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

First Class

April, 2006

Please send exchange bulletins to:

Doug Olson, Editor
211 Interlachen Way
Stillwater, MN 55082

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

The program: To be announced

St. Croix Rockhound's

LEAVERITE NEWS

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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	Brad Bonse	(651) 439-6832
Vice President	Vic Martinsen	(715) 247-3700
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 Martinson	(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!

April 18th : St. Croix Rockhounds club meeting will be at the Stonebridge Elementary School. The Program will be announced check the website www. Leaverite.com, I will post it as soon as I find out.

COMING ATTRACTIONS

April 18th: St. Croix Rockhounds club meeting will be at the Stonebridge Elementary School

April 22-23rd: Chippewa Valley Gem & Mineral Society 43rd Annual Show, Eau Claire County 4H Expo Center, corner of Hwy. 93 and I-94, Eau Claire, Wisconsin; Contact: Roger Goss, (715) 723-0196.

April 29th: Cuyuna Agate & Mineral Show at Westside church, Hwy 210, Aitkin, MN. For info call Kat Thomas 218-678-3298 or e-mail: katmoose@emily.net

May 16th: St. Croix Rockhounds club meeting will be at the Stonebridge Elementary School

May 19-21st: Midwest Federation convention and show in Southgate< MI

June 9-10th: California Federation convention and show in Angels Camp, CA hosted by the Calaveras Gem & Mineral Society

June 9-11th: Rocky Mountain Federation convention and show in Stillwater, OK hosted by the Stillwater Mineral & Gem Society

July 14-16th: Northwest Federation convention and show in Longview, WA hosted by the Southern Washington Mineralogical Society and the Mt. Hood Rock Club

August: South Central Federation convention and show in Bossier City, LA

August 14-20th: Southeast Federation convention and show in Nashville TN

November 18-19th: Eastern Federation convention and show in West Palm Beach, FL hosted by the Gem & Mineral Society of Palm Beaches, Inc.

Minutes of the Saint Croix RockHounds
March 21st, 2005

The meeting was **called to order** at 7:16 by president Brad Bonse. There were 24 members present.

Minutes of the previous meeting were approved as published.

Treasurer's report was approved as given by Lin Rawlins.

Lin has insurance certificate. Presenting the certificate to a land owner may get you into some quarries.

Program will be a CD show of the book "Other Lake Superior Agates" by John Marshall. Future programs may include a talk on the Kensington Runes & Agates. Perhaps we can have people can bring in their favorite agates to photograph and turn into a downloadable calendar at a future meeting. Also proposed is a future session on copper by Pete Rodewald.

Tour Director Susan Dustin received kudos for taking on the job. Susan reports that Minnesota Mineral Club is going to Glendive at the same time as our proposed trip – over Memorial day weekend. She will contact them regarding joining forces. The UP trip is tentative for June-July as Red Metal Days are in August. Possible places are the Wolverine II (for copper banded agates) and Sand Bay beaches.

Mark Rasmussen suggests that agate pickers going on trips could notify others for a group outing. An e-mail list will be prepared by Doug Olson to facilitate this.

Club show will be held April 8th. Bill Cordua has flyers to be spread. A few tables are still available. Bill wants volunteers to gather ~6:30 pm Friday evening at the Valley River Mall for setup. There are articles in the Woodbury and St Paul papers advertising the show.

Newsletter editor has nothing to say.

Librarian has nothing new to report.

Refreshments tonight were provided by June Young and Lin Rawlings.

Sunshine committee – Marie is not present to report.

Agate Days are July 15-16th this year.

Tours revisited – Brad want to go back to his Prairie Agate area. The Railroad Butte and Agates can be found on Google.

No **old or new business**.

Door prizes were provided by LeRoy Betlach. Winners were Rodney Harvey, Dory Lewis, Kerry Rasmussen, Terry Young, Avis Klinkhammer, Brad Bonse, Doug Olson, David Rusterholtz and Earl Kask.

New member tonight is Gerry McDougle.

The **meeting was adjourned** at 7:50

Minutes submitted by Doug Olson, secretary

Celebrate!

Diamond, the birthstone of April, is the hardest and most brilliant of gems. It is the chief symbol of marital happiness and, as such, the most popular engagement and anniversary stone.

Some diamonds are lasered to turn black inclusions permanently colorless.

Ancients believed diamonds were splinters of shattered stars.

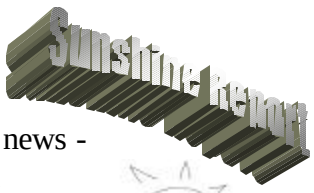
While the diamond is the most scratch resistant of all gems, it should be protected from sharp blows that can cause chipping.

April Birthdays:

Earl Kask 5th
Bill Cordua 21st
Reuben Shalander 21st
Cassondra Olson 22nd

April Anniversaries:

Rodney Harvey 22nd
Freya and Earl Kask 28th



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

Note: On April 10, Pete Rodewald gave a show to the CVGMS club in Eau Claire, WI On the Munich Germany rock show.

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

2006 St Croix Rockhounds Membership List

Large Diamonds Made From Gas Are Hardest Yet

Arlington, Va.—Producing a material that is harder than natural diamond has been a goal of materials science for decades. Now a group headed by scientists at the Carnegie Institution's Geophysical Laboratory in Washington, D.C., has produced gem-sized diamonds that are harder than any other crystals and at a rate up to 100 times faster than other methods used to date. The process opens up an entirely new way of producing diamond crystals for electronics, cutting tools and other industrial applications.

"This is a great example of fundamental research that will not only give us a better tool to duplicate conditions in the core of the Earth, but will stimulate many other scientific, technical and economic advances," said geologist James Whitcomb of the National Science Foundation (NSF)'s division of earth sciences, which funded the research.

"We believe these results are major breakthroughs in our field," said Chih-shiue Yan, lead author of the study published in the Feb. 20, online *Physica Status Solidi.* "Not only were the diamonds so hard they broke the measuring equipment, we were able to grow gem-sized crystals in about a day."

The researchers developed a special high-growth rate chemical vapor deposition (CVD) process to grow crystals. They then subjected the crystals to high-pressure, high-temperature treatment to further harden the material. In the CVD process, hydrogen gases and methane gases are bombarded with charged particles, or plasma, in a chamber. The plasma prompts a complex chemical reaction that results in a "carbon rain" that falls on a seed crystal in the chamber. Once on the seed, the carbon atoms arrange themselves in the same crystalline structure as the seed. This method has been used to grow diamond crystals up to 10 millimeters across and up to 4.5 millimeters thick.

CVD-produced crystals are very tough. "We noticed this when we tried to polish them into brilliant cuts," said Yan. "They were much harder to polish than conventional diamond crystals produced at high pressure and high temperature." The researchers then subjected the tough CVD crystals to high-temperature and high-pressure conditions. The diamonds were heated to 2000° C and put under pressures of 50,000 to 70,000 times atmospheric pressure for 10 minutes. This final process resulted in the ultra -hard material, which was at least 50 percent harder than conventional diamonds.

The research was also supported by the U.S. Department of Energy, the National Nuclear Security Agency, through the Carnegie/ DOE Alliances Center, and the W. M. Keck Foundation. It was conducted in collaboration with researchers at the Phoenix Crystal Corporation and Los Alamos National Laboratory. *from NSF www.nsf.gov 2/04 via Cedar Valley Gems 5/04 via Achates 3/06 via Agate Picker 3/06*

Fossiking on Fossils *by Cecilia Duluk, MWF Paleontology from MWF Newsletter 11/05*

"What IS that fossil oddball anyway?"

Even the most casual fossil collector occasionally runs into a "fossil oddball" – one of those strange-looking preservations or imprints that is usually impossible to identify. I'm not talking about unusual preservations or partial fossils that "look like a—'petrified dandelion,'" such as a horn coral imbedded in limestone broken across the cup that resembles that weed.

No, I speak of the true "oddball," an obviously fossilized something that even the professional paleontologists can't really explain. After many such fossils have been found in a certain locality or strata (usually by a bunch of interested amateur collectors), the pros might get involved, which may (or may not) result in a purblished solution. On the other hand, such studies may result in even more confusion as to what the "oddball" really was as a living organism, because no modern counterparts exist.

The number one classic example of such a fossil is, of course, the TULLY MONSTER, discovered in the Mazon Creek, Illinois concretions by Francis Tully in the 1950s. Fourteen years and hundreds of "monster" specimens later, Drs. Eugene Richardson and Ralph Johnson of the Chicago Field Museum named the "oddball" *Tullimonstrum gregarium* and described it as "a soft-bodied marine invertebrate animal" ("The Monster of Illinois Paleontology and Politics" by Mary R. Carman, Rocks & Minerals magazine, Vol. 64, No. 1, Jan/Feb 1989) that was nothing ever seen before!!! The *Tullimonstrum*, in fact, is still an oddball, having been variously classified as a worm, a shell-less mollusk, and a planktonic snail!!!

Few fossil oddballs retain the mystery and romance of the Tully, but many are interesting enough to fill a series such as the one begun in this issue. The last ten years or so have, in fact, at least provided some answers for me to a few of the "What IS that fossil oddball?" question.

In future issues, look for articles on the Blob, the Cornucopia, the "screw", and the "that's the weirdest crinoid I've ever seen fossils.

One important thing to remember if you collect an oddball—ALWAYS NOTE THE EXACT LOCATION where you found it. You might not know what "it" is, but if you know WHERE IT CAME FROM you can at least put in (in most cases) a time frame. Unfortunately, some collectors will thumb through a large book like Index Fossils of North America (Shimer & Shrock), see an illustration that LOOKS LIKE their "oddball", and stick a name on it. Then later, any quest to really identify it is doomed to failure because – they put a genus name on it that belongs to an Ordovician species, when in fact, the locality where they found their "oddball was all Pennsylvanian Age strata!

The best bet is to FIRST study some geologic time charts and other books on "what evolved when", not for the SPECIFIC dates (which are always being reevaluated up and/or down by a few million years) but for the general flow of evolutionary development. This can be a quite inexpensive undertaking. I would like to recommend an exceptionally clear booklet, Evolution and the Fossil Record by John Pojeta, Jr & Dale A. Springer, pub. 2001, by American Geological Institute, Alexandria, Virginia (under $10 from www.agiweb.org) also sponsored by the Paleontological Society. Write for two FREE U.S. Geological Survey booklets Geologic Time by William Newman; and Fossils, Rocks, and Time, by Lulcy Edwards and John Pojeta, jr.

(For fun, you might also ask for Birth of the Mountains (Southern Appalachians) by Sandra Clark, and Deserts Geology and Resources by A. S. Walker. Lots of geology with "oddballs" in it!) All four of the above may be obtained for FREE from the U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, Co 80225.

Happy "oddball"ing!

The Bible does not say there were three wise men; it only says there were three gifts.
February 1865 is the only month in recorded history not to have a full moon. *from Jim Pape, Hidden Treasures 02/06*

Did you know? Vulcanian eruptions are named for Vulcano, one of the Aeolian Islands north of Sicily. In fact, the word volcano itself comes from this island, home to the Greek god of fire, Hephaestus (called Vulcan by the Romans). *from Stoney Statements 2/06*

Vulcanian Eruption: A vulcanian eruption is a type of explosive eruption that ejects new lava fragments that do not take on a rounded shape during their flight through the air. This may be because the lava is too viscous or already solidified. These moderate-sized explosive eruptions commonly eject a large proportion of volcanic ash and also breadcrust bombs and blocks. Andesitic and dacitic magmas are most often associated with vulcanian eruptions, because their high viscosity (resistance to flow) makes it difficult for the dissolved volcanic gases to escape except under extreme pressure, which leads to explosive behavior. *from http://volcanoes.usgs.gov via Stoney Statements 2/06*

What Is A Seamount? Seamounts are underwater mountains with steep sides rising over 3,280 feet (1,000 meters) above the surrounding seafloor. There are over 30,000 seamounts in the Pacific Ocean alone, yet remarkably, less than 0.1% of the seamounts in the world have been explored. Studies that have been conducted over seamounts indicate that seamounts function as "oases of life," with higher species diversity and biomass found on the seamount and in the waters around it than on the seafloor. Seamounts rise up high in the water column, creating complex current patterns influencing what lives on and above them. Seamounts also provide substrate (a location for attachment) where organisms can settle and grow. These organisms provide a food source for other animals. Scientists have found that seamounts often provide habitat to endemic species, species found only in a single location. *from Stoney Statements 2/06*

"Rockhound" According to the American Geological Institute Glossary of Geological Terms, "rockhound" is a term first used by oil drillers for geologists, who often smell rock samples taken from well cuttings for the odor of oil. They used to say, "He hunts for oil like a hound dog," which evolved into rockhound. *from Pick & Pack via Rockwood Rockhound News 03/04*

Prized Bruneau Jasper: Did you ever wonder why you see so little Bruneau Jasper and why it is so costly? It is only found in Idaho's Bruneau Canyon and occurs only in one area along the steep walls of the canyon. Bruneau Jasper has beautiful designs and ranges in colors of red, tan and brown. It is a pleasure to work with and polishes to a high luster. The claim where it is found is privately held and permission is rarely given. *from Rockwood Rockhound News 12/03*

Obsidian Tells Time Age can be measured with obsidian. It is emerging as a promising tool for dating and tracing prehistoric culture. What makes it useful for dating is that it continuously absorbs moisture from the air. The moisture penetrates the stone at a constant rate and leaves a telltale mark on the obsidian, which is visible under a microscope. By examining the watermarks, the age of a piece of obsidian can be calculated with extreme accuracy. This is valuable because the measurements can be extended half a million years into the past, well beyond the 40,000 year limit of carbon dating. A most important use of obsidian is in dating glacial periods in the United States. Stones that were carried along by advancing ice have confirmed that a major ice age began 180,000 years ago, and the final retreat came around 12,000 years ago. *from Rockhound Ramblings, Via: Pick & Pack 06/03, via Rockwood Rockhound News 10/03*

Ever Wonder? Ever wonder why a rounded and domed polished stone is called a cabochon? One rock book states that the word "cabochon" is derived from a French word meaning bald-headed. The more highly polished, the more beautiful. Is that why BALD IS BEAUTIFUL? *from Rockhound Ramblings Dec. 2002 via Quarry Quips via Rockwood Rockhound News 10/03)*