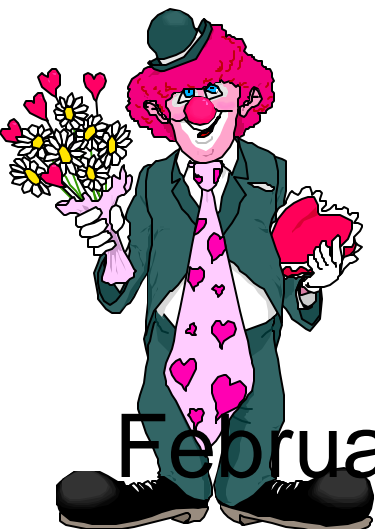


St. Croix Rockhounds
Community Education & Recreation
Independent School District #834
1875 Greeley Street
Stillwater, MN 55082

First Class



February, 1999

Please send exchange bulletins to:

Doug Olson, Editor
211 Interlachen Way
Stillwater, MN 55082

Meetings are held 7:15 PM at the Stonebridge Elementary School on W. Elm St., Stillwater, MN.

February 16th - is this month's meeting date.

The Program is:
Mexico Minerals



St. Croix Rockhound's

LEAVERITE NEWS

Vol. 24, Issue 2; February, 1999

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	Freya Kask	(651) 777-6371
Vice President	Dick Blom	(651) 735-2323
Secretary	Karen Barenz	(651) 776-8525
Treasurer	John Parsons	(651) 257-2724
Program Chairperson	Pete Rodewald	(715) 425-5561
Show Chairperson	LeRoy Betlach	(715) 425-5948
Refreshments	Helen Betlach	(715) 425-5948
Librarian	Jeanne Blom	(651) 735-2323
Historian	John Parsons	(651) 257-2724
Sunshine Committee	Marie Newlander MN	(651) 439-7809
	Esther Rodewald WI	(715) 425-5561
Tour Director	Karen Barenz	(651) 776-8525
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!

February 19th -the St. Croix Rockhound Club program for this week is "Mexico Minerals". Vic Martinson will talk about his recent trip through Mexico.



Coming Attractions

Mar 13-14: Anoka County Gem and Mineral show at Apache Plaza

Mar 20-21: Cedar Valley Rocks & Mineral Society 35th Annual Show at Teams ter Hall, 5000 J. Street SW in Cedar Rapids, IA.

Mar 27: St. Croix Rockhounds Gem and Mineral Show at the St Croix Mall in Stillwater, MN

Apr 7-10: Indian Mounds Rock and Mineral 24th Annual Show at Eastbrook Mall, 3655 28th Street SE in Grand Rapids, MI

Apr 10-11: MWF Council Meeting, Show and Convention at Veteran's Memorial, 300 W. Broad Street in Columbus Ohio.

Apr 17-18: Chippewa Valley Gem & Mineral Soc., Gem & Mineral Show at the 4H Fairgrounds Expo Center in Eau Claire, WI

Minutes of the Saint Croix RockHounds January 19th, 1998

The meeting was **called to order** by President Freya Kask.

Motion to accept **minutes** as published in the Leaverite News. MSP

Club positions were filled as follows:

Pete Rodewald: "Unofficial Program Chair"

LeRoy Betlach: Show Chairman

Helen Betlach: Refreshments Chair

Jeanne Blom: Librarian

Esther Rodewald: Sunshine for Wisconsin

Karen Barenz: Tours and Field Trips

Doug Olson: Leaverite Editor

Call Librarian Jeanne Blom if you want a book/article from the club library.

Karen and Vi served January refreshments.

Program chairman Pete Rodewald reported that tonight's program is "Show and Tell". February's program will be given by Vic Martinson who will report on his trip to Mexico. March's program will be given by Tom Buchholtz from the Wisconsin Rapids Club who will talk on Wasau Minerals.

Show chairman LeRoy Betlach wants members to start thinking about what to show at the club show on March 27th at the Stillwater Mall.

Motion to pass the **treasurer's report** given by John Parson. MSP

Pete Rodewald is donating a book "Rocks from Space" to the club library. The door prizes were also donated by Pete Rodewald.

Door Prizes were won by: Freya Kask, Karen Brown, Robert Olson and Nan Miller.

Motion to Close Meeting. MSP.

Pete led the **Show and Tell Program**. Bill Cordua showed slides of his trip to Ireland (Giants Causeway).

Respectfully submitted **by Karen Barenz**, Secretary.

1999 American Federation Regional Shows by Shirley Leeson from AFMS Newsletter 2/99

Midwest Federation

April 10-11 in Columbus OH at the Veterans Memorial, 300 Broad St. Contact Don Hall, 56 S. Columbia Ave., Columbus, OH 43209. Call (614) 252-0781 ext. 192 or e-mail: hall_dd@csg.capital.edu

California Federation

June 18-20 in Turlock, CA at the Stanislaus Co. Fairgrounds. Contact Al Troglin or Dennis Stewart at www.bell21.com/motherlode/Mother Lode Mineral Society

Northwest Federation

June 18-20 in Hillsboro, OR at the Washington County Fairgrounds. Contact Russell Snook, 73 South 26th Ave, Cornelius, OR 97113. Sponsored by the Tualatin Valley Gem Club.

AFMS/Southeast Federation

July 9-11 in Nashville, TN at the Tennessee State Fairgrounds. Contact William Buckner, 115 Carney Rd., Clarksville, TN 37040. Sponsored by the Middle Tennessee Gem & Min Soc.

Eastern Federation

August 6-8 in New Carrollton, MD at the Ramada Hotel Ballroom. Contact Russ Shew (301) 493-8936.

South Central Federation

August 21-22 in Bossier City, LA at the Bossier City Civic Center. Contact Gene Powell, 903 Lazywood, Shreveport, LA 71108. Sponsored by Ar-La-Tex Gem & Min Soc

Rocky Mountain Federation

November 19-21 in Tucson, AZ at the Pima County Fairgrounds. Contact Jason Penn, 462 South Stratford, Tucson, AZ. Sponsored by Old Pueblo Lapidary Club.

Columnar Joints

The formation of regular shapes by natural processes make some of the world's most intriguing wonders. The presence of long, mostly six-sided columns (called columnar joints) in cooled lavas is one of those wonders. No one who has seen the awesome grooved structure in Devil's Tower in Wyoming or the Devil's Post Pile in California, can forget this feature.

What about a cooling mass of magma could cause such symmetrical columnar joints? A similar phenomenon can be seen when a mud puddle dries. As it loses water, the mud cracks in symmetric shapes, forming mud polygons. This is because the lose of water causes the mud to shrink. That contraction is relieved by breaking as the dry mud becomes brittle. When things contract like this, they naturally seek the most stable position, For mud, that is a system of natural polygons, separated by vertical cracks.

Basalt and other lavas behave similarly. As lava cools, it doesn't dry out like mud, but it does shrink. As it becomes cold and brittle, the lava contracts and relieves the stress by cracking. The cracking produces a polygonal pattern that extends through the lava flow. As weathering cuts into lava, the rock breaks along the joints, exposing this geometric regularity. Although many of the polygons are six- sided, four, five, seven or eight sides columns are also relatively common. The degree and perfection to which this is developed depends on the thickness and composition of the lava and how fast it cools.

The long sides of the column form parallel to the direction of heat loss as the lava cools. In lava flows, the joints generally run vertically through the flow. This is because the lava was losing its heat upward to the air and down ward to the ground. Sometimes columnar joints are found in veins or dikes of magma cutting the rock. These joints may lay horizontally in the dike, like stacked firewood. This is because the magma in the dike was losing its heat to the cold rocks to its sides. At Devil's Tower, the joints through much of its length run vertically, indicating that heat loss was to the surface. Toward the base of the Tower, however, the joints curve horizontally. Here heat loss was easiest to the sides, probably because the tower base was far enough below the ground surface that most of the heat loss was to the sides.

Really thick lava flows have several layers of joints. Ideally, there is a well jointed lower zone, called the lower colonnade. The middle section in the flow can a more chaotic set of thinner columns and is called the entablature. A thinner, less well developed upper colonnade is also possible. The upper and lower colonnades reflect normal heat loss to the surface and the ground. In the middle of the flow, the entablature's more chaotic pattern suggests that the heat loss direction was less well defined and varied locally.

Anywhere that lava has been active is a potential place to find columnar joints. The Devil's Post Pile in California, Fingal's Cave along the sea coast of Scotland, and Giants Causeway, along the coast of Northern Ireland are world famous for this feature. Yellowstone Park and the Columbia River plateau in Washington state are other good places to look. Locally, good columnar jointing can be seen in the lava flows on Isle Royale and on the Keweenaw Peninsula of Michigan.

The appearance of these features often has them related, in name and legend at least, with giants or the devil. Yet there is nothing infernal about them. They are just a good examples of the workings of the laws of physics and geology

Dr. Bill Cordua, University of Wisconsin- River Falls

References:

Holmes, Arthur, 1965, Principles of Geology, second edition, Ronald Press.
MacDonald, Gordon, 1972, Volcanoes, Prentice Hall.

Current List of Saint Croix Rockhound club members:

note: if you are not on this list you are in danger of no longer receiving the Leaverite News

List of exchange newsletters we are currently receiving:

The Trilobite	3-M Club Rockhound News	Rock Chips
The Fractured Agate	Agate Picker	
The Agate Explorer	AFMS Newsletter	
MWF Newsletter	Stoney Statements	
Hidden Treasurers	Achates	

Stolen Gems

On several trips Marve and I have been asked if we have any extra wrapping paper, "I just need small sizes?" When we hand them several pages from an old telephone directory, they immediately say, "Hey, that's a good idea, we never thought of using that." Not only are they the right size for small 'stuff', but they do not blow all over like newspapers do. *from MWF Newsletter 2/99*

A quick and safe way to determine the hardness of a stone is to mark it with an aluminum pencil. The fainter the mark, the harder the stone is and you will not harm the tested piece. An aluminum mark can not be made on a stone harder than 7. *by "Robert Rockhound", Beehive Buzzer 5/90 via Rockhound Gazette 9/96 via Stoney Statements 12/98*

How California Got Its Appearance: According to the U.S. Geological Survey, the Pacific Ocean at one time lapped against the shores of Nevada. California was little more than islands scattered over half of the world. Not more than 10-15 percent of California is truly part of North America. Every thing else seems to have been added on about 200 million years ago. About the only part of California that is definitely native is a strip along the Nevada border east of San Francisco and south to Death Valley to the Mohave desert. The rest is like a patchwork quilt, sewn together scraps that vary vividly in color, size and shape.

The islands and submarine plateaus, some of them hundreds of miles across, were carried eastward on mobile plates of the Earth's Crust until they slammed into the west coast. The pieces arrived at different times. The gigantic collisions broke, twisted, folded, and upended the expanding region. These pieces were cemented together by granite that rose up as molten rock through the cracks.

The idea that continents growing by collision with islands was first suspected because the geology of one part of California often has no resemblance to an adjoining area. Later, these ideas were confirmed from fossil evidence. *from Gem Tim 8/97 via Rocky Review 8/97 via Stoney Statements 3/98 via the Trilobite 2/99*

Safe flame materials: If you want to make colorful flames please use the revised list below. They will work:

Table salt	yellow
Borax or boric acid	light green
Copper sulfate	green
Strontium chloride	red
Potassium chloride	violet
Calcium chloride	orange
Copper chloride	blue
Lithium chloride	crimson

from AFMS Newsletter 5/98 via Breccia 5/98 via Agate Picker 12/98



Non abrasive silver cleaning - it is possible to clean silver without rubbing off a layer of the silver as well. In a large pot, boil water containing baking soda and a sheet of aluminum foil. Put the silver into the water and the oxidation will transfer to the aluminum foil. There are several possible electrolytes which allow this to work, but baking soda is safe and cheap. Hot water is not necessary but it sure speeds things up. I also suggest a stainless steel pot rather than aluminum for obvious reasons. This also cleans coins without the telltale scratches but coin collectors will tell you that the natural "patina" makes a coin more valuable. - *ed (from my father-in-law, a chemical oceanographer)*

