that we could witness/follow-up with MRO would be truly spectacular, and could tell us much about the hidden subsurface that could help direct a search for life or life-related molecules," said John Rummel, NASA's senior scientist for astrobiology at the agency's Washington, D.C., headquarters. *Source – FOX News via Stoney Statements 01/08*

Moon Belches

Through the ages, sightings of hazy, short-lived spots on the moon have baffled astronomers. Now an astrophysicist suggest that eruptions of gas may be creating these blurry, sometimes glowing distortions on the moon's almost atmosphere-less surface. When Arlin Crotts from Columbia University compared reliable sightings of these distortions with records of radon emissions collected by lunar spacecraft, he found that the locations of radon emissions and distortions matched perfectly. In fact, half of all distortions and half of all detected radon emissions came from an area that includes the bright crater Aristarchus and the moon's larges volcanic vents.

Researchers have known for some time that the moon is gassy. In the early 70's an experiment left by Apollo 17 found evidence of argon gas. But Crotts has so far found no link between argon and the strange spots. Crotts says that gas seeping upward to the lunar surface could build up beneath the regolith, a thick layer of superfine ground rock that covers the moon. "It would be basically the equivalent of setting off a 500-pound blast of TNT at the base of the regolith", Crotts said. "you would see a poof of dust over an area." The weak gravity of the moon would allow the outburst to spread far and high. *by Wayne Parry, Discover Magazine, October 2007 via the Trilobite 10/07*

Did You Know – Utah has a meteor crater

Located just 25 miles SSW of Moab, Utah. There are several key pieces of evidence that point to a meteorite impact for the origin of Upheaval Dome. In 1993, Eugene Shoemaker and Ken Herkenhoff found shatter cones within the sandstone of Upheaval Dome.

Shattercones, as their name implies, are conical-shaped pieces of rock that have small grooves radiating from a central point. It is believed that shatter cones form when shockwaves from a meteorite impact move through the surrounding rock, leaving the grooves behind.

Shoemaker and Herkenhoff also found shocked quartz, which is ordinary quartz that has been highly fractured from an impact, within the sandstone. Even more evidence for the impact theory was presented in 1995 by John Louie, a seismologist at the University of Nevada-Reno.

Continuing their NASA-funded project, Shoemaker and Herkenhoff are mapping the rocks that make-up Upheaval Dome. They found that some of the strata beneath the dome are thicker than others. Both believe this is central uplift of the crater, formed by the rebound of the rocks after impact. Shoemaker also believes the original crater was 3 miles wide and was formed by a comet or asteroid 1000-feet in diameter. *from Stoney Statements 01/08*

60-Foot Dino

Bones found in southeastern Oklahoma were from a 604on, *6~foot tall* giraffe-like creature that is among the biggest dinosaurs ever discovered, a paleontologist said December 8th. A report on the Sauroposeidon -- or thunder laaard -- is expected to be presented in the March issue of the Journal of Vertebrate Paleontology, says researcher Richard Cifelli of the University of Oklahoma.

Matt Wedel, senior author of the paper, ramed the new find after Poseidon, the Greek god normally associated with the sea but also with earthquakes. Cifelli called the creature "among the biggest or arguably the biggest" dinosaur ever. "This guy took that general Brachiosaurus trend and pushed it to the max," he says.

The better-l:nown Brachiosaurus was about 45 feet tall. Cifelli says the Sauroposeidon had a neck that was conservatively 40 feet long. He says there was an "incredible compromise between making the neck strong enough to function and also be light enough so that you can lift the whole apparatus up." The remains were found in 1994 in Atoka County. Cifelli says he gave them about a

year ago to Wedel, who was then an undergraduate student looking for a research project.

The first report was of a rib an inch wide and 5 feet long, he says. The largest of the vertebrae found was 5 feet long. "It looked like a tunnk of a tree," Cifelli says. Apart from the neck bones, scientists have been unable to locate the rest of the animal's remains. "I feel like the rest of it still has to be there somewhere," he says.

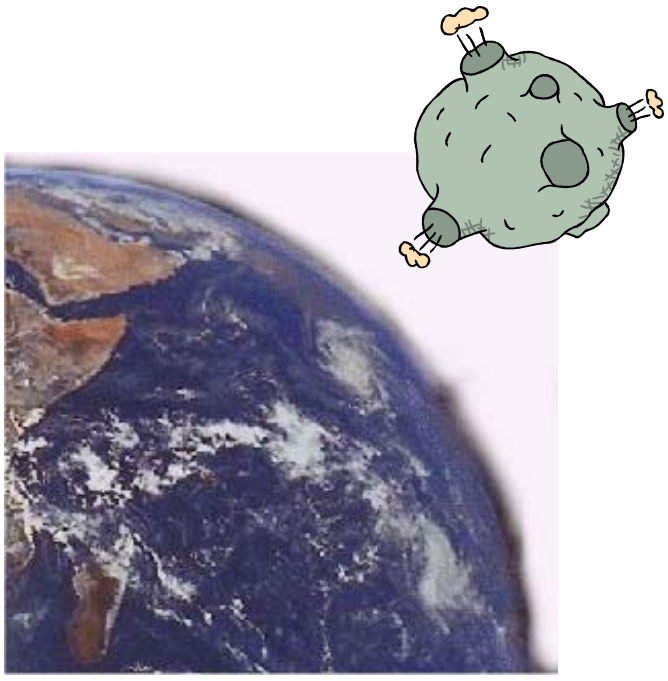
Cifelli says there are different ways of measuring the biggest dinosaur. The Sauroposeidon was definitely the tallest and definitely had the longest neck, he says. He says there were probably heavier and definitely longer dinosaurs. The dinosaur was from the early Cretasceous period and was found in beds that are about 110 million years old, Cifelli says. At that time, the T. Rex was just emerging in North America. *from Tate Geological Museum at Casper College on-line newsletter 2000, volume 1 http://www.caspercollege.edu/tate/main.htm*

Iowa's Fossil & Prairie Park Preserve & Center

Those of you who are dreaming of field trips, like fossil collecting and want a trip close to home may be interested in visitinb Iowa's Fossil & Prairie Park Preserve & Center. This park is located about 20 miles southeast of Mason City, Iowa on B47. You will find information on their web site: www.fossilcenter.com.

"This 400-acre park is a unique attraction, being one of only three known public fossil collecting sites in the nation (CNN, 2003). The Devonian fossils can be easily collected by visitors of any age, attracting school groups from elementary through college, as well as researchers and families. The park also has historic beehive kilns, over 60 acres of virgin prairie, re-created sod house, and visitor center. In the Center, museum quality exhibits interpret the natural and historic features of the park. Trained staff and volunteers greet visitors and answer questions about the park and local tourism."

The collection of fossils is free and encouraged, for personal use only, and no tools are necessary since the quarry is "fractured limestone and shale." *by Marilyn Westman from Rock Rustler's New 02/08*



Iris Agate All Stars *by Peter Rodewald*

This presentation is a pictorial display of iris agate captured on film of many species.

Iris, the term, is originally derived from Greek mythology “The goddess of the rainbow”. (American Heritage Dictionary)

Iris-- “Pigmented, round contractile membrane of the eye between the cornea and lens with pupil perforation”, (A.H.D.), also an “iris diaphragm”, a metallic mechanically adjustable diaphragm aperture commonly used in lenses regulating light admitted to a photographic plane.

The use of iris diaphragms, no relation to iris agate, are used to assist, in camera, a rainbow like array depiction of the visible spectrum via back light transmission through an agate thin cut slab.

Photographic lenses united with cameras and film or digital, do in combination produce an instrument capable of an advantage over the human naked eye, the ability to accumulate light. Accumulations of light photographically are fickle and very sensitively scrutinized by human eye and brain interpretation. All wavelengths of light reflected at once are viewed by the brain as white. So, in turn, the advantage is bypassed if over exposures of light occur, we see white. Filmed properly, photographed iris agate samples are just that when slightly underexposed, not allowing the separated wavelengths mixing to whiteness and thus appearing over exposed.

Photographs, utilizing lighting methods of projecting the light through two external iris diaphragms, placed a short distance apart with narrowed apertures, situated between the light source and specimen removes stray light before the light strikes the agate slab. This technique purifies the wavelengths by maintaining them parallel, resulting in purer color accumulated recordings.

Iris agate specimens have unique microcrystalline quartz arranged perpendicular to usually transparent band flow direction, which creates, through natural laws of physics, diffraction gratings. These diffraction rulings are meticulous slits, impeccably and fastidiously uniform. Multitudes of microscopic fibrous quartz crystals place reflections of light through these uniform slits, bending the light, separating each wavelength component apart from the rest. Wavelengths bend at differing rates causing color separation. These we can easily see if not first blinded by the big words.

May the “goddess of the rainbow” herself, be proud.

Reference acknowledgement
Physics advice—personal communication
Dr. Wayne Sukow
Frondel - Scanning Electron Microscope (SEM) Photos of iris bands.
Encyclopedia Britannica volume 14 pages 65-66 - - Studies of light.

Crystal Inclusions

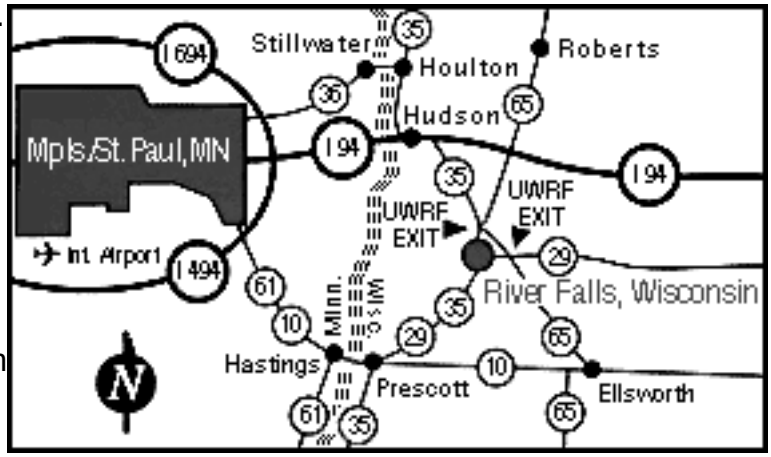
Almost every time nature grows a crystal she encases in it a variety of objects called inclusions. Not only solids, but liquids and gases are often trapped during crystal growth. The difference between the white, opaque variety of quartz and the clear variety is caused by multitudes of tiny bubbles of liquid trapped in the opaque quartz.

Frequently, the inclusions will be of more than one kind, each called a phase. One of the most amazing sights to see under a microscope is the two-phased inclusion of a tiny bit of carbon in one of the liquid filled cavities found in quartz from herkimer County, N.Y. The carbon can be seen jittering around bombarded this way and that by the ever-moving liquid molecules. *from CFMS New 7/94 via Strata Gem 12/07 via Rock Licker 5/05 via Hy Grader 6/05 via Rock Rustlers News 02/08 via Hidden Treasures 03/08*

St Croix Rockhounds meeting in River Falls *by Bill Cordua*

The program at the March 18, 2008 meeting of the St. Croix Rockhounds will focus on gypsum. It will include an introduction to the mineral by Dr. Bill Cordua, and a Power Point on the extraordinary giant gypsum crystal locality recently exposed during mining in Naica Mexico. Members are invited to bring along their favorite gypsum specimens to show.

Due to the unavailability of our normal facilities, we will meet in Room 337 in the Agriculture - Science Building on the campus of the University of Wisconsin- River Falls. Directions are below. 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 has a planetarium near the road and greenhouses in the back. There are convenient parking lots nearby. Parking restrictions are not in force after 4:30 P.M. Signs will be posted at the building entries with directions to room 337.



Lake Superior Copper Agates *by Peter Rodewald*

This program contains images of:
Minnesota Lake Superior Agates with copper from solution mix in chalcedony & copper minerals
Wisconsin Lake Superior Agates with copper from solution mix in chalcedony & copper minerals
Michigan Lake Superior Agates with copper replacements at the Wolverine # 2 Copper Mine, Keweenaw Peninsula.

The Keweenawan basalts, of the North American 1.1 billion year old, Mid-Continental Rift System, hosts the many varied Lake Superior Agate.

Many agate collectors, professional or otherwise believe these agates to be the oldest agates found on planet Earth. While searching for and retaining all agate specimens, whether they depict copper relationship or not, found at the Wolverine # 2 Copper Mine, one occasionally locates a specimen that supports this belief. A pictorial view of some of these very unique agates and their replacements, by many minerals other than copper, and most intriguingly copper itself, can, in rare instance, be interpreted to show their age in relation to known mineral depositional sequence. This program may conjure one to thinking in terms of agate's age but is not the purpose however.

Lake Superior Agates found in Iowa, Illinois (Mississippi River), Nebraska & Kansas, mentioned here, not to be unmindful of these other localities, occasionally contain copper also.

Copper found in agates that glaciated away from the Lake Superior Basin far south into mentioned areas, are deposited in agate nodules very differently than copper in agate as a replacement such as the Wolverine Mine agates.

Copper in agate is to be shown in its most bazaar inexplicable replications of these former formal agates. The accent of this presentation shall focus on Wolverine # 2 Copper Mine " Copper Agates". [This is an abstract for Pete's program entry at "Wonderful World of Agates" show in July in Menasha, WI. –ed.]

Stolen Gems *St Croix Rockhounds Leaverite News*

The fish within us: Four years ago, whole digging in the Canadian Arctic, paleontologist Neil Shubin discovered the 375 million year old fossil of a fish that appeared to have both neck and hands. *Tiktaalik roseae's* neck enabled this creature to turn its head from side to side, unlike ordinary fish. It had primitive elbows that could have helped it crawl along muddy bottoms. *by Jeneen Interlandi, Newsweek Magazine, 01/08 via the Trilobite 03/08*

An unusually well preserved dinosaur: a fossil specimen of a 67-million-year-old duck-billed dinosaur found in North Dakota has given scientists new insights, thanks to its clearly preserved skin, muscle and tendons…which don't usually survive fossilization. It appears this species was more muscular than previously thought, and may have been able to outrun T.Rex and other predators. *from American Scientist 3-Newsletters, 12/07 via the Trilobite 03/08*

Upper Michigan Mine Granted Permits: a proposal for a new nickel and copper mine in Michigan's Upper Peninsula has won approval from state environmental regulators. Kennecott Minerals Company was granted 3 permits to operate the mine in Yellow Dog Plains section of northen Marquette County. Known as the Eagle Project, the mine targets an underground ore deposit expected to yield up to 300 million pounds of nickel, and about 200 million pounds of copper, plus smaller amounts of other metals. It would be Michigan's 1st nickel mine, and the only US mine where nickel is the primary mineral generated. The mine would operate for 7 years, after which the company would restore grounds to previous condition. *by John Flesher, Milwaukee Journal Sentinel, 12/07 via the Trilobite 03/08*

Do you put polyethylene pellets in the final polishing stage with a vibratory tumbler? You can. Always change the pellets between different grit sizes. Re-use the pellets only with the same grit size. The grit becomes imbedded in the pellets and, again, you get contamination. I bought a bag of pellets several years ago. Before I started to use it. I mentioned to a dealer friend that I'd bought them. He went out in his garage &, came back with a gallon milk jug full of 1/4 to 1/2 in pieces of agate screened from the good stuff. *from MWF newsletter via Rock Chips 7 & 8/00 via Stoney Statements 02/06*

True synthetic diamond, though in wide use for industrial purposes, is not (yet?) a commercially viable gem material. This may soon change, as recent major advances in diamond synthesis techniques, including chemical vapor deposition (CVD) and high pressure/high temperature flux synthesis, make large (up to 3 ct) synthetic diamonds practical to produce. The simplest test for flux-grown diamond relies on the presence of very small iron and nickel inclusions, both remnants of the flux growth process. Even when not visible, such inclusions can be detected by attraction toward a strong magnet. Any clear magnetic attraction likely proves a diamond synthetic, though lack of magnetic response does not prove a natural. *from University of Texas GEO347K Gem Notes*

Vibratory Lapping: on weighting thin slabs; the instructions that came with my Raytech vibratory lap recommend 1/4 lb. per Square Inch on slabs less than 1" thick. It also recommends steel or lead slugs attached with dopping wax. I recommend lead. It is heavier and it will not rust. You can probably get all you need free at your local tire store. They just throw away all those lead balance weights that they take off when tires are re-balanced. *by Gary Ogg from Lapidary Digest Sept 97 via Stoney Statements 12/07*

HINT: Buy the Sodium Silicate at your drug store. Get the near quart bottle size, which will cost about $6.00 (probably more in 2004) for the quart. Used over and over it will cure a bushel of turquoise. As long as you pack the material in sand it will not be liable to cracking. You can also bake the material in sand in a coffee can or baking pan. *from RockCollector 10/04 via "Rock Chips" 8/04 and Sedona Red Rocking News 9/04 via Stoney Statements March 2005*