

WHITTIER

ROCKHOUNDER

GEM & MINERAL
SOCIETY

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WGMS January General Meeting
January 22 at 7:30 PM



Award winning rock paintings seen at Quartzsite

ROCKHOUNDER

THE PREZ SEZ:

Happy New Year everyone! Quartzite is coming up and that
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 yourself for not being ready.

The fieldtrip planning meeting is on January 31st at Mark &
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 get angry about it. The more input there is the better the future
 fieldtrips could be.

There seems to be another couple of challenges coming our way
 as members of rockhound societies. One is the mediation of the
 land that is disturbed in building the various alternative power
 generation plants; this is a double whammy for us. The other is a
 proposal from Senator Feinstein who has proposed a Route 66
 monument that would effectively close the desert to collecting
 and other activities. Go to the BLM and answer a survey on
 collecting in the desert ó deadline for answering the survey is
 February 15, 2015.

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Somewhere in Calif.
 Joe Goetz

WGMS General Meeting

Thursday, January 22, 2015

at 7:30 PM

"????DVD?????"

The January General Meeting date usually falls right on the starting date for Quartzsite and the QIA/Pow-Wow. Consequently, many of our members will be off in Arizona anyway.

It is interesting and informative.

Marcia Goetz

DO YOUR DUES

Meeting. In spite of ever-increasing dues, \$5 for juniors (under 18 years), \$15 for individuals, and \$25 for families.

NOTE: People who have not paid their dues by the end of March will be dropped from the mailing list.

Whittier Gem & Mineral Society to:

Whittier Gem & Mineral Society
PO Box 865
Whittier, CA 90608-0865

Thanks!

January Fieldtrip Info

For January the fieldtrip is to Quartzsite, Arizona for the great rockhound flea market. This is for the most part a self-guided tour amongst the vendors. There will be other side trips when the various groups find one another.

Most of our members will be going out the weekend of QIA/Pow-Wow and if you get tired of shopping at the various shows we will lead field trips to nearby sites. **Chris Kyte will lead the field trips Saturday and Sunday. Briefing is on Saturday at 5:00 PM at the Rockhound Club on Main Street.** The local rock club (the Roadrunners) also lead daily field trips during Pow-Wow to various collecting sites. Their list of available outings is at their Club booth near the large central building at the QIA show.

The schedule of events at Quartzsite is as follows:

- Jan 01 - Feb 28 Desert Gardens
- Jan 02 - Jan 11 Tyson Wells
- Jan 05 - Jan 25 Main Event (to be confirmed)
- Jan 21 - Jan 26 QIA/Pow Wow**

For those that camp, there is Scadden Wash, and we were invited to join the CFMS folks at Plomosa Rd. BLM Camping Area. The choice is yours. Hopefully if you are staying at a motel, you already have reservations

H q t " r n c p p k p i " p g z the date for the planning meeting will be held Jan 31, 2015 at the home of Mark & Linda Nelson. Call me at (626) 260-7239 for the address and directions.

*Lost somewhere in Calif
Joe Goetz*

Be Safe óBe Well

Southwest Federation, Safety Committee
Don Monroe, Chairman

This article is a portion of an e-mail received by a dear friend of mine and forwarded to me. Neither of us know who is the author because I would love to give that person credit. However this article is so good and so timely that I am including it for your education and enjoyment.

Tool Descriptions

DRILL PRESS: A tall upright machine useful for suddenly snatching flat metal bar stock out of your hands so that it smacks you in the chest and flings your beer across the room, denting the freshly-painted part which you had carefully set in the corner where nothing could get to it.

WIRE WHEEL: Cleans paint off bolts and then throws them somewhere under the workbench with the speed of light. Also removes fingerprints and hard-earned calluses from fingers in about the time it takes you to say, "What the...??"

ELECTRIC HAND DRILL: Normally used for spinning pop rivets in their holes until you die of old age.

SKILL SAW: A portable cutting tool used to make studs too short.

PLIERS: Used to round off bolt heads. Sometimes used in the creation of blood-blisters.

BELT SANDER: An electric sanding tool commonly used to convert minor touch-up jobs into major refinishing jobs.

HACKSAW: One of a family of cutting tools built on the Ouija board principle. It transforms human energy into a crooked, unpredictable motion, and the more you attempt to influence its course, the more dismal your future becomes.

WISE-GRIPS: Generally used after pliers to completely round off bolt heads. If nothing else is available, they can also be used to transfer intense welding heat to the palm of your hand.

WELDING GLOVES: Heavy duty leather gloves used to prolong the conduction of intense welding heat to the palm of your hand.

OXYACETYLENE TORCH: Used almost entirely for lighting various flammable objects in your shop on fire. Also handy for igniting the grease inside the wheel hub you want the bearing race out of.

TABLE SAW: A large stationary power tool commonly used to launch wood projectiles for testing wall integrity.

HYDRAULIC FLOOR JACK: Used for lowering an automobile to the

ground after you have installed your new brake shoes, trapping the jack handle firmly under the bumper.

EIGHT-FOOT LONG YELLOW PINE 2X4: Used for levering an automobile upward off of a trapped hydraulic jack handle.

E-Z OUT BOLT AND STUD EXTRACTOR: A tool ten times harder than any known drill bit that snaps neatly off in bolt holes thereby ending any possible future use.

BAND SAW: A large stationary power saw primarily used by most shops to cut good aluminum sheet into smaller pieces that more easily fit into the trash can after you cut on the inside of the line instead of the outside edge.

TWO-TON ENGINE HOIST: A tool for testing the maximum tensile strength of everything you forgot to disconnect.

CRAFTSMAN 1/2 x 24-INCH SCREWDRIVER: A very large pry bar that inexplicably has an accurately machined screwdriver tip on the end opposite the handle.

AVIATION METAL SNIPS: See hacksaw.

PHILLIPS SCREWDRIVER: Normally used to stab the vacuum seals under lids and for opening old-style paper and- tin oil cans and splashing oil on your shirt; but can also be used, as the name implies, to strip out Phillips screw heads.

STRAIGHT SCREWDRIVER: A tool for opening paint cans. Sometimes used to convert common slotted screws into non-removable screws.

PRY BAR: A tool used to crumple the metal surrounding that clip or bracket you needed to remove in order to replace a 50 cent part.

HOSE CUTTER: A tool used to make hoses too short.

HAMMER: Originally employed as a weapon of war, the hammer nowadays is used as a kind of divining rod to locate the most expensive parts adjacent the object we are trying to hit.

MECHANIC'S KNIFE: Used to open and slice through the contents of cardboard cartons delivered to your front door; works particularly well on contents such as seats, vinyl records, liquids in plastic bottles, collector magazines, refund checks, and rubber or plastic parts. Especially useful for slicing work clothes, but only while wearing them.

DAMMIT TOOL: Any handy tool that you grab and throw across the garage while yelling "DAMMIT" at the top of your lungs. It is also, most often, the next tool that you will need.

BENCH SANDER: Electric tool used to turn major refinishing projects into sawdust -- secondary uses are removing ridges from knuckles and all traces of grooves on fingers.

SFMS Lodestar, 4/09

Dendrites vs. moss agates:
Orbicular Jasper vs. Polka Dot Agate

We are usually delighted, but not surprised, to find inclusions in crystals, e.g., quartz of one color or another, rutile, line varieties of quartz, however, have a mysterious ambiance that brings out the name-making propensities of collectors. When our vision of inclusions is obscured, our imagination takes hold.

Chalcedony (clear to cloudy), agates (clear but usually banded), and jasper (opaque) are all variations of silica oxides, with hardness between 6 and 7, which makes them very suitable for polishing. They may all have included material, and the nature of the inclusion is dictated by the composition of the host rock material and the manner of rock formation.

Dendritic chalcedony and moss agate are terms or names frequently applied to the same material. They are basically similar, but dendrites can form not only in chalcedony and agate, but also on limestone and soapstone and some sandstones. The dendrites, so called from the Greek dendron, or tree, are branching structures of mainly manganese and iron oxides, in or on the host material.

Dendrites occur in many places in the world, basically whenever water rich in oxides flows across rocks. The dendrites form on a surface and are two-dimensional, like snowflakes or frost crystals on a windowpane. If the rock is chalcedony, the dendrite forms on the surface, but more chalcedony may entomb it. The dendrites are usually earthy, black, brown, or reddish, but near Four Corners, in the eastern Mojave, near the junction of Hwy 58 & Hwy 395, rockhounds reputedly find blue.

or celadonite, are visible impurities in the agate. Scientists attempt to distinguish between the two by determining, if possible, whether the dendrite/moss or the mineral rock formed first. The moss forms

while the chalcedony is still gel like and can then form three-dimensional shapes with the stone. Moss agate, also widely distributed, can be a variety of colors, green, black, white, yellow, red, orange, and tan. It is widely used in jewelry, and polishes beautifully, if care is taken not to cut into and pluck the moss.

Multi-colored balls can appear in rhyolite flows. Rhyolite is a fine-grained igneous rock the, if it contains sufficient silica to take a brilliant polish, and is sometimes called jasper. Orbicular material usually appears as a mass of rhyolite that has silicated. As the rhyolite cools, sometimes excess silica starts to precipitate out of the magma, forming spherical balls. The ball shape is the form that any extremely concentrated silica (cristbalite) takes, as opposed to the crystal form in dilute concentrations. However, any material that by composition or consistency is immiscible (not mixable) with the host magma will also form balls.

Regional metamorphism can also form orbicular jaspers. We hear names like Rainforest Jasper from Australia, Leopard Skin Jasper from Mexico, Poppy Jasper from California, and Ocean Jasper from Madagascar. We may find one color surrounding another, or bands of balls, veils of lighter colors staining the background. Polka Dot Agate, from Oregon, has iron rich spheres floating in a snowy extremely fine-grained jasper, along with veils of golden brown. The material is so fine-grained it is almost chert and resembles porcelain.

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limestone or dolomite, some occurs as nodules, and sometimes it is part of the gangue of mineral deposits by hydrothermal or meta-somatic processes. Agates are translucent and usually banded, with sub-vitreous luster; jasper is opaque with a dull to pearly luster; to a rockhound, jaspagate is a fine mixture of the beautiful oxides.

Via Rock Chip Reporter, 4/08; via Petrograph, 6/03; ref: Calumet Gem via Breccia 9/08

Agate Varieties

The names of agate varieties are chosen more or less arbitrarily according to their visual appearance, usually that of a cut and polished stone - there are no strict rules or definitions. With such a terminology it is no surprise that there is a countless number of agate "varieties", Zenz, 2005, lists 122 different varieties, for example. A few terms are widespread and people agree on their meaning. Some of the names have very little to do with the properties of the agate itself, but with the way the agates have been cut: "eye agate" is probably the best example.

Language barriers cause more difficulties. A "flame agate" in English is not the same as the literal equivalent "Flammenachat" in German. The same is true for "coral agate" which can be a chalcedony pseudomorph after coral (and thus not really an agate), but also a reddish agate with a certain growth pattern.

Most of the agate names have no mineralogical significance.

Onyx and Sardonyx

Onyx is simply a black-and-white agate and sardonyx a red-white and rarely red-white-black variant. There would probably be no separate name for it if there wasn't a long tradition of cutting cameos from onyx and sardonyx.

Onyx is not to be confused with **onyx marble**, a banded marble (consisting of calcite, not quartz) used for ornamental works, which is frequently sold as "onyx".

Except for the color, with the black parts being opaque in good specimen, there is nothing specific that cannot be found in other agates. The "ideal onyx" is made of parallel alternating layers of black and white and thus cut from agate of the Uruguay-type.

There is a long tradition of dyeing agates to turn them into onyx for ornamental and lapidary uses and it can be very hard to tell a real onyx from an artificially dyed one.

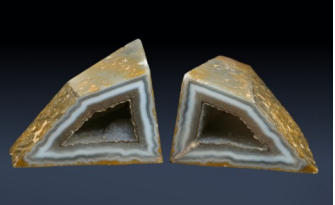
Enhydros

Occasionally agate geodes are found that still have some of the water captured in a central cavity, so called **enhydros**. You can sometimes hear the water when you shake the specimen. These will slowly lose their water as it escapes through tiny capillaries and evaporates at the surface. There is nothing special about enhydros except for being quite rare, they simply did not dry out yet, like

all the other agates did. The presence of water in the geode is sometimes interpreted as an indication of an agate formation in a watery environment, but of course the water could just as well have entered the geode later.

Polygonal Agate

In the 1970s agate slices with the shapes of irregular polygons appeared on the market. They were found in great quantities in the Brazilian state of Paraíba, but currently the locality is not productive any more. They are known as **polygonal agates** or **Paraíba agates** (the second name was used in Germany). Sometimes groups of neighboring polygonal agates were found that apparently were once separated by thin platy crystals. The former crystals are now completely dissolved and replaced by clay and quartz.



The first image shows the not so common case of two halves of a polygonal agate that was not cut into many slices. The agates are usually made of a thin layer of white, gray or bluish, but hardly ever colorful agate, followed by another layer of quartz crystals that outlines a central cavity. In this specimen the quartz crystals are covered by another thin layer of chalcidony.



The second photo shows both halves put together again. In the center you can see the cut running through the geode horizontally. The geode is bounded by perfectly plane "faces" with a polygonal outline, but the shape is asymmetric with random angles between the "faces" and thus is not related to any crystal class. This irregular shape can only be explained as a cavity bound by crystal faces of neighboring crystals that got outlined by chalcidony and quartz. The triangles and criss-cross patterns present on the surface are interpreted as negative imprints of the surface patterns of calcite crystals which enclosed the cavities that would later host the agates.

A typical example of agates from Wendelsheim, west of Alzey, Rheinland-Pfalz. The agate has filled the voids between platy crystals that have later been dissolved and replaced by chalcidony and small quartz crystals. In a sense, this is the miniature version of polygonal agates.



<http://www.quartzpage.de/agate.html>

HIGH PLAINS PETIFIED FORESTS

By Jan Baumeister

Petrified forests are found throughout the world, even in Antarctica where ever volcanic eruptions occurred. Where wood has been buried then exposed in an area, this shows at one time the area has been under volcanism, including the high plains of the Dakota, Wyoming and Nebraska. Nearby volcanoes can erupt numerous times. These eruptions blanketed the area in volcanic ash with high silica content. Rapid burial allowed the plant debris to escape destruction by oxygen and insects. The soluble ash was dissolved by groundwater flowing through the sediments replacing the original plant material. The dissolved ash served as a source of silica that replaced the plant debris, creating petrified wood.

The petrification process is rather complicated to explain in a brief description; however, it is the result of pressure, lack of oxygen and the infusion of minerals which produces an agate much harder than steel. Petrified wood can contain pyrites, marcasite, calcite, uranium ore with carotid, malachite, azurite, etc. The most common infusion is chalcedony, which is pure cryto-crystalline quartz deposited in wood, it is translucent or cloudy feature in the agate, jasper, or opalized wood. Its hardness is the same as quartz but tougher than quartz crystals and takes a very high r q n k u j 0 " C i c v g " k u " q h " v j g " u c o g " h c o k 1 times deposited in seams with bands. It makes some of our most beautiful wood with the infusion of minerals. When wood is petrified by silica gel it gives the wood a wax coating. This gel carries more water so it needs to be treated like opal when doing lapidary work. Jasper wood is completely opaque. The wide array of colors is due the mineral content of the silicified water and the time involved in completing the process. Below is a list of the minerals and their respective color hue: Copper ó green/blue, Cobalt ó green/blue, Chromium ó green/blue, Manganese ó pink, Oxides ó red, brown, yellow, Manganese Oxides ó black , blue, and purple , Carbon óblack, and Uranium /carnoitte óyellow.

No other state in American can boast of as many or an extensive stone forests as Wyoming. During the Jurassic and early Cretaceous times there was an 18 million year period when the land was raised above warm topical seas and. A large portion of our western states enjoyed the freedom from encroaching waters. Forest growth was abundance and types of trees widely varied. These Wyoming forests were largely conifers, although the more open ranges supported vast tree forests with cycads and tempskya ferns. Through these great forests and swamps gigantic dinosaurs roamed.

There were two eras of forest petrification that had occurred. The dinosaurian periods occurred 160 million to 60 million years ago--followed by sub-mergence beneath the seas during the Micoene period 15 t 40 million years ago. Stone forests in the Cretaceous era also contained fossil remains of figs, cinnamons, palms and cycads. Willow, elm, grape, laurel, birch, oak, and maple and hackberry also made their appearance.

In South Dakota and Nebraska, petrified wood is abundant in the basal conglomerates of the Oligocene Chadron Formation This wood also originated in the Cretaceous strata of the Front Range in Wyoming. This occurs in both North and South Platte River basins. Jet Black wood is associated with fossil seeds of the walnut *Juglans siouxensi*, which probably indicates the agatized wood is from walnut trees. The oldest occurrence is in sandy deposits in the middle part of the Oligocene-Chadron formation in northern Sioux and Dawes Counties. Opalized wood occurs near Republican City, Harlan County, and Beaver City and Furnas County, NE. Beautiful opalized black wood with white and radiant yellow is found in the Misson, SD area.



Petrified Wood Gallery, 418 East 1st.Street, Oglalla, Nebraska

The Petrified Wood Gallery at 418 East 1st St in Ogallala, Nebraska is a showcase of natural history specializing in ancient woods and fossils from around the world plus Native American arrowheads and artifacts -- many from within 25 miles of Ogallala. The Petrified Forest, located east of Piedmont, SD, features a large collection of varieties of fossil wood collected in western South Dakota.

References: <http://mineralmattergazette;> <http://geology.com/stoies/13/petrified-wood-fossil-wood/>; [http://lapidaryjournal.com/January 2015;](http://lapidaryjournal.com/January%202015/) [http://www.infoplease.com/ce6/n/Mineral and Gemstones of Nebraska,](http://www.infoplease.com/ce6/n/Mineral-and-Gemstones-of-Nebraska.html) by Roger K. Pabian, and [Cretaceous period: Evolution of Plant and Animal Life | Infoplease.com](http://www.infoplease.com/ce6/c/Cretaceous-period-Evolution-of-Plant-and-Animal-Life.html) . Photos by Bing.com.)

Via The Ammonite 10/14

Upcoming CFMS Gem Shows

Jan 17-18 **EXETER, CA.** Tule Gem & Mineral Society, Visalia
Exeter Veterans Memorial Building
324 N Kaweah Avenue, Hwy 65
Hours: Sat 10 - 5; Sun 10 - 4
Website: www.tulegem.com

Feb 13-22 **INDIO, CA.** San Gorgonio Mineral & Gem Society
Riverside County Fair & National Date Festival
82-503 Highway 11
Hours: 10 - 10 daily

**Feb 27-
March 8** **IMPERIAL, CA.** Imperial Valley Gem & Mineral Soc
Imperial Valley Expo, 200 East 2nd Street/dd>
Hours: Weekends noon -10 pm; Weekdays 4 pm - 10 pm
Website: www.IVGMS.org

Mar 7-8 **ARCADIA, CA.** Monrovia Rockhounds
Los Angeles Arboretum, 301 Baldwin Avenue
Hours: 9:00 - 4:30 daily
Website: www.Moroks.com

Mar 7-8 V **ENTURA, CA.** Ventura Gem & Mineral Society
Ventura County Fairgrounds, 10 West Harbor Blvd.
Hours: Sat 10 - 5; Sun 10 - 4
Website: www.vgms.org

Mar 13-15 **VICTORVILLE, CA.** Victorville Valley Gem &
Mineral Society
Stoddard Wells Road & Hwy 15
Hours: 9 - 5 daily
Website: www.vvgmc.org/tailgate

Mar 14-15 **SAN MARINO, CA.** Pasadena Lapidary Society
San Marino Masonic Center, 3130 Huntington Drive
Hours: Sat 10 - 6, Sun 10 - 5
Website: www.pasadenalapidarysociety.org

WGMS MEETING LOCATION!
Whittier Community Center
7630 Washington Ave. Whittier



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