

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

April, 2004

First Class

Please send exchange bulletins to:

Doug Olson, Editor
211 Interlachen Way
Stillwater, MN 55082

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

The program:
"Dinosaurs of Africa"

** If there is a red star next to your name we have no record of you paying dues nor are you a reciprocating newsletter editor. This will likely be your last issue.*



St. Croix Rockhound's

LEAVERITE NEWS

Vol. 29, Issue 4; April, 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	Helen & LeRoy Betlach	(715) 425-5948
Historian	John Parsons	(651) 257-2724
Sunshine Committee	Marie Newlander MN	(651) 439-7809
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!

April 20th : The St. Croix Rockhounds club meeting at the StoneBridge Elementary School at 7:15 pm. The program is a video: "Dinosaurs of Africa" the 4th in a series of 5. We saw the first 3 in previous meetings.

COMING ATTRACTIONS.

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

April 24-25: Chippewa Valley Gem & Mineral Society show in Eau Claire Expo Center

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

April 24th: Agate and Marble Show at Westside Church Parking Lot in Aitkin, MN on Hwy 210 W

May 1st: Rockhound estate garage sale, 11-2pm at 47990 Forest Blvd, ~1 hr north of Twin Cities. Contact Jack Newcomb 763-421-8521 for more info.

May 1-2nd: Heart of Wisconsin Gem & Mineral show, Marshfield, WI.

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

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

Minutes of the Saint Croix RockHounds March 16th, 2004

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

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

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

Committee Reports:

Library -Sheri Frankenberg brought a huge box of books and magazines for members to check out.

Program -Tonight's program is a video called "Venezuela's Ancient Tepuis" presented by Pete Rodewald.

New guests tonight are Lynn Juandell and Clark Whitmore.

Refreshments -Thanks to the Klinkhammers, Mike Frankenberg, and Lin Rawlings. Next month's snack will be provided by Jeanne Blom and Pete Rodewald.

Show -Bill Cordua reported that our show is set for April 3, 2004. Members are asked to help on Friday night at 6:30 to set up. A sign up sheet was passed around for those interested in sitting at the club's table to explain information about our club. A number of members are displaying rocks and minerals.

New Business - none

Field Trip - A tentative date of June 11-13 has been set for a trip to the Keewenaw Peninsula in Michigan.

A date will be firmed up before the next meeting.

Sunshine Committee :

LeRoy Betlach is recovering fairly well and will hopefully be at a meeting soon.

The meeting was adjourned at 7:45 pm.

Respectfully submitted,
Susan Dustin, Secretary

If paying dues by mail, send to treasurer:

Elaine Martinson

1938 Co. Rd. I

Somerset, WI 54025

Celebrate!

April's birthstone – Diamond: The Diamond, stone of April, is known as the "fire of love." Diamonds bring love and protect from evil. They are also thought of as the frozen tears of past princesses. Hindus believed that diamonds were most powerful in their natural state. They also used diamonds in medicine for they were believed to produce longevity, strength, energy, and a beautiful complexion.

Engagement diamonds have been worn on the third finger of the left hand, for Egyptians believed the "vein of love" connected this finger to the heart. In 1477 the first written account of a gentleman successfully proposing to a woman, by presenting a diamond ring involved Archduke Maximilian of Austria to Mary of Burgundy. Until the 15th century, only royalty, nobility, and priests were allowed to own and wear diamonds.

April Birthdays:

Earl Kask 5th

Bill Cordua 21st

Reuben Shalander 21st

Cassandra Olson 22nd

April Anniversaries:

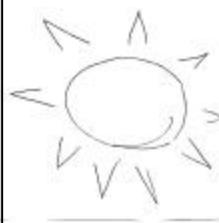
Rodney Harvey 22nd

Freya and Earl Kask 28th

Floyd and Eloise Kimball are back from "Peony Gardens", their winter home.

Phyllis White is recovering from knee surgery.

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



2004 Club Show Report

Pictures are courtesy of Bill Cordua

The St. Croix Rockhounds held their annual show on April 3, 2003 in the Valley Creek Mall in Woodbury, Minnesota. This was our fourth time in this location. This coincided with the visit to the mall by the Easter bunny, an event that brought in lots of families. Consequentially, our show attendance was very good. There were some major glitches with power supply, but the lights in the mall were good enough that most displays did not suffer unduly.

Jeanne Blum showed geodes from Missouri and Iowa, and had pictures of geode hunting. Both kids and adults were fascinated with looking at these geodes with Jeanne's magnifying glass.

Dick Blum displayed his colorful rock slab mosaics and demonstrated how he made them.

Bill Cordua showed various ³big rocks² from the University of Wisconsin - River Falls collection. He also brought coloring and project materials for kids of all ages and had flyers from the U.S. and Minnesota Geological Surveys. Bill was also busy identifying specimens brought in by show visitors.

Art Hill brought a display of rough and polished gems featuring chrysocolla, Apache tears and opal. He also had some of his fine hand-made jewelry boxes.

Dave and Avis Klinkhammer had a display centered on examples of rough and polished gem materials. They also had a beautiful gem slab inlaid table top.

Vic Martinsen had a large lighted display of fine mineral specimens from world-wide localities. He also had a fine assortment of copper artifacts.

John and Sandy Parsons displayed petrified wood and dinosaur bones from a variety of localities.

Pete Rodewald showed several of his largest slabs of amygduloidal and conglomerate load copper from Michigan He had display cases showing a large calcite stalactite and several exquisite Indian zeolite specimens. Reuben and June Shalander brought many excellent agate from the Lake Superior region and elsewhere. They also showed a fascinating collection of flint tools and arrow heads.

We look forward to next year's display at Valley Creek Mall.

Bill Cordua
Show chairman



Dick Blum and his mosaics



John Parsons explains



Vic Martinsen also explains



Pete Rodewald proudly displays his slabs

Green Rust and Invisible Gold

One of my first experiences in mineral I.D. happened when I was a teen-ager working at my Dad's store. A customer showed me a specimen of gold ore given him at the Homestake Mine in Lead, South Dakota. It had lots of brassy grains. I correctly identified them as pyrite, or, as I undiplomatically told him, fools gold. He was furious. ³It has to be real gold², he said, ³it's from a real gold mine!² What he didn't know was that the gold at the Homestake averages 0.345 ounces per ton - about 0.001% by volume of the rock. This is true of most modern gold mines - the gold is in very tiny grains. This ³invisible gold² can't be seen with the eye or even with a hand lens. It is still economic to mine by modern techniques.

The nature of the gold grains in any ore is important to its mining and recovery. Much gold is recovered in modern mining by grinding up the ore and leaching it with cyanide solutions. If the ore is not ground fine enough, or if the gold is included in minerals impervious to the cyanide solutions, as much as 20% of the gold may wind up dumped in the tailings. On the other hand too much grinding is very expensive and can also make mining an ore unprofitable. Thus research on the position and nature of this invisible gold is very important.

Recently researchers at the University of Bristol in the U.K. (Heasman, et. al., 2003) looked whether sulfides and iron oxides can remove gold in solution and tie it up as tiny grains. We often think of gold as insoluble, but it does dissolve if conditions are right. This means linking gold up with chlorine or sulfur and moving as a complex², rather than as independent ³naked² gold atoms. Even so, the concentration of gold in these natural fluids is very low. The problem is: what draws the gold out of solution and locks it up as a solid in a rock we can mine?

Heasman and his colleagues experimented with exposing gold-bearing fluid to finely ground sulfide minerals such as pyrite, chalcopyrite and stibnite. They found the gold plated out on these mineral's surfaces as grains 29-77 Angstroms across. (That's about 0.0000002 inches. Invisible? Close enough.) This mimics in the lab the occurrence of invisible gold in many natural deposits. Invisible gold also occurs in the weathering zones above many ore deposits, where it is associated with iron oxides. The iron oxides form by the breakdown of pyrite and similar minerals. This process is not simple. If you've ever had a pyrite or marcasite specimen break down on your shelf to a pile of noxious greenish-white goo and fibers, you've seen that the process. It doesn't make nicely crystalline hematite and goethite. ³Green rust² describes this poorly crystalline mixture of iron hydroxides and sulfates. This material was first described in studies of steel corrosion. Heasman and his co-workers exposed gold -bearing solutions to green rust and found that gold plated out on the surface of these minerals too. The gold complexes reacted with the partially oxidized iron, which causes them to break down and release the gold. This goes to show that not all that glitters is gold, not all fool's gold is worthless, and even icky-looking alteration products can hide real gold.

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

References:

Heasman, D.M.; D. Sherman, and K. Ragnarsdottir, 2003, ³The reduction of aqueous Au by sulfide minerals and green rust phases², American Mineralogist, vol. 88, p. 725-738

If Fed Ex and UPS were to merge, would they call it Fed UP?

Do Lipton employees take coffee breaks?

How much deeper would oceans be if sponges didn't live there?

STRESSED spelled backwards is DESSERTS

Go ahead and take risks....just be sure that everything will turn out OK

As I said before, I never repeat myself!

If you can't be kind, at least have the decency to be vague.

Trilobites in the Daytime: trilobites are renowned for having well developed eyes quite early in the Cambrian period, long before most animals. One species from the Devonian Period (about 420-350 million years ago) of Morocco has outdone most with some unusual features. With a head shield just 1 ¼ inches wide, the trilobite *Erbenochile* has eyes that stand about half an inch high. Each eye curves into a tower-like structure, somewhat resembling a soda can cut in half, and consists of about 560 lenses. Each lens is a crystal of the mineral calcite, and although they lie on a curved surface, they line up in the same direction to enable the trilobite to spot small movements at a distance. To aid this visual ability, the trilobite has an unique innovation: a lobe at the top of each eye curves over to form an eye shade. This adaptation would have blocked light rays from above that might have confused *Erbenochile*'s optics. One conclusion we can draw is that at least this species of trilobite was active in daytime, when the sun's rays sparkled through the water's surface.

source: Fortey, Richard and Brian Chatterton. 2003. A Devonian Trilobite with an eyeshade. *Science* 301: 1689 (19 September 2003) by George Rothdrake *from the Trilobite* ¾

A petrified wood fact: Many pieces of petrified wood, especially from the northwest, have a center that looks like wood, but with a layer of chalcedony or pumice between the center and the outside. This indicates that the tree was green when it was buried in hot ash. The water in the green wood evaporated, making the wood shrink. The outside was made into a cast by the heat, so the areas left between the wood and the cast were filled with chalcedony, making beautiful pieces of petrified wood. *from Kiskigen Journal 1/97 via Shop Notes and News 9/01 via Pebble Pusher 3/04 via Achates 4/04*

Cabbing tip: Transparent stones should be polished on both front and back. Otherwise, saw marks can show through and appear to be cracks. *from the Show Me Geode 12/03 via the Pegmatite 10/03 via Quarry Quips 12/03 via the Agate Picker 3/04*

A shop experience from Moose: Moose put a load of Condor agate pieces in the rotary tumbler using Keith's method of running them for a month on coarse (60-90) grit for a month – no peeking! After a month, he opened the batch to find them well rounded off and ready for polish. After a week in cerium oxide, he found that the rounded edges were nice but the flat surfaces were a bit dull. So...he lightened the load (pulled out some of the larger pieces so everything moved more freely) and ran them for a nother week in cerium oxide. Much better results. We will bring some to April's meeting. *from the Agate Explorer 4/04*

Frosted Glass: Dissolve Epsom Salts (magnesium sulfate) in a pot of boiling water until no more will dissolve. Brush a small amount of the liquid onto a window. The liquid will quickly evaporate, leaving behind a film of big delicate crystals. Really! *from Breccia 12/03 via Achates 3/04.*

Did you know?: from 1890 to 1900, 20 tons of ivory was shipped each year from Siberia to London of this ivory was taken from the remains of woolly mammoths, which have been extinct since the Ice Age. *from Achates 03/04*

Thrumming: This is an ancient method for bobbing and polishing delicate or intricate areas too small for hand or machine polishing.

A small nylon cord is held in a vise. The other end is held in the hand, pulled tight, and rubbed with an abrasive. The cord is then pulled through the opening in the design and pulled tight. Polishing is done by moving the work back and forth with pressure. Using tripoli on the cord does a fine job on sawed designs. *from Southwest Gem, via Huntin' & Diggin' 4/95 via Stoney Statements*