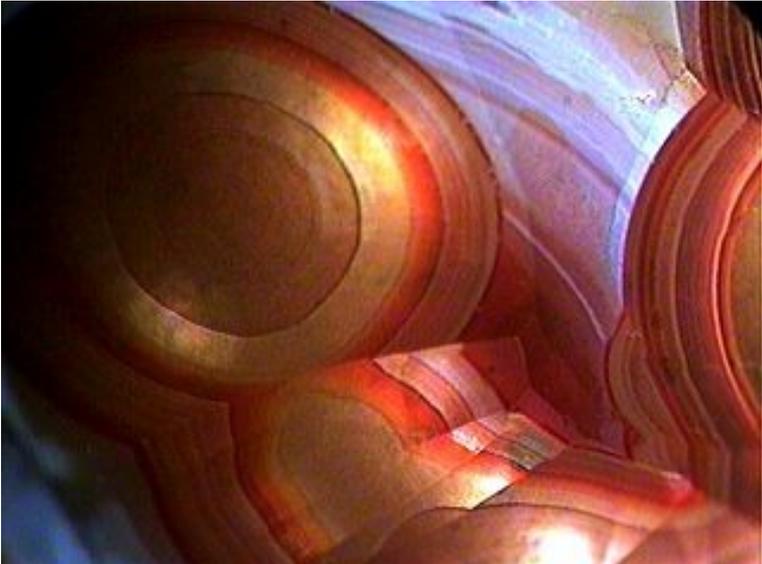


January 2003

WHITTIER

ROCKHOUNDER
GEM & MINERAL
SOCIETY

Program for January: Geology of the Whittier Hills
By Lisa Baboloni



Fire Agate (close-up)

ROCKHOUNDER

THE PREZ SEZ:

So here we are! It is the year 2003 already. It seems like just the other day we were talking about the end of the millennium and for a few, the disaster of "Y2K."

I know that some of you suffered and struggled this past year. For you I wish comfort, success, joy and a better year in 2003. For those of you that had a great 2002, I wish you continued good fortune and happiness. If you had a boring, uneventful 2002, I wish you growth and a little more excitement for 2003.

Wherever you find yourself as this new year begins, please rest assured that your friends in the Whittier Gem and Mineral Society stand ready to make 2003 everything that it possibly can be for you. I am pleased that the capable team of officers that managed the club's affairs last year has agreed to return for another year.

By the time you receive this, the "Field Trip Committee" will have already met to begin planning another year of "not to be missed" field trips. Also, this year we will in all likelihood be returning to the Whittier Community Center for our annual gem show. While the majority of our energy last year was focused on finding a new show site, this year we will be focusing on fine tuning the show.

Please remember that this is your club. Let me, or any Board Member know what you like, or do not like about what your club is doing. Do you want us offering something beyond what we offer now? Let us know what your club should be doing.

Last year, in an effort to expose the club to potential new members, we participated in the local community school program. In this copy of the Rockhounder you will find information regarding the next set of classes WGMS is sponsoring. Think about signing up for a class to support the club, to learn something new, and/or improve on something you already know.

That's it for now. Keep those gems polished!

Art

**January Regular Meeting
Thursday, January 23 at 7:30 PM
Geology of the Whittier Hills**

Lisa Baboloni, a geologist at the Ralph B. Clark Regional State Park is going to present a talk on the Geology of the Whittier Hills.

James LaBorde

News From Around the Club

Well, the new year of 2003 is off and running and we have a number of members who are under the weather. I am certain they would appreciate it if you dropped them a line to say hi and see how they are doing.

Clarence Pool is home from the hospital. He had a heart valve replaced with a pig heart valve (he says he oinks now each time his heart beats) and a double bypass. And all this at 93 years old. He is recovering his strength and seemed in good spirits when I talked to him last week.

Walt Abramson has entered a convalescent care facility near his and Joan's home in Vista so that Joan can be with him every day.

Sylvia Cliffe had total knee replacement surgery on one of her knees on January 6 and is recovering at home. This is a particularly painful procedure and we wish her all the best.

Vern Cliffe had cataract surgery on one of his eyes and is home taking care of Sylvia (or is it the other way around.)

Flo Piechota suffered a stroke on January 11 and is presently at Whittier Hospital. She is regaining her strength and is already speaking normally again. This stroke left her paralyzed in her right leg and partially in her right hand. The hand is coming back and, hopefully, the leg will follow shortly.

Our best wishes go out to **Les Roy** who is being treated for cancer.

If we have missed anyone it is only because we can't report what we haven't heard. Please keep us informed so that we can keep our friends and fellow members informed.

JValle

**"Lets all get wired"
Wire Wrapping Class
Presented by Marcia Goetz
February 20, March 6 and March 20
Location: Whittier Senior Center**

We are doing well at our newly established classes. Izzy has put together a nice package and certainly at a good price for all. Club members are encouraged to enroll in these classes and learn some of Marcia's secrets. We need at least 6 students to keep these classes going. Join now at the senior center and we will see you in February.

Cost: \$10.00 Class Fee when you sign up for the class at the Senior Center
\$10.00 Materials Fee, paid at the class

Les Roy, Community Relations Chairman

2003 Dues Are Still Due!

Yes, WGMSers, DUES ARE DUE.

It seems like only a year ago we were paying our dues for 2002 and here we are again, another January and another year. Time certainly flies.

The dues schedule is unchanged:

Single Adults: \$15
Married couple; \$25
Juniors: \$5

Please send your dues to Jay Valle, the WGMS Treasurer at:

Jay Valle
1421 Latchford Ave.
Hacienda Heights, CA 91745

If you joined during the 2002 Annual Gem show or have already paid, thank you and you may disregard this message.

*JValle
WGMS Treasurer*

OPTICAL CHARACTERISTICS OF GEMSTONES

Optical characteristics of gemstones are primarily derived from their chemical composition and physical structure.

Color

Color is the apparent result of selective absorption or transmission of different frequencies of visible light. Color can be described as the combination of three characteristics: hue, tone, and intensity.

Hue is a function of the frequency of light and is described by familiar terms such as red, orange, yellow, blue, green, indigo, and violet. Tone is a variation from very light to very dark. Intensity is a measure of saturation, or purity, of a color. The typical human eye can identify approximately 150 pure hues, but around one million colors. The differences among colors may be immediately obvious or so subtle that direct comparison under controlled conditions is required to discern them. Color acuity is also highly affected by fatigue, diet, and other factors. Judging subtle color differences in gemstones such as diamond require comparison stones and careful control of lighting conditions.

Pleochroism is the apparent change in color of a doubly refractive gemstone when viewed through different directions of the crystal structure. In most cases, the color variations are not obvious to the unaided eye and must be viewed through a polariscope or dichroscope, but in some cases, the pleochroic colors are strikingly obvious. For example, many green tourmalines appear black through the C (longest) axis of the crystal, and iolite shows a striking combination of blue-violet and near colorless. Dichroism refers to the display of two ("di") pleochroic colors in a gemstone.

Alexandrite-like color change is the marked change in perceived color of a gemstone under different lighting conditions. Alexandrite, a form of chrysoberyl, typically appears blue or green in daylight and red or purplish in incandescent light. Similar color changes may be observed in sapphire, garnet, and tourmaline. The phenomenon is due to selective absorption of different wavelengths of light, and the predominance or absence of those wavelengths in the prevailing light (incandescent light has proportionately higher quantities of reddish wavelengths and less of blue or green).

Optic character

Gemstones may affect the passage of light differently through different directions in the crystal structure. If the velocity of light is constant through all directions in the stone, the stone is said to be singly refractive, or iso-

metric, and has one refractive index (see below). This is characteristic of isometric crystals. If the velocity of light varies with direction, the stone is doubly refractive, or anisotropic, and has two refractive indices. In Anisotropic materials, light is separated into two polarized components, the ordinary ray and the extraordinary ray. Anisotropic materials can be further characterized as uniaxial, biaxial positive, and biaxial negative.

Amorphous (non-crystalline) materials, such as opal, amber, and glass, may scatter light in unusual directions due to internal stress and display a phenomenon known as anomalous double refraction.

Refractive index

Refractive index (R.I.) is the ratio of the velocity of light in air to the velocity of light through a transparent material. If light passes from air into a transparent material at an angle of incidence other than a 90-degree angle, it is deflected at a different angle (the coincident angle) according to the R.I.

Gemstones with higher R.I. are generally more brilliant than those with low R.I. For example, diamond has an R.I. of about 2.4: quartz, about 1.54 - 1.55.

The R.I. of most gemstones is easily measured using a simple optical instrument known as a refractometer.

Birefringence

Birefringence is the difference in value between the highest and lowest refractive indices in a doubly refractive (anisotropic) material.

Dispersion

Dispersion is the ability of a gemstone to separate light into its component colors; that is, the quality of passing different wavelengths of light at different velocities. Dispersion is the quality in a diamond that produces sparkles of color in an otherwise colorless stone. Quartz, which has a dispersion of 0.013, shows much less of this effect than diamond, which has a dispersion of 0.044.

Diamond, in turn, shows much less color play than sphalerite, which has a dispersion of 0.156.

From the October 95 issue of Geminews of the Montreal Gem & Mineral Club. Via GMFC Newsletter, Summer/Fall 1996

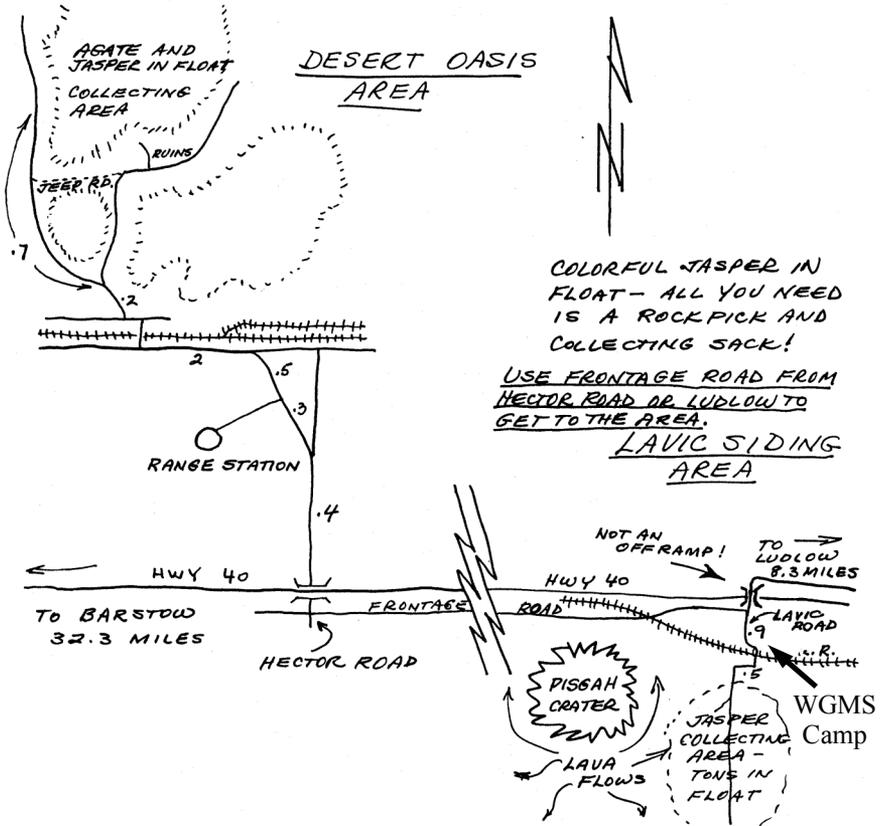
February 22 - 23 Field Trip to Lavic Siding

This month's field trip is to Lavic Siding. We will camp in the usual place with a potluck dinner Saturday night. Several locations will be explored with possible multiple field trip leaders.

Directions to camp: take the Hector Road exit off of Hwy 40. Turn onto the frontage road which can be seen just off on the right side of the freeway and go left (East). Follow this road about 10 miles to where the road crosses the freeway. Turn right onto the dirt road and follow the WGMS signs to camp.

Call Joe for more information at (626) 914-5030.

Joe Goetz



How Many Minerals Does it Take to Make a Light Bulb:

Bulb - Soft glass is usually used, made from silica, trona (soda ash), lime, coal and salt. Hard glass, made from the same minerals, is used for some lamps to withstand higher temperatures and for protection against breakage.

Filament - Usually made of tungsten. The filament may be a straight wire, a coil, or a coiled coil.

Lead-in-wires - Made of copper and nickel to carry the current to and from the filament.

Tie Wires - **Molybdenum** wires support the lead-in wires.

Stem Press - The wire in the glass are made of a combination of nickel-iron alloy core and a copper sleeve.

Fuse - Protects the lamp and circuit if the filament arcs. Made of nickel, manganese, copper, and/or silicon alloys.

Gas - Usually a mixture of nitrogen and argon to retard evaporation of the filament.

Support Wire - Molybdenum wires support the filament.

Button and Button Rods - Glass, made from the same materials listed for the bulb (plus lead) is used to support and to hold the tie wires placed on it.

Heat Deflector - Made of aluminum, used in higher wattage bulbs to reduce the circulation of hot gases into the neck of the bulb.

Base - Made of brass (copper and zinc) or aluminum. One lead-in wire is soldered to the center contact and the other soldered to the base.

From Glacial Drifter 12/96 via The Petrified Log 02/03

SAFETY DANGER OUTSIDE:

Hypothermia and frostbite are ready to grab you!

By Chuck McKie, CFMS Safety Chairman, 2003

Exposure to cold can cause injury or serious illness such as frostbite or hypothermia. The likelihood of injury or illness depends on factors such as physical activity, clothing, wind, humidity, working and living conditions, and a person's age and state of health.

Follow these tips to stay safe in cold weather:

- Dress appropriately before going outdoors. The air temperature does not have to be below freezing for someone to experience cold emergencies such as hypothermia and frostbite. Wind speed can create dangerously cold conditions even when the temperature is not that low. If possible, dress in layers so you can adjust to changing conditions. Avoid overdressing or overexertion that can lead to heat illness.
- Holiday traveling and winter can be a dangerous combination. Allow extra time when traveling. Monitor weather conditions carefully and adhere to travel advisories. Keep a winter storm survival kit in your car. This should include blankets, food, flares, chains, gloves and first aid supplies. Visit the National Oceanic and Atmospheric Administration website for a more extensive list.
- NEVER allow anyone who has been drinking alcohol to drive.
- Cold and heat-related emergencies can occur quickly. To learn more about signals of and how to care for cold and heat-related problems, take a Community First Aid and Safety course from your local Red Cross.
- Learn more about how to prepare for winter weather! Read "Winter Storms: The Deceptive Killers." "Are you ready for a winter storm?" The Weather Channel NOAA's interactive Weather Site National Warnings Area.

This information is in the public domain and is intended to be used and shared without copyright restrictions.

Via: Talking About Disaster: Guide for Standard Messages. Produced by the National Disaster Education Coalition, Washington, D.C.. 1999

And more DANGER INSIDE your home!

Falls are the leading cause of injuries, hospitalizations and deaths among the elderly. In the United States, one of every three adults aged 65 or older falls each year. The majority of falls happen in the home. Many falls can be prevented by following these guidelines:

- Maintain a regular exercise program. Exercise improves strength, balance and coordination. Talk with your health care provider about the best type of exercise for you.
- Make your home 'fall-proof. Remove tripping hazards such as papers, books and shoes from floors and stairs. Remove throw rugs that may slip - or secure them with double-sided tape. Use non-slip mats in bathtubs and showers. Have grab bars and/or a bath chair installed in bathrooms. Make sure that your home is well lit and that staircases have handrails.
- Have your health care provider review your medicines to reduce side effects and avoid drug interactions. Have your vision checked by an eye doctor. Poor vision can increase the risk of falling.

*Source: Centers for Disease Control and Prevention (<http://www.cdc.gov/>)
American Red Cross Lifeline is a Personal Emergency Response Service that can help elderly people and those with physical limitations live independently in their own homes.*

CFMS Newsletter 2/03

Color Enhancement of Gemstones

by Dean Johnston

Many gemstones are routinely subjected to heat or radiation to enhance the natural color of the stones. In most cases, treating is considered to be an acceptable practice because both heat and radiation commonly play a part in the coloration of natural gemstones. However enhanced coloration of stones should never be misrepresented as natural coloration.

HEAT TREATED STONES

Subjecting stones to sophisticated heating procedures is the most commonly used method of changing or enhancing a gem's color. Heat treatment is routinely applied to the following:

- AMBER -- to deepen the color
- AQUAMARINE -- to produce a "bluer" blue
- TANZANITE -- to produce a more desirable shade of blue
- TOURMALINE -- to lighten the darker shades, especially green
- AMETHYST -- to change color of pale material to "yellow" to be sold as citrine.

RADIATED STONES

Radiation techniques are now in common use. Sometimes radiation is used in combination with heat treatment. As long as the radiation produces stable results, color enhancement by radiation techniques is not considered fraudulent. Radiation is routinely applied as follows:

- AQUAMARINE -- used in conjunction with heating to improve blue
- DIAMOND -- to change colorless diamonds to fancy colors (green, yellow, etc.)
- TOPAZ -- to change colorless topaz to dark blue
- TOURMALINE -- to intensify pink, red and purple shades.

Enhancement of gemstones through radiation and heat treating has become commonplace, yet often dealers are elusive (or unknowing) as to whether a particular gemstone has been treated. It is a question that should be asked of the dealer prior to buying an expensive colorful gem.

From Victoria G & M, via The Glacial Drifter 01/03

The Rules of Chocolate!

Author unknown

1. If you've got melted chocolate all over your hands, you're eating it too slowly.
2. Chocolate covered raisins, cherries, orange slices & strawberries all count as fruit, so eat as many as you want.
3. The problem: How to get 2 pounds of chocolate home from the store in hot car. The solution: Eat it in the parking lot.
4. Diet tip: Eat a chocolate bar before each meal. It'll take the edge off your appetite and you'll eat less.
5. A nice box of chocolates can provide your total daily intake of calories in one place. Isn't that handy?
6. If you can't eat all your chocolate, it will keep in the freezer. But if you can't eat all your chocolate, what's wrong with you?
7. If calories are an issue, store your chocolate on top of the fridge. Calories are afraid of heights, and they will jump out of the chocolate to protect themselves.
8. If I eat equal amounts of dark chocolate and white chocolate, is that a balanced diet? Don't they actually counteract each other?
9. Money talks. Chocolate sings.
10. Chocolate has many preservatives. Preservatives make you look younger.
11. Q. Why is there no such organization as chocoholics Anonymous?
A. Because no one wants to quit.
12. If not for chocolate, there would be no need for control top pantyhose. An entire garment industry would be devastated.
13. Put "eat Chocolate at the top of your list of things to do today. That way, at least you'll get one thing done.

Via AFMS Newsletter 2/03

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Upcoming Local Gem Shows

Feb 14-23 **Indio, CA.** San Gorgonio Mineral & Gem Society
Riverside County Fair & National Date Festival;
Gem & Mineral Bldg. (on the Fairgrounds)
46-350 Arabia Street. Hours: 10 am - 10 pm

Mar 1-2 **Arcadia, CA.** Monrovia Rockhounds, Inc.
The Arboretum of Los Angeles County
Ayers Hall: 301 N. Baldwin Avenue, Arcadia
Hours: 9-4:30 both days . Fee to enter The Arboretum

Mar 1-2 **Ventura, CA.** Ventura Gem & Mineral Society
Seaside Park/Ventura Co. Fairgrounds
10 W. Harbor Boulevard
Hours: Sat. 10 – 5; Sun. 10 – 4

Mar 8-9 San Marino, CA. Pasadena Lapidary Society
Show Theme: "Gems, Minerals and Jewelry of the Southwest"
San Marino Masonic Center
3130 Huntington Drive
Hours: Sat. 10 - 6; Sun. 10 - 5

Editor: Jay Valle, 1421 Latchford Avenue, Hacienda Heights, CA 91745
Home: (626) 934-9764; E-Mail: jvalle@aqmd.gov
Bulletin exchanges are welcome and should be sent to the editor.

Affiliations



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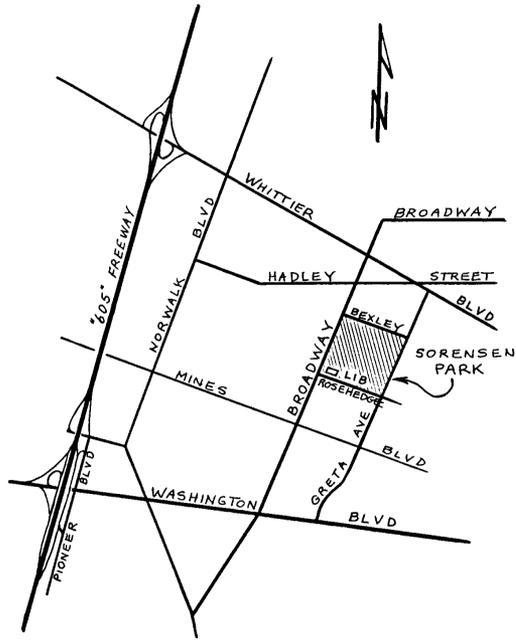
Whittier Gem and Mineral Society, Inc.

Post Office Box 865

Whittier, California 90608-0865

Editor: Jay Valle, 1421 Latchford Ave.

Hacienda Heights, CA 91745



Meeting Date: **January 23 at 7:30 PM**
Location: **Sorenson Park**