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

February 2009

First Class

Please send exchange bulletins to:

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211 Interlachen Way
Stillwater, MN 55082

February 17th – The Program is: Election of Officers

St. Croix Rockhound's

LEAVERITE NEWS

Vol. 34, Issue 2; February, 2009

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	Victor Martinsen	(715) 247-3700
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! - February 17th : St. Croix Rockhounds club meeting will be at Stonebridge Elementary School in Stillwater MN at 7:15 pm. We will be selecting new officers at tonight's meeting.

COMING ATTRACTIONS

February 17th: St Croix Rockhounds club meeting at Stonebridge Elementary School.

Fed 28-Mar 1: Anoka County Gem & Mineral Club pre-spring show at the Har Mar, 2100 Snelling Ave.; Sat. 10-6, Sun. 11-5; free admission; gems, minerals, jewelry, fossils, agates, collectibles; for info contact: Martha Miss, (651) 459-0343; email: rockbiz8@cs.com

March 14-15: Macomb, IL. Geodeland Earth Science Clubs, Inc. 29th Annual Show. Student Union Building at Western Illinois University, Murray St., Macomb, IL. Free admission. Saturday 10-6, Sunday 10-5.

March 17th: St Croix Rockhounds club meeting at Stonebridge Elementary School.

March 20-21: Cedar Rapids, IA Cedar Valley Rocks and Minerals Society Annual Show, Teamsters, Union Hall, 500 J. St. SW. Saturday 8:30-6:00, Sunday 9:30 -5:00 adults $2, students (12-18) 50 cents, youth groups and children under 12 free (with adults); programs, demonstrations, Pebble Pit for kids, silent auctions, displays, 20 dealers, special exhibit theme "Crystals." For info contact Leslie Blin, (319) 377-3339; bblin@bser.com

March 28-29: Monroe, WI. Badger Lapidary & Geological Society Show, "Driftless Treasures of the Badger State." Monroe High School, 1600 26th; St.; Sat. 9-5, Sun. 9-5; dealers, minerals, fossils, gems, jewelry, speakers, educational exhibits, wandering "Rock Wizard," demonstrations, hourly door prizes, club sale table, kids' games and Fish Pond, specimens from around the world; for info: David Zimmerman, (608) 921-0206; e-mail: David@showchair.com ; Web site: www.MonroeRockClub.org

April 4th: St Croix Rockhounds club show at the Valley Creek Mall

April 18-19: Des Plaines, IL 44th Annual Show, Des Plaines Valley Geological Society, Des Plaines Park District Leisure Center, 2222 Birch St. Sat 9:30 a.m. - 5 p.m.; Sun. 10 a.m. - 4 p.m. Jewelry, gem, fossil, rock and mineral dealers. Live lapidary arts demonstrations, silent auction, educational exhibits, kids' room, raffles and door prizes. Contact Lois Zima at (847) 298-4653 or Jeanine N. Mielecki, jaynine9@aol.com.

July 18-19th: Agate Days

Minutes of the St Croix Rockhounds
January 20th, 2009

The **meeting was called to order** by President Pete Rodewald at 7:22 pm.

There were no **minutes** from the December X-mas party.

Treasurer's report was approved as given by Treasurer Vic Martinson. Interest rate in savings account is now 0.1%.

Tonight's **refreshments** were provided by Cheryl Kopp and Joyce Sullwold (Kelch). Next month's refreshments will be provided by June Shalander and Brad Bonse or Ron Lewis.

Newsletter: If you would like to receive the newsletter by e-mail instead of snail mail, send a request to doug@implan.com.

Club Show – Bill Cordua reports that the Club show at the Valley Creek Mall, April 4, 2009 is set and the usual postings have been listed. Various club members voiced their approval about the location.

Joyce Sullwold sent a thank you note to Larry Dorau for hosting the club's x-mas party. She brought up that the club needs to reciprocate by extending an invite to the club picnic.

New Business

Pete Rodewald presented the idea of changing by-laws to allow more than one entry per category per person for Find of the Year. The motion is tabled for further discussion.

Brad Bonse presented the idea of changing by-laws to allow jewelry and polished rocks categories for Find of the Year to be for rocks worked on in the current year but allow them to be found in previous years. The motion is tabled for further discussion.

Elections – it was pointed out that elections are overdue and that several of the officers have exceeded two years in the same position which is against club by-laws.

Please get involved! We need members to step up to take positions as officers.

Show and Tell

Pete Rodewald has a ??? – a large rock found near his farm in River Falls. Bill Cordua posits that it is a basalt displaying a "chatter fault" – looks like a washboard.

Bill Cordua had a picture display of a foundation excavation near River Falls that uncovered hard sandstone from the cretaceous - unique for Wisconsin. This area is a former river or floodplain and escaped glaciation. It contains leaf fossils and Bill brought in samples.

David Flynn brought in many pieces of lake superior agate.

Mary Pagel found a large agate in 30 year old rock pile.

Find of the Year – Winners for the categories are:

Open: David Flynn for a geode found near Somerset, WI
Fossil: David Flynn for a horn coral found near Somerset
Polished: David Flynn for a polished lake superior agate.
Lake Superior Agate: David Flynn

Door Prizes were polished slabs of patricianite. Won by: Mary Pagel, Joyce Kelch, Bill Fernholz, June Shalander, Doug Olson and Norma Schutt.

Minutes submitted by Doug Olson, secretary.

Note from President Pete Rodewald: Now for future immediate club officers. I cannot remain as an officer of any kind for a while. At least until my medical situation levels out and stabilizes. I'm having difficulty conducting meetings and don't wish to tax myself needlessly anymore. I will ask Brad Bonse and Victor to make a few phone calls to members that do not do a lot at meetings to get them involved. I could use a fresh list of our membership roster for which to make a few calls from myself. Victor can provide that though. Make an appeal in the next newsletter concerning this, please.

Threat to Collecting Fossils?

In spite of the verbiage in an e-mail I've received, this bill specifically excludes any controls over non-Federal lands and it does allow recovery of significant finds. But it certainly puts the kibosh on any form of commercial collecting.

I don't know if it sets any precedents as far as regulation on non-vertebrate and plant fossil collecting for those who are inclined worry that this is just an opening salvo.

To me the worrisome thing is it specifically gives the Secretary of Interior authority to simply not allow casual collecting: "The Secretary may allow casual collecting without a permit…"

Provisions appears to exclude the casual collector from this bill - and it does for any "rock, mineral, or invertebrate or plant fossil that is not protected under this subtitle". But by definition of "Paleontological resource", all invertebrate and plant fossils can be considered protected.

The upshot is, if you are a collector of invertebrate and plant fossils on public land this bill should scare the crap out of you. Contact your representative.

Salient parts of the bill are repeated below. A complete copy of the bill is here: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:s22es.txt.pdf

111TH CONGRESS1ST SESSION Bill S. 22 [already passed by the senate]
TITLE VI—DEPARTMENT OF THE INTERIOR AUTHORIZATIONS [page 458]
Subtitle D—Paleontological Resources Preservation [page 475]
SEC. 6301. DEFINITIONS.

(2) CASUAL COLLECTING.—The term ''casual collecting'' means the collecting of a reasonable amount of common invertebrate and plant paleontological resources for non-commercial personal use, either by surface collection or the use of non-powered hand tools resulting in only negligible disturbance to the Earth's surface and other resources. As used in this paragraph, the terms ''reasonable amount'', ''common invertebrate and plant paleontological resources'' and ''negligible disturbance'' shall be determined by the Secretary.

(4) PALEONTOLOGICAL RESOURCE.—The term ''paleontological resource'' means any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth, except that the term does not include—[here it excludes items covered by other laws]

SEC. 6304. COLLECTION OF PALEONTOLOGICAL RESOURCES.

(a) PERMIT REQUIREMENT.—
(1) IN GENERAL.—Except as provided in this subtitle, a paleontological resource may not be collected from Federal land without a permit issued under this subtitle by the Secretary.
(2) CASUAL COLLECTING EXCEPTION.—The Secretary may allow casual collecting without a permit on Federal land controlled or administered by the Bureau of Land Management, the Bureau of Reclamation, and the Forest Service, where such collection is consistent with the laws governing the management of those Federal land and this subtitle.

(b) CRITERIA FOR ISSUANCE OF A PERMIT.—The Secretary may issue a permit for the collection of a paleontological resource pursuant to an application if the Secretary determines that—
(1) the applicant is qualified to carry out the permitted activity;
(2) the permitted activity is undertaken for the purpose of furthering paleontological knowledge or for public education;
(3) the permitted activity is consistent with any management plan applicable to the Federal land concerned; and
(4) the proposed methods of collecting will not threaten significant natural or cultural resources.

(e) AREA CLOSURES.—In order to protect paleontological or other resources or to provide for public safety, the Secretary may restrict access to or close areas under the Secretary's jurisdiction to the collection of paleontological resources.

SEC. 6311. SAVINGS PROVISIONS. Nothing in this subtitle shall be construed to—

(3) apply to, or require a permit for, casual collecting of a rock, mineral, or invertebrate or plant fossil that is not protected under this subtitle;
(4) affect any land other than Federal land or affect the lawful recovery, collection, or sale of paleontological resources from land other than Federal land; *[Doug Olson, ed.]*

2012 American Federation Show Business – *note from Pete Rodewald*

Hi Doug,
Forwarded is the results of the first organizational meeting concerning the upcoming federation show in 2012. As a member club of the federations we need to start thinking in terms of assistance to the Minnesota Mineral Club and do our part.... be it small. I will query what would be of help from us. This is shaping up to be the largest agate theme show ever in this upper Midwest area. I will remain the liaison contact keeping our club updated.

----- Original Message ----- **From:** MICHAEL R CARLSON

Subject: 2012 American Federation Show

The MN Mineral Club will be hosting the 2012 American Federation Show. Last night we set the tentative dates as July 20, 21, and 22 of 2012. That would make it the week following the Moose Lake Agate Days.

While the Federation has some special requirements, the theme of the show will be agates. We cannot preclude other rocks, minerals, and fossils...and there will likely be some various completive exhibits as well as business meetings, but the Federation is totally on board for an agate-themed show. That being the case, we'd like to lean a bit on those of you who put on the phenomenal show at the Weis Museum last summer.

I'm leaving on the 27th for 3 weeks in Tucson, but would appreciate it greatly if you would help me to obtain some information for our next planning meeting on March 5th.

Do you have an overall master list of things that needed to be done to put on your show...like ribbons, security, electrical needs, planning the banquet, and so on?

Can you provide a list of your speaker names and contact info for them?

Do you also have a list of your agate dealers and their contact info?

Of course, we'd also really appreciate a list of the exhibitors who brought all of the wonderful displays.

Also, we are trying to figure out the cost breakdown for a show like this. Without being too specific, would you be able to list your various costs for putting on the show? This would include things like table and chair rental, badges and ribbons, power, advertising (flyers and so on), security, speaker fees, cases, and all the other types of things necessary to put on a show like yours.

Obviously, any information that you can provide would not only help us to promote agates as you did so well in Appleton, but will also certainly be held confidential.

I was wondering how you arrived at the fee for dealer tables, and what percentage of the show costs you recouped from selling dealer space.

Thank you so much for any and all help that you and others involved with your show might provide. We certainly want to keep the agate excitement going.

Anything that you can share could be emailed to me or sent to my home address.

Mike Carlson

Celebrate!

February's birthstone – Amethyst. The word amethyst comes from the Greek word "amethystos" meaning "not drunk", and was believed to prevent its wearers from intoxication.

Demantoid: Not Easy Being Green – Article submitted by Mickey Sauricki from gemstone.org/demantoid.html

Another rare and beautiful gemstone associated with Russia is demantoid garnet: a fiery green garnet once mined only in Russia's Ural Mountains, where it was discovered in 1868. A new source was found in 1998 in Namibia, southern Africa, but it is still quite rare. Generally, Russian origin adds to the value of the material.

Demantoid garnet has fiery brilliance not usually associated with garnets: in fact it has higher dispersion than diamond. But all this fire and brilliant green color has a price: demantoid is the rarest of garnets, and is rarely found in sizes above a few carats.

When judging demantoid, look for the purity and intensity of the green color. Generally, demantoid jewelry is set with many small stones: large sizes are extremely rare. Collectors should always be on the lookout for Victorian jewelry set with small brilliant green stones, which could be demantoid. If they are, they add dramatically to the value of the piece. One indication of a lucky find would be a brilliance not seen in other green gemstones.

Demantoid garnets from Russia sometimes have byssolite inclusions, a form of asbestos. These fibers sometimes form a beautiful pattern like the tail of a horse. So they are called "horse-tail" inclusions. Demantoid with prominent horse-tail inclusions are particularly valued by some collectors: this is an example of an inclusion that adds rather than detracts from the value of a gemstone. *from Summit Gem Newsletter 11/08*

Yellowstone's Super Caldera is Awake *by Judith Washburn, MWF Geology Chair*

At the heart of Yellowstone's past, present, and future lies volcanism. Catastrophic eruptions occurred here about 2 million years ago, then 1.2 million years ago, and then 600,000 years ago. The latest eruption spewed out nearly 240 cubic miles of debris. What is now the park's central portion then collapsed, forming a 28 by 47 mile caldera (or basin). The magmatic heat powering those eruptions still powers the park's famous geysers, hot springs, fumaroles, and mud pots. The spectacular Grand Canyon of the Yellowstone River provides a glimpse of Earth's interior: its waterfalls highlight the boundaries of lava flows and thermal areas. Rugged mountains flank the park's volcanic plateau.

The Earth's crust beneath Yellowstone National Park is still restless. Precise surveys have detected an area in the center of the caldera that rose by as much as 86 centimeters between 1923 and 1984 and then subsided slightly between 1985 and 1989. Scientists do not know the cause of these ups and downs, but they hypothesize that they are related to the addition or withdrawal of magma beneath the caldera, or to the changing pressure of the hot groundwater system above Yellowstone's large magma reservoir. Also, Yellowstone National Park and the area immediately west of the Park are historically among the most seismically active areas in the Rocky Mountains. Small-magnitude earthquakes are common beneath the entire caldera, but most are located along the Hebgen Lake fault zone that extends into the northwest part of the caldera. A magnitude 7.5 earthquake occurred along this zone in 1959.

Yellowstone National Park was jostled by a host of small earthquakes for a third straight day on Monday, December 29th, and scientists watch closely to see whether the more than 250 tremors are a sign of something bigger to come. Swarms of small earthquakes happen frequently in Yellowstone, but it's very unusual for so many earthquakes to happen over several days, said Robert Smith, a professor of geophysics at the University of Utah.

"They're certainly not normal," Smith said. "We haven't had earthquakes in this energy or extent in many years."

Smith directs the Yellowstone Seismic Network, which operates seismic stations around the park. He said the quakes have ranged in strength from barely detectable to one of a magnitude 3.8 that happened Saturday. A magnitude 4 quake is capable of producing moderate damage, he indicated.

"This is an active volcanic and tectonic area, and these are the kinds of things we have to pay attention to," Smith said. "We might be seeing something precursory. Could it develop into a bigger fault or something related to hydrothermal activity? We don't know. That's what we're there to do, to monitor it for public safety."

The strongest of dozens of tremors Monday was a magnitude 3.3 quake shortly after noon. All the quakes were centered beneath the northwest end of Yellowstone Lake. A park ranger based at the north end of the lake reported feeling nine quakes over a 24-hour period over the weekend, according to park spokeswoman Stacy Vallie. No damage was reported.

"There doesn't seem to be anything to be alarmed about," Vallie said.

There is a great DVD available from the History Channel on the "Mega Disaster: Yellowstone Eruption." It presents the idea that one of America's best-loved parks may be the most geologically dangerous place in the nation. Mega Disasters explores the worst of what could happen. Stunning computer graphics and actual footage combine to create convincing pictures of the risks faced by U.S. cities. All of Yellowstone Park is the caldera of an ancient volcano that is likely to erupt again! Go to www.history.com to order.

Sources: United States Geological Survey Web Site http://www.usgs.gov/ and various newspaper accounts. *from MWF Newsletter 02/09*

PSEUDOMORPHS by Michele Yamanaka, Junior Activities Chair *from MWF Newsletter 12/08*

"Pseudomorph" is a word made of two smaller Greek ones: "pseudes" - which means **false**; and "morphe" - which means **shape** or form. So a pseudomorph is something with a false shape. It was first used to describe some kinds of fossils. Then it was used for minerals. For mineral pseudomorphs, what you see is NOT what you get.

A pseudomorph is a *mineral possessing the external (outer) form characteristic of another* (Webster's Dictionary). It will look like one thing, but be something else. A famous mineralogist, Mr. James Dana, put pseudomorphs in 5 categories, based on how they became pseudomorphs. Here are the first 4 general ways he listed.

1. **Substitution Pseudomorph** - One mineral or other material is completely substituted by another [replacement] or is gradually getting replaced [infiltration]. When this happens, the outside shape of the minera looks the same, but the color, hardness and chemical composition (its building blocks) change. There is no chemical reaction, just replacement .

 Example: wood* pores can be replaced by quartz or opal to form petrified wood. Even the wood cells appea to be there, but it is no longer wood. .

Demonstration: Dunk a rolled up paper napkin into red soda. What happens to the napkin? The soda travels up the spaces between the paper molecules. Imagine the napkin being the wood and the soda representing the silica. Then imagine this wood soaked with silica under heat and pressure. It produces petrified wood.

2. **Alteration Pseudomorph -** One mineral gradually changes into another in the same species because of a chemical reaction. Often, water is added or removed.

 Examples: anhydrite changes to gypsum; azurite changes to malachite.

3. **Incrustation Pseudomorph** - The original mineral gets coated by another mineral. Then the original mineral dissolves. The coating stays and keeps the shape of the original mineral, even though it is gone. Later another mineral can fill in the empty shape.

 Example: Fluorite gets incrusted by quartz and then dissolves .

Demonstration: Dip an ice cube into Heath Shell topping. The ice cube represents the original mineral. The shell topping represents the new mineral forming a crust on the old one. After a few minutes, the ice will melt and leave the Heath topping in the ice cube shape. This is an example of an incrustation pseudomorph.

4. **Paramorph* or allomorph** - The molecules of the mineral change but it has the same chemical composition. The mineral keeps the same shape as the original mineral, but by itself it would have a different crystal shape even though it has the same composition as the original mineral .

 Example: calcite replaces aragonite. Both are $CaCO_3$ (calcium carbonate), but they form different crystal shapes by themselves.

To describe a pseudomorph we say (replacement) **after** (original mineral). An example is —goethite **after** pyrite; the goethite replaced the pyrite, but the pyrite cube remains. It may look brown because goethite is brownish-black, but goethite does not have a cubic shape. It is cubic only because it replaced the pyrite which was in a cube shape.

Here are some common pseudomorphs: aragonite after calcite; malachite after azurite; goethite after pyrite limonite after pyrite; hematite after magnetite

Why is this important to know? Because you may find a mineral that looks like it should be something you know by the shape, but its other characteristics do not seem right. When this happens, suspect a pseudomorph.

* *Petrified wood was used as a paramorph example for more than 150 years. However, the modern definition (one mineral replacing another **mineral**) means that, technically, petrified wood is not a paramorph (Judith Washburn, MWF Geology Chair)*

References: Mineralogy. John Sinkankas, (1964, p. 86); A System of Mineralogy, 4th Edition. James Dana, (1854, 223); "Pseudomorphs: An Introduction". Si & Ann Frazier, (Dec. 19, 2004), Published in the Bulletin of the Mineralogical Society of Southern California, Vol. 75, No. 1. Jan. 2005, EASA Mineralogy Homepage.
http://www.eas.slu.edu/People/JPEncarnacion/mineraoloy/week5.htm; "Alteration Pseudomorph" Britannica Online Encyclopedia. Http://www.britannica.com/Ebchecked/

Stolen Gems *St Croix Rockhounds Leaverite News*

The Wet Look - good old Elmer's Glue mixed 50/50 with warm water works wonders at maintaining that "wet look" on all types of materials, including most shells. Just brush it on and let it dry- if it gets dusty or dulled simply soak it in warm water and reapply. I learned this technique from one of my mentors when I wanted to display some petrified wood that looked great when wet but looked like a plain old rock dry. *from Clyde Gilbert via the RockCollector2/08 and Blue Agate News, 1/08 via Stoney statements 02/08*

How did a mineral, Mercury, tell where the Lewis & Clark Party "pooped" 200 years later? In his journal, Lewis wrote that they camped near Pompey's Pillars in Wyoming. A Guidebook of the area says a Latrine is 1,300 feet from a Campfire Site. By using vapor analysis, Mercury was found where no presence of Mercury should be. Collectively, the Explorers took 1,300 "Dr. Rushes Little Cure All Pills" which were principally composed of Mercury. *by Doris Currington from Polished Slab 12/07.*

To tumble soft material that is hard to polish, start with the second coarsest grit. Fill the tumbler 3/4 or 7/8 full so the stones will roll and not fall. About 1/4 the normal amount of cerium oxide polishes better than the usual polishes. *via Canaveral Moonstone 6/08 via Backbender's Gazette 07/08*

Try cementing three pieces of tiger eye together so that the grain is perpendicular to the next. Cabochons and other stones can then be cut with interesting chatoyancy effects. from Quarry Quips via Backbender's Gazette 07/08

Pliers Marring Your Work? — Use "Plast-Dip". It's a liquid rubber coating that's available at Home Depot and comes in a variety of colors. Just dip the nose pieces of your pliers into the liquid. Pull out and let dry. It's very durable and when it becomes worn, just peel off and re-dip. *from Florida Society of Goldsmiths via Gem Cutter News 2/05 via The Glacial Drifter, 5/08 via Pick & Pack 06/08*

Natron was a preferred material for mummy purification and preservation. Natron is superior to salt as a drying agent because it chemically attacks and destroys grease and fat. It is found not only in tombs and pits with other discarded embalming materials, but also as nodules and residues in the mummies themselves. There is some debate over the method in which the natron was used. It may have been used in a way similar to the method for the preservation of fish. Dry natron would be sprinkled over the body, perhaps with sawdust, or spread with linen clothes. Other archeologists believe the body was immersed in vats containing a natron solution. Such a wet method would however be odiferous, accelerate putrefaction and thus be counterproductive to the preservation of the body. A dry body would also be more readily bandaged as well as more amenable to the attachment of amulets and other jewelry. Although mummification has supernatural trappings, its basis is rooted in simple chemistry and processes as mundane as fish preservation. It also is another example of a technology born out of observations of the properties and effects of rare minerals. *via the Breccia 9/03, via Coral Geode 10/2003 via the Rockhound 08/07*

"Natron is a naturally occurring mixture of sodium carbonate decahydrate ($Na_2CO_3 \cdot 10H_2O$, a naturally occurring form of soda ash) and about 17% sodium bicarbonate (also called nahcolite or baking soda, $NaHCO_3$) along with small quantities of household salt (halite, sodium chloride) and sodium sulfate. Natron is white to colorless when pure, varying to gray or yellow with impurities. Natron deposits occur naturally as a part of saline lake beds in arid environments. "Natron is an ingredient for the making of a distinct color called Egyptian blue. It was used along with sand and lime in ceramic and glass-making by the Romans and others at least until 640 CE. The mineral was also employed as a flux to solder precious metals together". *from Wiki*

Polish: Try adding a few drops of liquid detergent to the water you use for mixing cerium, tin oxide or chrome oxide. It makes the polishing much easier and faster as the detergent holds the polishing compound to the wheel/buff longer. *from Calgary Lapidary Journal 12/03 via Blue Agate News 2/07, Stony Statements 09/07, Fredericksburg Rockhound News 10/07 via Stone Chipper 01/08*