

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

First Class



May, 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.

May 18th - is this month's meeting date.

The Program is:

The Manitou of Lake Superior



St. Croix Rockhound's

LEAVERITE NEWS

Vol. 24, Issue 5; May, 1999

Member of:



&



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!

May 18th - St Croix Rockhounds meeting, 7:15 pm at the Stonebridge Elementary School. The scheduled program will be "The Manitou of Lake Superior" - the story of a large Copper boulder. This is a 20 minute video. This is the last club meeting until September. Be sure to mark your calendar for the club picnic in August - come to the meeting to find out when it occurs.

Coming Attractions

June 11-12: A.E. Seaman Museum auction and sale, 5th floor Electrical Energy Resources Center, 1400 Townsend Dr., Houghton, MI. Call 906-487-2572 for more info.

June 25-26: 11th annual Knap-in at the North West Company Fur Post, 3 mi. west of Pine City, MN on Co. Rd 7. Take Pine city exit off I-35. Call Jim Regan 612-462-5568 for info.

July 5-11: AFMS/SFMS Annual Convention and Show in Nashville, TN

July 17-18: Agate Days in Moose Lake, MN. Call Tom Olsen 218-384-4961 for more info.

August 8-14: Red Metal Retreat - tours, collecting, and workshops in the Upper Peninsula. Registration \$40, held at Michigan Tech University in Houghton, MI. Call 906-487-2263 or e-mail ci@mtu.edu.

Minutes of the Saint Croix RockHounds April 20th, 1999

The meeting was **called to order** by President Freya Kask. She welcomed Avis Klinkhammer back from surgery and Dick Blom, also back from surgery. She welcomed Floyd and Eloise Kimball back from Las Vegas.

The March minutes were approved as published in the Leaverite News.

Show Chairman, LeRoy Betlach said that the recent show was small but good. He will try to get the Stillwater Mall for October 16th. He also reported on a visit to Indianhead Rock and Gem meeting in Frederic.

Our **guest tonight** is David Stalka, from Stillwater.

Librarian, Jeanne Blom reported receipt of a new book, "Minnesota Underfoot" from Pete Rodewald.

Floyd Kimball reported on work he did in Las Vegas and showed the club a bola with turquoise and coral.

Door Prizes were won by: Floyd Kimball, Reuben Shalander, Dick Blom, Brad Bonse, Freya Kask, Dave Klinkhammer and June Shalander.

Refreshments for tonight were presented by June Shalander and Jeanne Blom. May refreshments will be provided by Elaine Martinsen and Eloise Kimball.

The meeting was adjourned for the program: A photo essay by Pete.

Respectfully submitted by Dick Blom, Sec pro tem

Notes from the Club Show Chairman: *By LeRoy Betlach*

Thanks to Vi and Karen for spending a long day taking care of the club table. Also thanks to Reuben, June, Earl, Freya, Vic, Peter and Esther for helping set up Friday evening to everyone who helped to dismantle on late Saturday afternoon. The Mall also appreciates having the tables and chairs taken care of.

Gordon & Gladys Weikert: joined us at our show for the second time. They displayed Lake Superior Butterflies, Window transparencies, several boxes of cabochons, butterfly pictures, large Brazilian agates and some very brilliant lamps which they made. Hope they will join us again.

John and Sandy Parsons: had several other commitments Friday and Saturday, but they dropped off a case Friday for the show on Saturday. They showed assorted cabochons from classes at the university. A nice collection of great work. They also returned later Saturday to help.

Pete Rodewald: display Brazilian amethyst geodes; a Keokuk geode; Tunisia geodes; Okenit geodes from India; copper and silver half-breeds from Michigan; amethyst from Russia; ammonites from Ural Mountains in Russia; vivianite in clam shells from the Ukraine; marcasite from Felch, Michigan; and rhodochrosite from Colorado and Peru.

Victor Martinsen: display a variety of minerals from around the world, including a large copper-silver from the White Pine mine at Ontonagon, Michigan and a micro-wire silver from Mexico.

Reuben and June Shalander: displayed a large collection of agates, including Montana agates, Brazilian agates, eye agates, fire agates, and Lake Superior agates.

LeRoy and Helen Betlach: displayed a collection of amethyst; petrified wood; barite from Missouri, Binghamite from northern Minnesota; polished Brazilian agate slabs; and an assortment of unpolished slabs.



I'm Gonna Clean This Specimen by Mel Albright, AFMS Safety Chair

Like many rockhounds, I have some mineral samples. Like many rockhounds, the samples need cleaning up. Ugly stuff is on the surfaces of the pretty stuff. Like many rockhounds, my first thought is "I'll soak it in some acid." Like many rockhounds, I may be headed for trouble.

First, the perennial warning – AAA: always add acid. If you are going to dilute acid with water, always add the acid to the water. Why? The heat of solution of acid in water is high. If you add water to acid, it turns to steam and blows acid into the air. Very bad if your hand is still over the acid. Even worse if your head is also.

Now – about cleaning up. The list of possible acids contains some that you and I should never get near. Hydrofluoric acid (HF) cleans fluorite. But, it is so dangerous that we should never consider using it. To quote from the Material Safety Data Sheet (MSDS) for HF: "Vapors may be irritating to skin, eyes, nose and throat. Inhalation of vapors may cause irritation or burns of the respiratory system, pulmonary edema, or lung inflammation. Liquid and vapor cause severe burns that may not be immediately painful or visible. Substance is readily absorbed through the skin, penetrating the skin to attack underlying tissues and bone. Ingestion may cause severe burns to the mouth, throat, and stomach. HF may have adverse effects on kidney function, and may be fatal." The MSDS goes on for some time. What the above does not say is all those bad things occur with very low exposures. Convinced? It is not something for amateurs to be around. It is something professionals treat with much protective equipment, safety hoods, training, and care and only when required.

Hydrochloric acid (muriatic acid – swimming pool acid, HCL) can be used for cleaning. Because it is so common, many people consider it as not too dangerous. Wrong! For HCl MSDS says: "Inhalation of vapors may cause pulmonary edema, circulatory system collapse, damage to upper respiratory system, collapse. Touching it is even worse. With eye goggles and rubber gloves, you can use this material. But you must be very careful with it.

Nitric acid (HNO₃) is sometimes considered for cleaning since many nitrates are soluble in water. Trouble is that nitric acid is a strong oxidizer. That means it reacts strongly with all organic material – like people. It is also extremely corrosive. Contact with skin or eyes may cause permanent damage. The vapors can be dangerous, too. Most important – it is so reactive that it may well boil when you pour it onto your specimen to be cleaned. Use goggles and rubber gloves if you do try to use this stuff.

Sulfuric acid (H₂SO₄) is also available for use. Vapors can cause severe irritation of the respiratory system. Liquid can cause severe burns to the skin and eyes. Ingestion may be fatal.

Now a couple of more benign materials. Acetic acid (vinegar) can be used to clean specimens. It is dangerous when in strong solution – corrosive, and can cause serious burn. In the form we get it from the grocery, it is safe for us, but still corrosive.

Oxalic acid is often used to remove iron stains from quartz. Again we often underestimate its danger because it is common. Contact with the skin or eyes may cause severe irritation or burns. Ingestion may be fatal.

In summary – do not use any acid unless you are trained to do so. If you do, use protective gloves, eye protection, have good ventilation, and remember AAA and that use may generate heat and cause rapid and immediate boiling. *from AFMS Newsletter 3/99*

For the computer literate here are a list of web sites of potential interest for rockhounds:

www.commean.com/rocks/mwf; csd.unl.edu/csd.html; www.lapidarydigest.com; www.jewelersmutual.com;

www.galstar.com/-ela/afm.html; www.public.asu.edu/-mcmahan/pcmashan

from Agate Picker 12/98

Note: capitalization on the domain name does not matter, but the directory portion (after the slash) can be case-sensitive. - ed.

Mineral Identification: General visual check

A general visual examination is a good place to begin mineral identification. Determine the color as black, white, colored. If colored determine the color. Next classify the luster as metallic, semimetallic, or non-metallic. If non-metallic classify the luster as vitreous, adamantine, resinous-oily-greasy, vitreous, pearly, silky, waxy, or earthy. Note if transparent, translucent, or opaque. Be sure to check if apparent opaque mineral may be translucent in slivers or thin edges. Heft the specimen to determine if heavy, light, or somewhere in between. If there is some extra material available for test, check to determine how brittle or tough, malleable, sectile, if flexible, elastic, etc. *By Lloyd L. Brown via the Trilobite 10/98*

Flint

Ohio's Official Gemstone source Ohio DNR Division of Geological Survey

In 1965, when the 106th General Assembly designated an official gemstone for Ohio, it chose flint, a rock that has been of long and valuable service³ to man. Flint is a form of silica (SiO₂) and is therefore an enduring material. As a result, many of the flint tools and weapons of early man have survived from prehistoric times. They serve as a record of his life and habits and tells us much of what we know about his growing civilization.

Flint in some forms is also a prized semiprecious gemstone, probably the one most representative of Ohio and a particularly appropriate state symbol.

The most outstanding occurrence of flint in Ohio is at Flint Ridge, which extends from east of Newark almost to Zanesville in southeastern Licking County and the adjacent area of Muskingum County. Here may be found striking examples of flint in a wide variety of colors: red, pink, green, blue, yellow, white, and black, but still attractive when polished.

Flint is hard and brittle and breaks into fragments with razor-sharp edges. With care, it can be shaped into a variety of implements: arrowheads and spearheads, knives and scrapers. Many different groups of Indians, as far back as 9,000 BC, have painstakingly flaked small chips from larger pieces of flint in the manufacture of these weapons and tools, and their favorite material has been the colorful flint of Flint Ridge.

Indians apparently traveled hundreds of miles to obtain the valuable Flint Ridge flint. Trails led into the area from every direction and specimens from Flint Ridge have been discovered on the Atlantic seaboard, in Louisiana, and as far west as Kansas City. The ridge itself is covered with hundreds of shallow pits, now largely filled with soil and vegetation, where the flint has been quarried through the ages. Flint Ridge seems to have been neutral ground. Despite the great numbers of prehistoric Indians of different groups that met on the narrow ridge, there is not evidence that fighting took place there.

Flint was also of vital importance to early Ohio settlers, who used it for starting fires and in flintlock guns, which were in use for two hundred years. A porous form of the rock was used for buhrstones to grind grain in early mills.

The Ohio Historical Society in 1933 established the Flint Ridge State Memorial, located four miles north of Interstate 70 on Licking County road 668. The grounds are open throughout the year and visitors may enjoy a picnic area and a wooded trail winding among the old flint workings. The museum, built in 1968 over one of the original pits, is open. - *submitted by Gerri Crisp, from the Fractured Agate*



1999 AFMS/SFMS Annual Convention Nashville, Tennessee

Monday, July 5, 1999

Convention Check In: 7:30 a.m. - 9:00 p.m.
Host Hotel Lobby
Riverboat Casino Tour: 9:00 a.m. - 8:00 p.m.
Depart from the Host Hotel parking lot

Tuesday, July 6, 1999

Convention Check In: 8:00 a.m. - 9:00 p.m.
Host Hotel Lobby
AFMS Uniform Rules Committee Meeting:
9:00 a.m. - 12 Noon
Host Hotel Conference Room
Flair Bus Tour of Nashville: 9:00 a.m. - 3:30 p.m.
Depart from the Host Hotel parking lot

Wednesday, July 7, 1999

Convention Check In: 8:00 a.m. - 9:00 p.m.
Host Hotel Lobby
AFMS Registration:
Host Hotel Conference Room
AFMS Annual Convention Meeting:
9:00 a.m. - 12 Noon,
Host Hotel Conference Room
AFMS Scholarship Board: 12 Noon - 1:00 p.m.
Host Hotel Conference Room

Thursday, July 8, 1999

Convention Check In: 8:00 a.m. - 9:00 p.m.
Host Hotel Lobby
Gem Show Dealer and Display Setup Begins: 10:00 a.m.
Tennessee State Fairgrounds
ALAA Meeting: 7:00 p.m.
Host Hotel Conference Room

Friday, July 9, 1999

Convention Check In: 8:00 a.m. - 9:00 p.m.
Host Hotel Lobby
Gem Show Opens: 9:00 a.m.
Tennessee State Fairgrounds
SFMS Competitive Judges Meeting: 8:00 a.m.
Tennessee State Fairgrounds
State Director/Regional Vice Presidents Seminar:
9:00 a.m. - 12 Noon
Host Hotel Conference Room
AFMS/SFMS Past Presidents and Delegates Luncheon:
12 Noon
Host Hotel Conference Room
Editors Seminar: 1:00 p.m. to 4:00 p.m.
Host Hotel Conference Room
Gem Show Closes: 6:00 p.m.
Grand Ole Opry: 7:30 p.m. - 10:00 p.m.
transportation on your own.

Saturday, July 10, 1999

Convention Check In: 8:00 a.m. - 9:00 p.m.
Host Hotel Conference Room
AFMS Competitive Judges Meeting: 8:00 a.m.
Tennessee State Fairgrounds
SFMS Registration: 8:45 a.m.
Host Hotel Conference Room
SFMS Annual Convention Meeting:
9:30 a.m. - 12 Noon
Host Hotel Conference Room
Gem Show Opens: 9:00 a.m.
Tennessee State Fairgrounds
SFMS Delegates Luncheon: 12 Noon,
Host Hotel Conference Room
Gem Show Closes: 6:00 p.m.
AFMS/SFMS Awards Banquet: 7:00 p.m.
Host Hotel Conference Room

Sunday, July 11, 1999

AFMS/SFMS Editors Breakfast: 8:00 a.m.
Host Hotel Conference Room
Gem Show Opens: 10:00 a.m.
Tennessee State Fairgrounds
Gem Show Closes: 5:00 p.m.

from AFMS Newsletter 5/99

Silent Auction

We need help! To assist the **Middle Tennessee Gem & Mineral Society** with the expenses of this undertaking we are requesting donations of hobby related items (i.e. cabs, slabs, cutting rough, mineral specimens, extra tools, etc.) to be sold at a silent auction at the show in July. Please look around and find something that you believe someone else would want and donate it.

We would like to have the items ahead of time if possible but will be glad to take them at the time of the show.

Middle Tennessee Gem & Mineral Society, Inc. AFMS/SFMS Annual Convention and Show Official Registration Form

Please complete a form for each person registering and make photocopies for additional forms as required. If spouse is attending, but not a registrant for Federation meetings, include order for their tickets in spaces below and provide their name below yours. Confirmation of registration will be sent to all registrants. Tickets will be included in packet for pickup at registration booth at host hotel.

Name: _____ Phone: _____
Address: _____ E-mail: _____
City: _____ State: _____ ZIP: _____

Please check all items which apply:

AFMS	SFMS	Other
<input type="checkbox"/> AFMS Officer	<input type="checkbox"/> SFMS Officer	<input type="checkbox"/> Editor
<input type="checkbox"/> Past President	<input type="checkbox"/> Past President	<input type="checkbox"/> Judge
<input type="checkbox"/> Delegate	<input type="checkbox"/> Delegate	<input type="checkbox"/> Exhibitor
<input type="checkbox"/> Other (_____)	<input type="checkbox"/> Alt. Delegate	<input type="checkbox"/> Demonstrator

Society/Club Affiliation: _____

City: _____ State: _____

Tickets for which payment must be sent with registration; Prices are per person:

Admission to show (registrants pay for one day and two days are free) ___ X \$ 2.00 = \$ _____
AFMS/SFMS Past Presidents Luncheon, Friday, July 9th, 12 Noon ___ X \$ 9.00 = \$ _____
SFMS Delegates Luncheon, Saturday, July 10th, 12 Noon ___ X \$ 9.00 = \$ _____
AFMS/SFMS Awards Banquet, Saturday, July 10th, 7:00pm ___ X \$12.00 = \$ _____
Editor's Breakfast, Sunday, July 11th, 8:00am ___ X \$ 9.00 = \$ _____
Tour of Nashville ___ X \$39.00 = \$ _____

Total Enclosed \$ _____

Other Tickets (No Cost, see letter, indicate number of tickets needed if you want to attend)

Riverboat Casino Tour
State Director/Regional Vice President Seminar
Newsletter Editors Seminar

Deadline for Participant Registration is June 15th. NO EXCEPTIONS!

Remittance must accompany this Registration Form to secure reservation. Staple together all registration forms covered by same payment to assure proper credit.

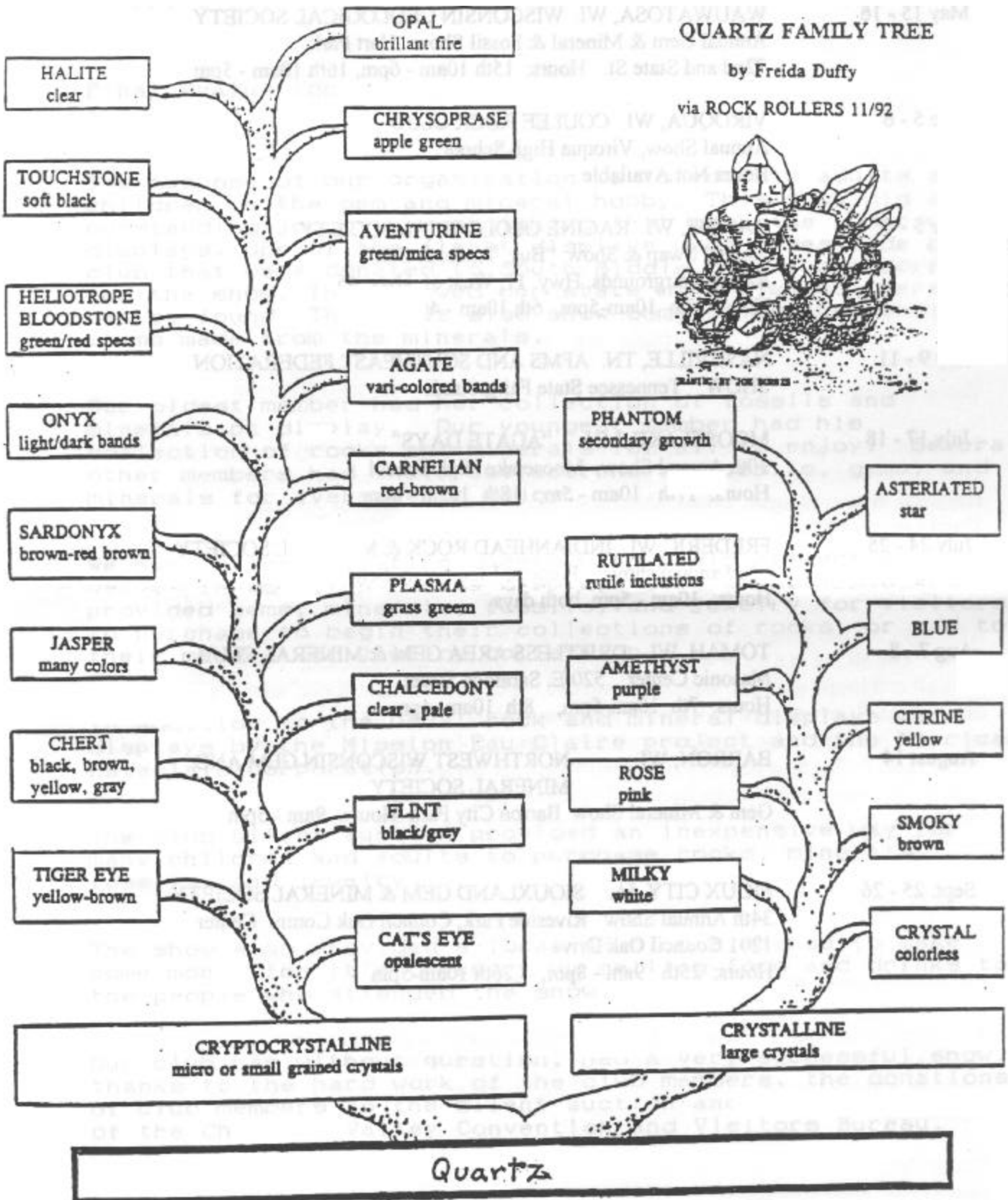
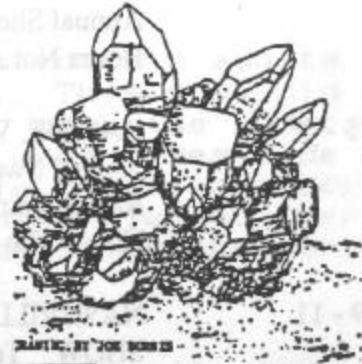
Make checks payable to: MTG&MS

Mail all Registration Forms and payment to: MTG&MS Registration
P. O. Box 1256
Murfreesboro, TN 37133-1256

QUARTZ FAMILY TREE

by Freida Duffy

via ROCK ROLLERS 11/92



References: Chesterman, C.W., *Audubon Society Field Guide to North American Rocks and Minerals*, 1978;
 Knopf, Lester j. *Minerals of Georgia*; *Georgia Mineral Newsletter*, Winter 1959 via *Tips and Trips et.al.* Via *T-Town Rockhound*
 9/94, et al via *Rock-Tok* 2/97 via *Fractured Agate* 5/99

Stolen Gems

To keep specimens from scratching the glass or wood below it, place three or more dots of silicone rubber caulk on the bottom of the specimen and place it on waxed paper to cure for a day. This produces a nice, smooth, rubber-like cushion that protects both the shelf and the specimen. *from the Jaspalite via Agate Picker 2/99*

After a tube of epoxy has been opened, dab a bit of Vaseline on the threads. The cap will not stick and mess up your tube. Also put Vaseline around the rim of your tumbler before bolting on the lid. It makes a tighter seal and it will be easier to remove the lid. *from the Jaspalite via Agate Picker 2/99*

Toothpaste with fluoride has the unique characteristic of penetrating stone, ceramics, bricks, terra cotta, and then flushing the dirt away with water. *from Arrastra 11/98 via Rock Chips 2/99*

Non-foaming detergent, such as borax compound will make your grinding wheel cut much faster. Try tri-sodium phosphate (TSPO), or one of the controlled suds detergent that are designed for automatic washers. Use about 1 heaping teaspoon of detergent to each 5 gallons of water that you drip on your grinding wheel. It helps in your tumbler also, because the foam action tends to hold the grit in suspension, and prevents it from settling. *from The Rockfinder 2/95 via Jaspers Jargon via 3-M Club RN 5/99*

Try tartaric acid for removing iron stains. It does not leave an insoluble residue like the oxalate left by oxalic acid and is not so poisonous. *Original source unknown via Rock Rollers 4/98 via the Polished Slab 5/99*

How do Diamond Blades Work?

Diamond blades don't really cut like a knife, they grind. During the process individual diamond crystals are exposed on the outside edge and sides of the rim. These exposed surface diamonds do the grinding work. The metal matrix locks each diamond in place. Trailing behind each exposed diamond is a "bond tail" (also called a comet tail) which helps support the diamond.

While the blade rotates on the arbor shaft of the saw, the stone is pushed into the blade. The blade begins to grind (cut) through the stone, while the stone begins wearing away the blade.

Exposed surface diamonds score the stone grinding it into a fine powder. Embedded diamonds remain beneath the surface.

Exposed diamonds crack or fracture as they cut, breaking down into even smaller pieces. Hard, dense rocks cause the diamonds to fracture even faster. The stone also begins wearing away the metal matrix through abrasion. Highly abrasive rocks will cause the matrix to wear faster, allowing new layers of diamond to continue cutting. This is the purpose of periodically "dressing" the blade with an abrasive block. *from Graves Tech notes and others via the Petrified Digest 10/98 via Stoney Statements 1/99*

Eras by Roger Van Cleef (MAGS 5/97)

Mesozoic: (Era) It means "pertaining to life." John Phillips coined this term in the early nineteenth century. This era originally included the Cretaceous, Jurassic, Triassic, and part of the Cambrian, but Phillips revised the stratigraphy and proposed the terms now in use.

Tertiary: This term was introduced in the eighteenth century to mean rocks overlying earlier ones, which at this time were called "primary" and "secondary" rocks. Based on the rocks in the Paris Basin, this period was divided into "epochs" with the Greek names: **Paleocene** – ancient recent, **Eocene** – dawn recent,

Oligocene – scant recent, **Miocene** – less recent, and **Pliocene** – more recent.

Quaternary: a term used by French and German geologist, meaning fourth, they describe unconsolidated materials, like those deposited by streams, lakes, and glaciers, which covered Tertiary rocks.

Pleistocene: the term, meaning most new, was invented by John Phillips in 1849, to include the Tertiary and the Quaternary. *via Rock-Tok 8/97 via Stoney Statements 10/98*