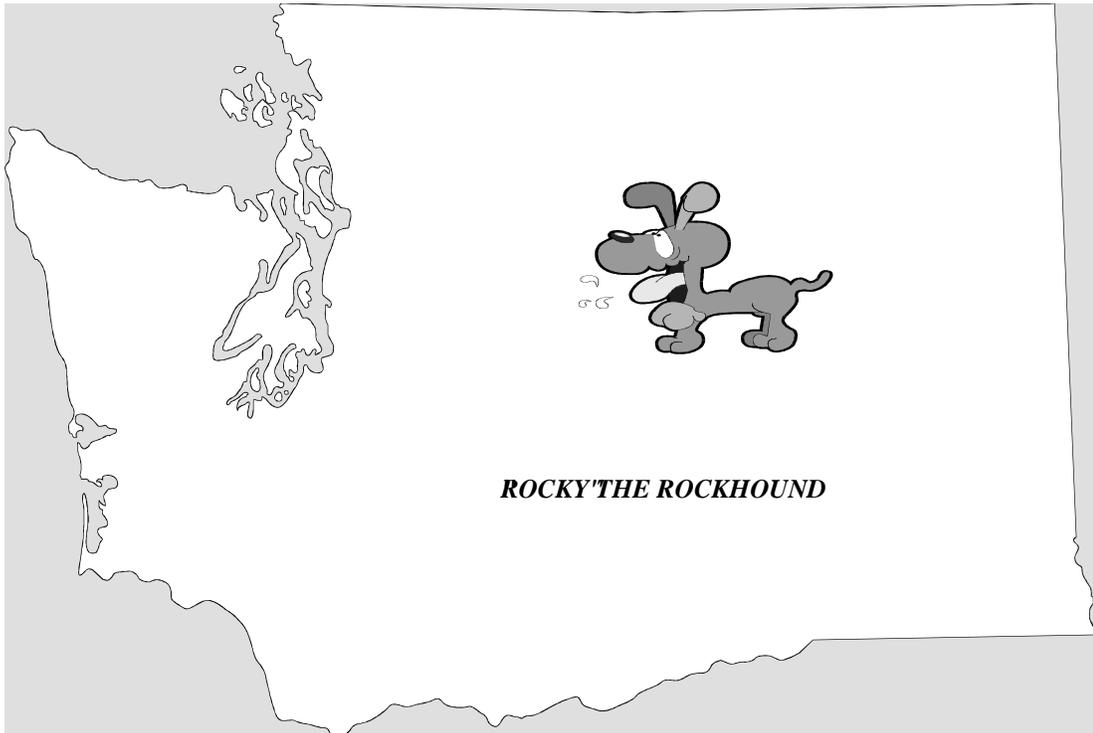

◆ **The Council Reporter** ◆

Volume 34, Issue 7

October 2014



**Official Publication of the
Washington State Mineral Council**

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The West Side Board meets the third Tuesday of each month between Quarterly meetings, unless a meeting is specially called. Usually no meeting in July and December dependent on Board action.

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Some Notes and Safety Tips on Using Oxalic Acid

by Duane Leavitt

One often reads about and sees reference to oxalic acid (wood bleach) in publications when the topic of cleaning minerals is discussed. This chemical, while an excellent cleaner for some types of minerals, poses some serious health risks which are not widely understood and can be confusing when considered in light of other acids that are sometimes used for cleaning purposes.

Oxalic acid, chemically $H_2C_2O_4$, is an organic acid, which means that it contains, among other things, the element carbon. At room temperature it is a white, crystalline, odorless, solid looking a lot like granular sugar in physical appearance. It melts at 101 degrees C and will vaporize at around 150 degrees C.

When we look at oxalic acid, strictly as an acid, we find that as acids go it is quite weak. Acid strength is measured by how much hydrogen acids give up in water solutions; a convenient measure of this is what is known as the K_a value, ionization constant value, of the acid. In a standard water solution oxalic acid has ionization constant (K_a) values of 0.0054 (primary) and 0.0000523 (tertiary). Compare this to K_a values of hydrochloric acid, K_a : 1; and nitric acid, K_a : 27.79 and it is obvious that oxalic acid is nowhere near as strong or as soluble in water as these last two acids, which are also used in mineral cleaning. This last statement is very true and is a BIG part of the problem with understanding oxalic acid. There is NO CORRELATION between acid strength and how poisonous it is, it's TOXICITY.

As an organic acid, oxalic acid, and/or it's water solutions, can be absorbed directly through the skin into the bloodstream, powders from the dry acid and vapors from solutions can be absorbed into the body through the lungs - this has serious implications for those who like to clean specimens in a crock pot of simmering oxalic acid solution in their basement; residues from improperly neutralized and rinsed specimens may be absorbed through later handling. Dust from the solid acid can damage the cornea of the eyes.

In the body, oxalic acid removes calcium from the blood, forming insoluble crystalline masses of calcium oxalate that eventually wind up in the kidneys where they will obstruct and abrade the kidney tubules causing the kidneys to bleed. They may block the kidneys and have to be removed surgically - kidney stones. In respiratory passages the material will cause severe irritation, possible hemorrhaging of these tissues and bums. When the material gets into the digestive tract it causes severe gastroenteritis and vomiting, shock and convulsions, cardiovascular collapse and/or kidney failure which can lead to death. A lethal dose of oxalic acid is somewhere between 5-15 grams. Severe Health problems occur at much smaller levels of exposure.

OSHA recommends a TLV (threshold limit value) of no more than 1 mg (that is one thousandth of a gram)/ cubic meter. For comparison, 1 restaurant packet of sugar contains about 1 gram of material or 1000 times the recommended exposure value. Unlike neutralized hydrochloric, muriatic and nitric acids, the products of "neutralized" oxalic acid are STILL poisonous - they just are no longer acidic. Oxalate compounds of any nature are still a threat to your health. People wishing to use oxalic acid can do so successfully and safely provided they incorporate the following procedures into their mineral cleaning:

1. Always use long-sleeved rubber gloves, a splash proof apron, and full eye/nose protection when handling either dry oxalic acid crystals or oxalic acid solutions.
2. Avoid heating solutions of oxalic acid.... it will work cold, it just

November 1, 2014 Combined Board Meeting AGENDA

Pres. Opening of Meeting
Treasurer's Report
◇ Kathy Earnst
Committee Reports
◇ Wagonmaster
Old Business
New Business
Open Comments
Adjourn

Tentative Meeting Calendar for 2014

West side board meetings:
1/21, 2/18, 4/15, 6/17, 10/21

At 7:30PM at the
Maplewood Clubhouse
8802 196th St SW, Edmonds

General meetings :
4/5, 5/3, 9/20, 11/1

All general meetings will be held at:

Palace Café
4th & Main
Ellensburg
Meeting @ 9:30 AM

takes longer.

3. Keep containers of soaking specimens covered so that acid vapors stay inside the container. Lids should NOT be airtight.
4. Rinse any specimens cleaned with oxalic acid with copious amounts of water and test with pH paper to ensure that all acid is gone. A post treatment bath in dilute (household) ammonia or sodium bicarbonate solution is a good idea.
5. In the event of a spill removed affected clothing immediately, rinse affected areas with copious amounts of water, rinse and wash affected clothing. If there is any doubt as to the severity of the exposure seek medical help immediately.
6. Small amounts of used solutions of oxalic acid can be disposed of by the following method:

1. Neutralize the solution with sodium bicarbonate or sodium hydroxide; TEST with pH paper to make sure it is neutral (or slightly basic).
2. Dilute the solution from step 1 above, 20 fold with water (example, to 1 pint of neutralized acid solution add 20 pints of water.
- 3.) Pour solution 2 down the drain with plenty of cold water. This disposal technique is identical to Flynn Scientific disposal technique 24A (Flynn, 2006).

(Continued on page 4)

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7. Read up on cleaning techniques (Cleaning and Preserving Minerals by Richard Pearl is a good place to start) and educate yourself about techniques, materials and alternatives.

Via Stone Age New 10/14, via AFMS Newsletter 9/14

Fire Agate

by Dan Driscoll

Fire Agate is a gemstone discovered some time in the 1940's. It is a unique type of Chalcedony. Its brilliant, varied, iridescent hues span the full color spectrum. The best stones can rival the best opal. As it is a microcrystalline quartz it will not crack or graze and it is a durable stone.

The situation with Fire Agate has been reminiscent of what happened with the first finds of black opal at Lightning Ridge. The stones were so different that it was a while before the stone was accepted. Most gemologists and geologists were puzzled the first time they saw Fire Agate. Fire Agate has been found to be indigenous to the South West USA and Central and Northern Mexico. The first recorded discovery seems to be at the end of 1945 at Wiley Well also known as Coon Hollow in South eastern California near the Arizona border.

This may not be the first discovery as many prospectors and rock hounds are secretive about disclosing their source. Sometime in the 1960's it was discovered in Mexico. I first saw Fire Agate in Mexico in 1973, but it was not until the late 1970's that I saw fine quality stones. At this time the mines at Deer Creek, Arizona and the Mexican mines in the state of Aguascalientes began to produce stunning fine quality material. There was much interest and demand for these stones. This was not to be for long, almost simultaneously disaster struck at the Deer Creek mines and at the Mexican mines there was severe drainage problems. The mines became ponds for much of the year and there were mud slides and collapsing in of the mines. Some of the Mexican mines were up to 100 feet deep.

It must be understood that the mines in Mexico and Deer Creek Arizona were in very isolated mountainous areas often just a trail into the mountains. It was a problem, and often impossible to get in heavy earth moving equipment to remove the top soil or over burden to expose the Agate bearing basalt and Rhyolite country rock. It is also not easy to extract the Fire Agate from pockets and seams in the rock.

Fire Agate is a rare form of Chalcedony. It is hydrothermally formed when rising hot water, saturated with colloidal silica and iron oxide, enters seams crevices and pockets in the country rock. As this solution cooled, the Silica formed Chalcedony often in botryoidal form on any surface available. As the solution lost Silica, too much iron oxide remained in suspension to re-stabilize this. The iron oxide formed extremely thin layers of goethite or limonite crystals upon the Chalcedony. This cycle kept repeating, thus forming Chalcedony with extremely thin layers of iron crystals. These are known as Schiller layers. Latest research indicates when light passes through them it causes the interference color in Fire Agate. It is the same chemical formula as any other type of quartz SiO_2 .

Fire agate has many unique properties. Fire agates are a member of the agate family. These stones share many of the same features of the other members of the agate family, but also have many features that

are unique. The colors in this stone vary, not only at first glance, but also as you turn the stone in the light. Like all gemstones, the fire agate has its own set of properties that make it different from other gemstones.

Scientific Properties

The fire agate stone is in the same family as quartz. It has a specific gravity of 2.57 to 2.64 and an index of refraction of 1.53 to 1.55. A fire agate's hardness ranks 6.5 to 7 on the Moh's scale of hardness. This puts it on the upper end of the middle range. The color of the stone varies greatly from stone to stone. Many of them are even colored by artificial means to create a more consistent color.

Metaphysical Properties

According to Crystals and Jewelry website, fire agate is thought by some to have special metaphysical properties. Fire agates are a symbol of courage, strength and protection, which makes the stone a highly desired agate among those who are facing difficult times. People suffering from certain physical ailments will also sometimes turn to the fire agate for its supposed healing powers. This stone is thought to help heal ailments of the intestines, circulatory system and lymph system.

For those who believe in mystical lore, fire agate offers some unique properties, according to Crystals and Jewelry. This stone is used during spells to aid communication, both speaking and writing. Those who have issues with writing or public speaking may find their fears dissipating if they are wearing a piece of fire agate jewelry. Old stories claim that the fire agate contains the power to stop gossip, relieve fear and avert any harm.

Unusual Properties

The fire agate has properties that are unlike many other gem stones, including others in the agate family. The fire agate is thus named because a well-polished one will look like there is a fire burning within the stone. A fire agate creates an optical illusion of more depth and an interesting combination of color within the stone.

How to Recognize Fire Agates. Difficulty: Moderately Challenging

Instructions

Things You'll Need: Hammer, Chisel, Stiff brush, Goggles or safety glasses, Bucket, Spray bottle of water.

Find a good source for fire agates. There are dig-for-fee commercial mines in southern Arizona. You can also look for fire agates in California, around the Colorado River and parts of Mexico.

Be prepared to do some hard-rock mining. You might have to cover a large area before you find a seam or pocket of potential fire agates.

Use your hammer and chisel to break off pieces of rock. Fire agate is usually surrounded by dark brown quartz.

Bubbles of color in rough fire agate

Fire agate in the rough can be hard to spot. Instead of regular bands of color and crystals found in geodes and quartz, fire agates often have a surface marked with irregular bubbles, bumps or swirls of color.

You might have to break the stone in half to see the fire agate.

(Continued on page 5)

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Spraying the stone with water can help highlight any color. Look for the iridescent reds, greens, yellows or blues that are characteristic of fire agate.

If you do not want to dig, look around in tailings at mine sites. A piece of fire agate may have been left behind.

Polish the stone with care. Fire agate is a layered stone, and polishing one layer too deep will destroy the colorful effect.

Directions for Cutting Fire Agate (Notes my father left)

Inspect the rough stone by wetting with water under a bright light. Direct light is ideal. (The stone is fragile so hold it over a padded surface.)

Observe the depth and location of color layers. The gem material (fire layers) are usually covered by chalcedony. Trim away excess chalcedony by sawing, grinding, or sanding. Sawing should be used only for the top portion of chalcedony which has no color. Leave 1/8th inch for grinding.

For grinding, use a 100 grit wheel. Grind for not more than four or five seconds. Stop and examine for signs of fire under bright light. Shape the stone in any direction the fire indicates. Do not overheat the stone.

Remember — Grind slowly and inspect often!

When you are satisfied that you have exposed all the fire, grind on a 600 grit wheel to eliminate scratches. Then start with 325 diamond paste, moving to 600, then 1200, 3000, and finally 50,000.

Reminder: In all of the above steps of grinding use plenty of water. Do not overheat.

Via CSM Tumbler, 10/14, via West Seattle Petroglyphs, 5/14; from Maplewood News, 3/11

Westside Board Meeting Minutes 10/21/14

In attendance; Bob and Jackie Pattie , Glen Morim, Ed Lehman, Brad Johnson, Diane Myers, Vesta Bettinger .

The meeting was called to order at 7:30 PM by Vesta Bettinger.

There was no Treasurers report as she is on vacation.

Wagonmaster Ed Lehman said we needed suggestions for new field trips. It is hoped some one in the Spokane area will have some. Successful field trips to Money Creek, Happy Thoughts Creek were held.

A college geology group from Michigan were taken to Walker Valley. They were unable to get the gate unlocked and had to walk in, however there appears to be parking at the gate now for about 8 cars. Botryoidal Jade, Citrine, and amethyst have all been found at Walker Valley.

A small group also went to Salmon Creek, they had to hike in about 1/4 mile.

The last scheduled trip for this year is the Nov. 8th trip to Blanchard Hill for stilpnomelane and chert.

Lolo Pass is closed to mineral collecting because diggers were undermining trees and leaving holes unfilled. This is a 30 square mile area.

Bob Pattie has made new map books and will have them available.

There was a discussion of rules regarding locating mining claims. You can no longer patent claims anymore, the BLM will only lease the mineral rights.

Bob also said he has lists on the web site of information for mine site availability, and rules regarding that.

Claim maintenance fees are rising from \$150 to \$250 on new claims.

Ed Lehman said to go to the SL2000 website (or search Google for SL2000). This is a website site you can search for information on past and current claims. You need to know the township, range, and section numbers of the mine site to get the information.

Bob said the Forest service is doing a recap of Forest Service roads in the Greenwater and Bellingham areas for multiple use.

The DNR's new focus in meetings is on roads, who uses them, what type activity they are used for, such as motor vehicles, horses, off road vehicles, rock hounds , hunters etc.

The ORV people are inviting us to join them in their monthly clean ups.

The list of rock clubs in the State needs to be updated. Bob has submitted these updates to the State but they fail to use it to update their website.

A Nominating committee is needed for next years officers.

We need one east side and two west side Trustees.

Perry will move to President, Vesta will move to 1st Vice President.

We need a 2nd VP from the Eastside.

Lisa will move to Past President, Diane Myers will stay as Secretary.

Kathy Earnst will stay as Treasurer.

Dales term is up.

Need to ask Dave if he wants to stay on, also same for Stu and Bob.

Meeting was adjourned at 8:40 PM.

Respectively submitted,

Diane Myers; Secretary

WSMC FIELDTRIPS 2014 (Will be updated—see mineralcouncil.org)

The Washington State Mineral Council plans guided fieldtrips to collecting sites. Open to member clubs, and the general public. Most trips are free. Included will be Pow Wow trips (must join to go on trips). Host clubs and contact persons will be set up as I gather info. For now, go to mineralcouncil.org for updates, or contact Ed Lehman @ wsmced@hotmail.com , or home (425) 334-6282 cell (425) 760-2786.

Date	Host	Site	Meeting place and time	Material	Tools
01/18	Kit	Beaver Valley	10:30 @ info Center BeaverValley Rd	Chert & Zeolites	Hard rock tools
02/15	Msvl	Cedar Ponds	9:00 @ Monroe Jack n Box	Jasper	Dig & Lt hard rock tools
03/15	Msvl	Cherry Creek	9:00 @ Duval Safeway	Jasper	Dig, Lt hard rock, wading
04/12-13	POW	Saddle Mt Mattawa, WA	8:00 @ boat launch	Petrified wood	Dues required \$7.50/each \$15/family
04/19	MtBkr	Racehorse Creek	9:00 @ IGA @ Nugents Corner	Fossils	Dig & Lt hard rock tools
05/17	Elb	Saddle Mt	9:00 @ Mattawa Leprechaun Market	Petrified wood	Dig, Lt hard rock
06/01	Canceled	Tunk Creek, Riverside, WA	9:00 @ store (park)	Thulite -\$1 #	sm sledge hammer
06/14	Spk	Emerald Creek	9:00 @ Emerald Creek Star Gar- net Area, Idaho	Star garnet	Tweezers
06/25-29	POW	Madras, OR	8:00 @ Fairgrounds see dues above	Petrified wood, agate, jasper, T-Eggs -\$1 #	
07/13	Spk	Lolo Pass	8:00 @ Lolo Hot Springs	Smokey quartz	Dig, Lt hard rock
07/19	Msvl Darrington	Darrington Rock Show	11:00	Travertine	Hard rock tools
08/02	Shltn	Salmon Creek	I-5 Park & ride in Toledo	Agate, petrified wood, pseudo coprolites	Wading
08/16/	NWOS	Greenwater	9:00 @ Enumclaw Ranger Station	Agate, Jasper	Dig, Lt hard rock
09/6-7	POW	Red Top	8:00 @ camp (W fork M fork jct) Dues, see above	Agate, geodes, jade, jasper	
09/13	NWOS	Little Naches	9:00 @ Enumclaw Ranger Station	Thunder-Eggs	Dig, Lt hard rock
10/04	Msvl	D.P. Mine & H.T. Creek	9:00 @ Money Creek Camp	Ore, picture Jasper	Lt hard rock, light
11/08	MtBkr	Blanchard Mt	9:00 @ I-5 240 exit gas Station	Stilpnomelane & Chert	Hard rock tool

Host	Club	Contact Info
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Kit = Kitsap M & G Soc— T B D

Msvl = Marysville R & G Club - Ed Lehman wsmced@hotmail.com (425) 334-6282 or (425) 760-2786

MtBkr = Mount Baker R & G Club—Kris Menger @ (360) 927-0994 kmenger@comcast.net

Elb = Ellensburg R Club—Steve Townsend—(509) 933-2236 srtrocks@aol.com

Spk = Spokane Rock Rollers—Mike Shaw—(509) 244-8542 mikeshawmoose@yahoo.com

NWOS = Northwest Opal Soc—Tony Johnson—(253) 863-9238

This is just a work in process. Participants please respond for corrections and updates.

Thanks, Ed

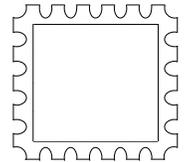
Local Area Shows for 2014 and 2015

November 2014 8th 9am - 5pm 9th 10am - 5pm	Skagit Rock and Gem club	“Treasures of the Earth” Annual Rock and Gem Show	Sedro Woolley community Center 700 Pacific Street Sedro Woolley, WA
November 2014 8th 9am - 5pm 9th 10am - 5pm	Maplewood Rock and Gem Club	Annual Fall Show	Maplewood Rock and Gem Clubhouse 8802 196th ST SW Edmonds WA
December 2014 6th 9am - 6pm	Maplewood Rock and Gem Club	Annual Winter Bazaar	Maplewood Rock and Gem Clubhouse 8802 196th ST SW Edmonds WA
February 2015 7th 9am—5pm 8th 9am—4pm	Whidbey Island Gem Club	50th Annual Sweetheart of Gems Show	Oak Harbor Senior Center 51 SE. Jerome Street Oak Harbor, WA
February 2015 21st 10am—6pm 22nd 10am—5pm	Idaho Gem Club	Annual show Adults \$3.00 Children 12 & under free	Expo Idaho 5610 Glenwood Boise ID 83714
February/March 2015 28th 10am - 6pm 1st 10am - 5pm	East KingCo Club	Annual Rock and Gem Show	Pickering Barn 1730 10th Ave NW Issaquah, WA
March 2015 7th 10am - 6pm 8th 10am - 5pm	Owyhee Gem & Mineral Society	61st Annual Rock and Gem Show	O'Conner Field House 2200 Blaine Caldwell, ID
March 2015 14th 9am - 5pm 15th 9am - 5pm	Magic Valley Gem Club	64th Annual Show	Twin Falls County Fairgrounds 215 Fair Ave. east of Filer on US Hwy. 30
March 2015 27th 10am – 6pm 28th 10am – 6pm 29th 10am – 4pm	Rock Rollers Club of Spokane	56th Annual Gem, Jewelry and Min- eral Show	Spokane County Fair & Expo Center N.604 Havana Spokane WA
April 2015 11th 10am - 6pm 12th 10am - 4pm	Yakima Rock & Mineral Club	Annual Parade of Gems Adults \$3.50, Students \$2.00 Under 12 free w/adult	Central Washington State Fair Ground Modern Living Building 1301 South Fair Avenue Yakima WA 98901
April 2015 17th 9am - 6pm 18th 10am - 6pm 19th 10am - 4:30pm	Willamette Agate & Mineral Society	Annual River of Gems Show	Polk County Fairgrounds 520 S. Pacific Hwy Rickreall, OR
April 2015 18th 10am - 5pm 19th 10am - 4pm	Lakeside Gem & Mineral Club	Annual Rock & Mineral Show	Benton Franklin County Fairgrounds 1500 S. Oak Kennewick, WA
May 2014 2nd 9am—5pm 3rd 10am—5pm	Everett Rock and Gem Club	62nd Annual show	Everett Community College Student Fitness Center, 2206 Tower St Everett, WA
May 2015 2nd 9am—5pm 3rd 10am—4pm	Umpqua Gem & Mineral Club	45th Annual Show	Douglas County Fairgrounds I-5 Exit 123 Roseburg, OR
June 2015 6th 12pm—5pm 7th 10am—5pm 8th 11am—5pm	Puyallup Valley Gem & Mineral Club	Annual show	Swiss Park 9205 198th Ave. E. Puyallup, WA

Combined Board Meeting
November 1, 2014
9:30 AM

Palace Café
4th & Main
Ellensburg

COUNCIL REPORTER, Monthly publication of The
Washington State Mineral Council



WASHINGTON STATE MINERAL COUNCIL
27871 Minkler Road
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