The Opal Express
American Opal Society
P.O. Box 4875
Garden Grove, CA 92842-4875

Volume #37 Issue #8
August 2004

Some Topics In This Issue:

- **Report From The *GOLDBUG GALA***
- **Catching On to Cacholong**
- **Help! Is Opalite real?**
- **Minerals, Crystals and Their Systems**
- **2004 August Health and Safety Tips**

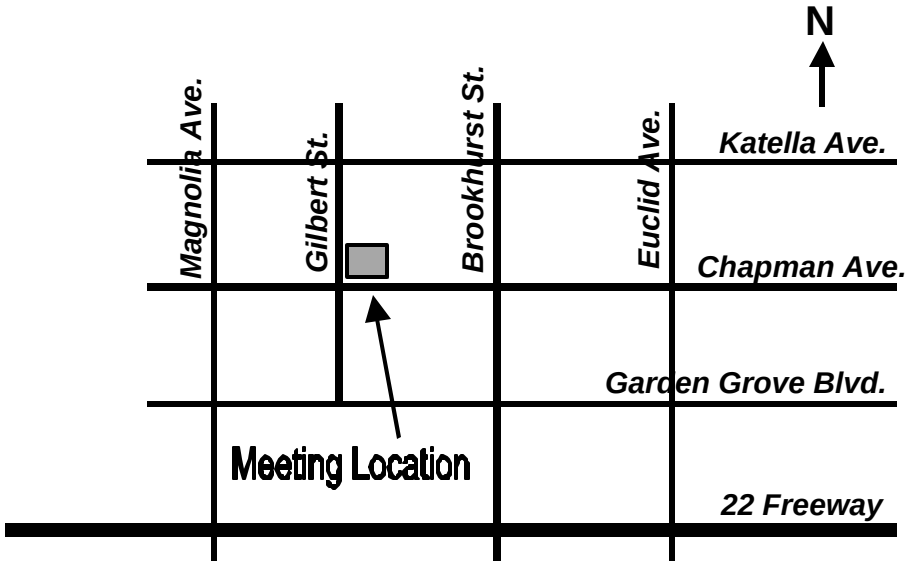
TO:

August 12th - General Meeting

Important Info:

Board Meeting
August 9th

General Meeting
August 12th



— GENERAL MEETINGS —

2nd Thursday of the Month
7:00 pm - 9:00 PM
Garden Grove Civic Women's Club
9501 Chapman Ave.
(NE corner of Gilbert & Chapman)
Garden Grove, CA

MEETING ACTIVITIES
Opal Cutting Advice Guest Speakers
Slide Shows Videos Other Activities

The American Opal Society

http://opalsociety.org

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American Opal Society Membership Renewal

Thank you for continuing to support your American Opal Society!

TYPES OF MEMBERSHIP		DUES / FEES)	AMOUNT PAID
DUES: SELECT ONE	*All US Addresses including Alaska and Hawaii*	$25.00	
	International Members = All addresses outside of US Addresses	$30.00	
ADDITIONAL BADGES = $5.00 each (First Badge free when joining)		$5.00	
ONE TIME INITIATION FEE = All New members		$10.00	
SENIOR DISCOUNT = Age 65 or over deduct $5.00		-$5.00	
TOTAL PAID – DUES, less Senior Discount plus Badge plus Initiation Fee (if Applicable)			

Please make check or money order payable to "***American Opal Society***". Mail payment and application to:
American Opal Society; PO BOX 4875; Garden Grove, CA 92842-4875
An optional, quicker method of payment is via the **Internet** using **PayPal.com**. To pay, just log onto your PayPal account and "Send Money" to the AOS account, **webmaster@opalsociety.org**. There is no transfer charge!

NAME		
BUSINESS NAME		
ADDRESS		APT #: or PO BOX
CITY	STATE	ZIP or POSTAL CODE
COUNTRY (IF OUTSIDE USA)		
PHONE: Home ( )	Business ( )	FAX ( )
E-MAIL	WEBSITE	
OCCUPATION:		
HOBBIES AND INTERESTS:		

NAME BADGE ORDER FORM: PLEASE PRINT NAME AS YOU WISH IT TO APPEAR ON YOUR BADGE using up to two (2) lines of text for your name, nickname, or name of your opal related business.

MEMBERSHIP ROSTER & DEALERS LIST: The AOS publishes a membership directory once per year in its Newsletter, the *Opal Express*. Your name will be included. Please check what additional personal information that you want listed for other members. If it is different from the information above, please note that on the application.

☐ Address ☐ Phone ☐ E-mail ☐ Website

☐ Include my name & address on a list provided to the Dealers selling at our Annual Opal & Gem Show.

Please sign here: _____ Date_____

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Please address all inquiries and exchange newsletters to:
The Opal Express C/O
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P.O. Box 4875
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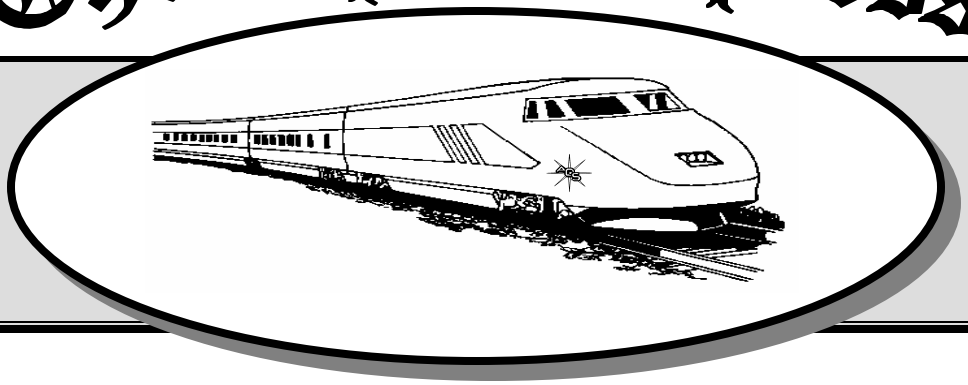
Are Your Dues Due Now?

PLEASE CHECK YOUR ADDRESS LABEL. If your label shows **the** current month/year your dues are DUE NOW. If the date is older, your dues are overdue.

A Renewal Grace Period of two months will be provided. If your dues are due now you will receive two additional issues of the newsletter. Please note, however, that as the system is now set up, if your renewal is not received you will be AUTOMATICALLY dropped from membership thereafter. It is your responsibility to assure your dues are current.

Thank you,
The Editor

The Opal Express



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August 2004

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President's Message

By Pete Goetz

Hi Folks,

All I can say is, "Man this summer is flying by!". Hope you all are having a great summer. I have spent most of my free time *destroying* some OPAL with odd shaped color bands. However, I am getting better at cutting OPAL - thanks Stan.

Our annual OPAL show is only three months away. Things are moving along with the preparations. We could still use a few volunteers to help with the reception desk. Mike could use some help on Friday evening from about 4:00 to 6:00, and Sunday evening about the same times, setting-up and taking down the electrical cords for the vendors display lighting.

The workshop should be up and running again by the end of September. The school where the workshop is located has decided to keep their woodshop program. I have a meeting scheduled, next week, with the new teacher to discuss how we, The AOS, can co-exist with his woodshop. I do not think there will be any problems. More on this later.

As I mentioned before, if you are traveling and are in the neighborhood, stop by our (your) next general meeting which will be held the second Thursday in August…Hope to see you there.

Meyer P Goetz

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Report from The *GOLDBUG GALA*

By Fran Todd, AOS CFMS Director

Memorial Day weekend brought a meeting of the State's rockhounds to the Mariposa Fairgrounds. This relaxed weekend contained several meetings of rockhounds from the Golden State of California and neighboring Nevada. Networking, story telling and decision making was in order. The Semi Annual meeting of the California Federation of Mineralogical Society was held in this picture perfect town.

Friday morning was a field trip, in slightly damp weather, to the local quarry for some very interesting rocks. The main goal was white and green squiggle Mariposite, but there were other finds such as serpentines, reported jade and various forms of quartz. Friday night was the "Cracker Barrel" meeting, a time for discussion, airing of differences and debate. Various desserts and fruits were served. It was a large, intimate group. The main debate was moving the CFMS further into the computer age. All ended on a friendly basis. I still could not find any barrels or crackers. I'll look harder next time.

Bright blue sky and white clouds greeted us on the way to the semi annual CFMS meeting on Saturday morning. President Lois Allmen quickly dealt with the business and we could get back to the fairgrounds to enjoy more of the show and lectures. Really, the show is the reason that we were there. Saturday evening was the Awards Banquets. Several scholarships were given. There was not enough time to talk with the graduate students regarding their research as deeply as I wanted to.

The unsung delight of the Mariposa show was the California State Mining and Mineral Museum located right on the fairgrounds. There were exceptional specimens from all over the Golden State; some were donated in the late 19th Century. Himalayan mine tourmaline, benitoite, large gold nuggets and gold ore were just some of the treats for our eyes. For those of you who scoffed when Dr. Walt Johnson mentioned diamonds in California, there were FOUR specimens, from two locals displayed. Be extra careful with those buckets from the Walker Jr. High Mine trips!

Mariposa's main street is only several blocks longs and composed with original Western buildings. Yosemite tourist buses stop, as Asian tourists quickly take family vacation pictures at a real Western town, just like in the movies. It is a town of only one fast food chain, no other chain restaurants, no super store of any variety or a Starbucks. Cell phones work only at selected areas. Natural rock is used on the building through out the town. White and green mariposite was the foundation of the bride just outside of our hotel. In the creek below this bridge, there were tadpoles the same size as edible trout. Every one was friendly, relaxed and agreeable. Hmmmm, maybe Mariposa needs to stay just like it is.

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Last Month's Lecture: Stan McCall on Making Opal Triplets

Stan McCall, longtime member and expert stone cutter, gave a great presentation at the August General meeting on how to create opal triplets. Stan demonstrated how to create triplets, showing us his special techniques and trade secrets. Stan also showed us some non-opal techniques, such as using mother-of-pearl in a triplet.

Opal Workshop

The AOS opal workshop is at Ball Jr. High School on 1500 W. Ball Rd., Anaheim, CA. It can be open for members on Monday. Contact Stan McCall at (714) 220-9282.

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Members Only Website Password

To log onto the website's members only area at: http://opalsociety.org/aos_members_only_area.htm type: Name: "member" and Password: "koroit".

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How Opal is Graded and Sold

Rough opal parcels are sorted into three grades: tops, middle, and low. Each tops parcel has a King stone, which is the best stone in the parcel. Some parcels have several King stones. Colour is the primary criteria for grading, but the graders also take into consideration the number of imperfections and faults, and whether a stone is the right shape to be cut into an oval or one of the other popular shapes.

You can buy rough opal in several different conditions.

Mine Run. Direct from the mine. The stones have not been cut or ground down. This means that there is more guess work in the cutting. Purchasing mine run opal can be risky if you are not very experienced.

Off Cuts. The miner has removed whatever opal he has a market for and sells you what's left. With off cuts, you can usually tell what you are going to be able to cut. You must still watch for cracks in the opal because once a crack becomes obvious, a stone can lose half its value.

Rubs. This can often be the best way of buying rough if you are not very experienced. The miner has cut and ground the stones into basic shapes, after having removed most of the rubbish. What you have left is the stone nearly ready for the dopping and polishing process. You have the satisfaction of cutting your own stones without the high risk of buying mine run rough.

Opal is officially sold in troy oz. there are 20 d.w.t pennyweights to a troy oz. There are approximately 30 grams to a troy oz and approximately 30 oz to a kilo.

From http://www.opalmine.com .

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Catching On to Cacholong

A little known opal gets a new taste of the limelight

By Darren Arnold

October 2003

Photo Courtesy: gliptica.ru

Even in the wide and varied world of gemstones, cacholong is pretty obscure. While it's been known to the gem community for years, your average consumer is more likely to respond to the mention of cacholong with a polite "gesundheit!" The stone has certainly generated its share of confusion. Also known as kascholong, the stone is actually a variety of opal, but this hasn't stopped it from being listed as an agate on more than one occasion. It has also been described as either chalcedony or hydrophane opal. The fact that it is sometimes known as "mother of pearl opal" only adds to the complexity.

Cacholong is generally milky white in color, and this neutrality means that the stone is very versatile. It's also extremely porous (hence the confusion with hydrophane opal), and this absorbent nature makes it highly suitable for perfume stones. It has a Mohs hardness of 6, making it easily carved or inlaid.

The stone is found in a number of places in Austria and the countries formerly known as Mongolia and Czechoslovakia, to name a few. However, much of the cacholong bought and sold in the world today is sourced from Russia and countries that border that massive nation. The stone is thought to be named after the Cach River, today known as the Kashkadarja a River in the Bukhara province of Uzbekistan, which has long been associated with deposits of cacholong.

Cacholong seems to have initially come to prominence through a number of Russian works of art in the mid to late 1800s, and Emperor Nicholas 11 commissioned a series of Cossack figurines that featured the stone.

A walk through the world famous Hermitage museum in St. Petersburg gives visitors an idea of how the stone was used in 19th century Russian art, especially by the nation's famed mosaicists. One might see, for example, a cacholong daffodil set on a nephrite stem, or a mahogany cabinet with a mosaic of a tropical forest that features cacholong alongside jasper, lapis, and other stones.

One of the Russian artisans whose work is housed in the Hermitage is Oleg Galatin, who has used cacholong in his "glyptic" carving work with cameos and intaglios. Galatin carries on the work of his Russian ancestors, continuing to bring this obscure stone to life.

Until recently, artisans like Galatin were the only ones who used cacholong in jewelry, and their work was highly traditional. Cacholong also tended to play a supporting role in jewelry or objects of art rather than being the main attraction.

All that began to change in late 2002 and early 2003 as some of Europe's most prominent jewelry companies began to feature cacholong in their jewelry. Leading the way was fashion icon Chanel, which launched its new haute joadlerie collection in early 2003. Cacholong enjoys a high profile in the new designs, being used along with onyx to create carved camellias, Chanel's trademark. This collection neatly demonstrates the versatility of the stone, as cacholong is used both in a more traditional secondary manner for example, on diamond earrings yet takes on a central role as the main stone in a gold ring or necklace.

Picking up on this cue, other jewelry makers have begun using cacholong in everything from beads and rings carved from the stone to jewelry set with carved cacholong. The stone is especially popular in jewelry with a black and white color scheme, where especially cut pieces of cacholong replace the more fragile white enamel.

Whether the stone's sudden popularity will have any longevity is another question. Cacholong is difficult to get, and prices can vary depending on the supplier. While Chanel is about as good a springboard into the jewelry market as any stone could expect, fashion is fleeting even for better known gemstones. If high end jewelers abandon the stone, it's most likely to fade back into obscurity.

If, on the other hand, the current spark of interest brings more cacholong onto the market especially given the popularity of Art Deco style jewelry with carved stones it could be just the boost this Russian classic needs to find a new market niche.

From Tip's From The Jeweler's Bench Library: http://www.ganoksin.com/borisat/nenam/cacholong.htm

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Help! Is Opalite real?

Here is a good thread from The Lapidary List, a Yahoo eGroup, posted May 12-13, 2004, on what "opalite" is. I've seen the word mentioned many times, and it has always confused me as to what it is. This thread helps explain it.
From http://groups.yahoo.com/group/LapidaryList. Reprinted for educational purposes under the "fair use" provision of the U.S. Copyright Act.

From: "pam" <spkisner@a...>
I need this info please, I thought from info I've found that this is a real stone, now I'm being inundated with info that it is only glass, one person in particular, is a very informed helpful person, and is always willing to help anyone, but I need to find a link that this is real or mark my jewelry as manmade stone, and I don't use those. I'm sure not the type of person to argue, more like the type to let it drop, I just need this for my own info...
please,
Pam, a novice in Michigan

From: "Don T" <flashmax@i...>
See
http://www.google.com/search?hl=en&lr=&q=opalite&btnG=Search
Don Thompson

From: Daniel Holloway <danrx12000@y...>
Hello Pam From what I can glean from the web, opalite is Moss Agate or a type of Quartz. In order to tell what it is you will have to subject it to some tests. I can specific gravity and Moh's hardness tests. Let me know if I can help.
Dan

From: gntyler <gntyler@s...>
Hi Pam.
Your question intrigued me so I went to my old friend Goggle and typed in "opalite'. Interesting.
Check http://www.stonetrails.com/Opal/Opal.htm#opalite
Then check http://www.bernardine.com/gemstones/opalite.htm
Or use Google at http://www.google.com/ and you will find out more about opalite than you ever wanted to know.
Best to you
George Lakeside CA

From: John Joldersma <johnjold@m...>
Well Pam, there is opal glass, and opaline glass and opalescent glass and there are two rocks opal and opalite. I came back from Cloud's Jamboree in Laughlin last year with 20 pounds of beautiful Brazilian dendridic opalite. Someone else will have to tell the exact difference between the terms. I know that opal, agate, quartz, jasper and opalite are all made of silicon dioxide with various things added to create stones that result in widely different appearances and colors. Also each of these stones cut very differently. I am over in Grand Rapids with the Indian Mounds Rock and Mineral Society. There was a post in the Yahoo Rockhounds group for a show next weekend, May 14-16 at the Southfield Civic Center. Another good event in the Taylor Rock Swap at the Democratic Hall on Wicks Road just off Telegraph Road, this is held near the end of March. Come on by next year and I'll give you a piece of my Brazilian opalite stash. I'll be the guy with large Petoskey Stone - Michigan's. See you then?

From: Kreigh Tomaszewski <Kreigh@T...>
Opalite is a name for opal that is not accepted as a mineral name officially and is not used very often. Opalite is also a name for an artificial (usually plastic) opal, and this is the more common use of the name.

From: "Christina Broman" <christina.broman@o...>
I was once told that opalite was a kind of crust surrounding the real opal. As a mineral then, it is in the process of becoming

opal, but has not yet reached there (and never will, of course ;o)). Opalite is often more opaque, whilst the opal is more translucent/semi-translucent. Now, this is only hear-say, so... Opalite glass I know very little of. :o) Christina

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From: "Orville & Rose Alene McArthur" <obmcarthur@c...>
In common rockhound usage in the Western United States the term opalite is usually applied to massive common opal. In contrast to precious opal, it is not especially gemmy, but may be useable for such things as carving and bookends. It can be in many colors from dark browns to creamy whites. All opal has more water incorporated in with the silicon dioxide than agates or quartz do. Thus a moss agate is not opalite. However, opal can have dendrites in it. Some striking examples come from Australia. Because of the inclusion of more water in the structure of all opal material, it is brittle and displays a typically more glassy broken surface than the cryptocrystalline quartz varieties like chalcedony have.
Rose Alene McArthur

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Minerals, Crystals and Their Systems

Brain Press Publications
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Alberta, Canada T2P 2L7
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Writings | Gallery | Contact |

This is an introductory listing of definitions and nomenclature concerning gem materials.

A Mineral may be defined as a homogenous substance produced by the processes of inorganic nature having a chemical composition and physical properties which are constant within narrow limits. Its structure is crystalline.
It is composed of the same substance throughout. Except for impurities it has the same chemical formula for all specimens of the mineral. Its atoms usually have a definite and ordered crystal structure. What makes a mineral (or an organic product) a gemstone is cultural and partly subjective: beauty, durability and rarity.
Minerals often occur in geometrical forms bounded by plane surfaces. These are crystals and the internal structure determines properties which allow the identification of the gem material; its differentiation from other minerals, imitations and sometimes synthetics.

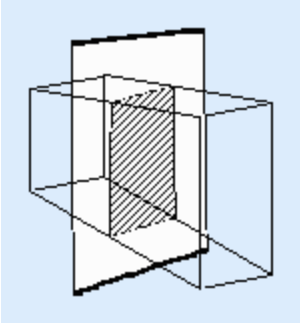
Crystals have:
1. An orderly and symmetrical atomic structure.
2. A definite external geometrical shape bounded by plane faces.
3. Physical (and optical) properties which vary with direction.

Glass has:
1. No regular atomic structure.
2. No tendency to assume a definite external shape.
3. Properties which are the same in all directions.

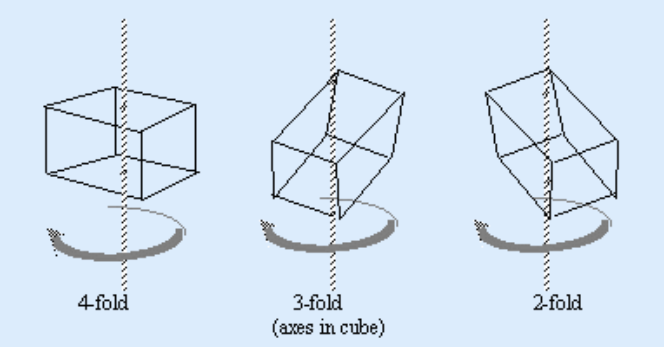
(The above derived from the British Gemmological Association's course material. I strongly recommend their program to aspiring gemmologists)
Crystalline Material: Possesses the regular structure and directional properties of a crystal but not the regular geometrical shape. Also called massive. e.g. rose quartz.
Crypto-crystalline Material: Material which consists of a multitude of tiny, often submicroscopic crystals. e.g. Chalcedony.

Symmetry:
Crystal symmetry refers to the balanced pattern of the atomic structure which is reflected in the external (crystal) shape. Different species vary in the symmetrical arrangement of faces. These arrangements have certain 'planes' and 'axes' of symmetry. These form part of the definition of the crystal system to which specific gemstones belong.

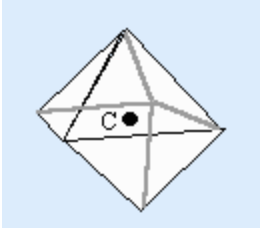
Plane of symmetry:
An imaginary plane dividing a body into two parts such that each is the reflected image of the other. Crystals may have more than one plane of symmetry. i.e. a cube has nine planes of symmetry.



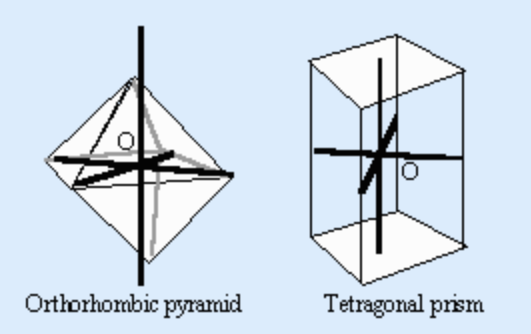
Axis of symmetry:
An imaginary axis is placed through a perfect crystal so that during a single rotation about this axis the outline of the crystal form appears identically more than once; 2, 3, 4 or 6 times.



Centre of symmetry: (centro-symmetry)
Often present, it exists when every face of a perfect crystal is exactly opposite a similar face on the other side of the crystal.



Crystal axes: (Crystallographic axes)
To describe crystals imaginary lines are used intersecting at 0 (the origin). These are specific to the various crystal systems, intersecting at given angles and being of given lengths specific to each crystal system.



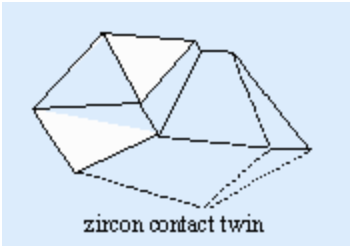
Origin:
The intersection of the crystal axes.

Habit:
Gemstone species tend to occur in characteristic shapes which relate to one or more of the forms common to the crystal system of the gemstone in question. The crystal form or forms which a gemstone most often appear are it's habit. e.g. diamond: octahedron, emerald: 6 sided prism.

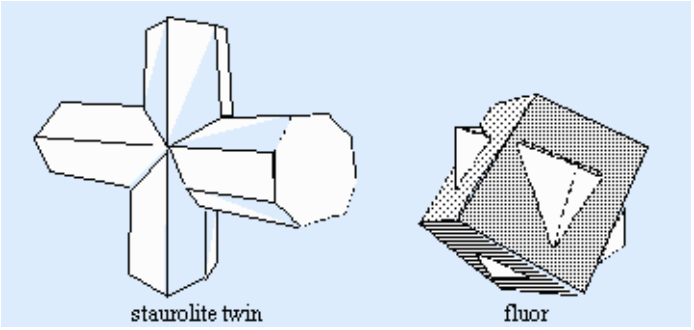
Form:
Those faces of a crystal which are identically related to the crystal axes. When the space so defined is completely enclosed (cube, octahedron) it is a closed form. When identical faces do not completely enclose the space (four or six sided prism; top and bottom open) it is an open form.

Twinned crystals: (compound crystals)
A twin is a single crystal composed of two or more parts with any part in reversed structural orientation to the next, or interpenetrated.

Contact twin:
Sharing a common plane.



Interpenetrant twin:
Two individuals have grown from a common origin and appear to penetrate each other. e.g. cross stones.



Lamellar twinning:
A series of contact twins often as extremely thin plates. Atoms in adjacent sheets are reversed, i.e. alternate plates are in the same order. This can give rise to special optical effects as in the feldspar labradorite.

Secondary twinning or parting:
The crystal is composed of very thin plates parallel to definite crystallographic directions. e.g. ruby, this gives rise to 'false cleavage'.

CRYSTAL SYSTEMS

Cubic
Three crystal axes of equal length intersect at right angles to each other. e.g. diamond, spinel, garnets.

Tetragonal
Three axes intersect at right angles to each other. The vertical axis is of unequal length while the two horizontal axes are of equal length. e.g. zircon, rutile.

Hexagonal
Four crystal axes. Three are of equal length and intersect at 60° to form a horizontal plane which the fourth intersects at right angles. The vertical fourth is of unequal length and forms an axis of 6-fold symmetry. e.g. Beryl, apatite.

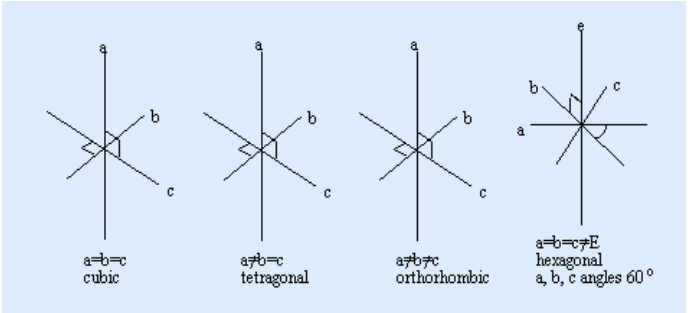
Trigonal
Four crystal axes. Three of equal length intersecting to form a horizontal plane which is intersected at right angles by the fourth axis. The vertical fourth is of unequal length and forms an axis of 3-fold symmetry. e.g. quartz, corundum, tourmaline, dioptase, haematite.

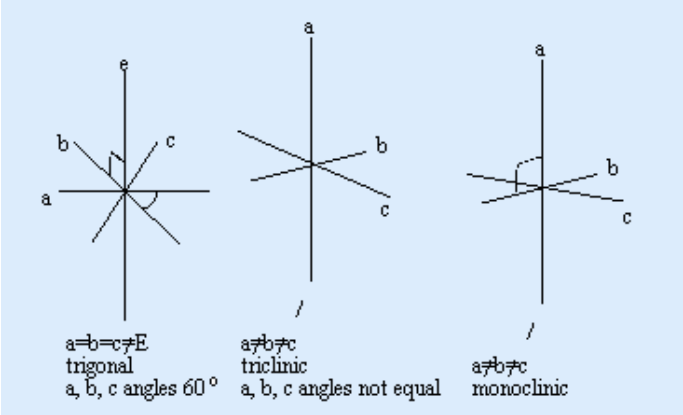
Orthorhombic (Rhombic)
Three crystal axes of unequal length interest each other at right angles. e.g. topaz, peridot, Chysoberyl, iolite, sinhalite, andalusite.

Monoclinic
Three axes. Two of unequal length intersect each other obliquely to form a plane which is intersected by the vertical third (of unequal length) at right angles. e.g. jadeite, nephrite, diopside, orthoclase feldspar, serpentine, sphene, malachite, spodumene.

Triclinic
Three axes of unequal length intersect each other at oblique angles. e.g. turquoise, labradorite.

NOTE: The Gemological Institute of America (GIA) system for crystal types differs from the above. Contact their web site for information on their courses, books and so on.





CRYSTAL SYSTEM SYMMETRY
Singly Refractive: Amorphous -- no crystal structure

Cubic	9 planes 13 axes a centre	4 3-fold 3 4-fold 6 2-fold	Optic Axis - - -
Doubly Refractive:			
Tetragonal	5 planes 5 axes a centre	1 4-fold 4 2-fold	Optic Axis uniaxial
Hexagonal	7 planes 7 axes a centre	6 2-fold 1 6-fold	Optic Axis uniaxial
Trigonal	3 planes 4 axes a centre	3 2-fold 1 3-fold	Optic Axis uniaxial
Orthorhombic	3 planes a centre	3 2-fold	Optic Axis biaxial
Monoclinic	1 axis a centre		Optic Axis biaxial
Triclinic	no planes no axes a centre		Optic Axis biaxial

Uniaxial
The optic axis of the crystal is parallel to the main crystal axis. One direction of single refraction.

Biaxial
There are two directions of single refraction. (optic axes)

GEMSTONES BY CRYSTAL SYSTEM (major ones)

*Diamond simulants, man-made (U) = uniaxial, (B) = biaxial

Cubic Diamond Sodalite Fluorite Spinel GGG * Strontium Titanate* Garnet Yttrium Aluminate* Lazurite (Lapis Lazuli) Yttrium oxide* Pyrites Cubic Zirconia* **Tetragonal (U)** Idocrase Rutile Zircon **Trigonal (U)** Calcite (marble) Quartz Corundum Rhodochrosite Dioptase Tourmaline Hematite	**Orthorhombic (B)** Andalusite Marcasite Chrysoberyl Peridot Danburite Sinhalite Enstatite Staurolite Iolite Topaz Kornerupine Zoisite **Monoclinic (B)** Azurite Nephrite Diopside Orthoclase Feldspar Epidote Serpentine Euclase Sphene Jadeite Spodumene Malachite **Triclinic (B)** Axinite Kyanite Microcline Feldspar Plagioclase Feldspar Rhodonite Turquoise

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2004 August Health and Safety Tips

By Chuck McKie, CFMS Safety Chairman 2004
via the American Red Cross

Heat-Related Illnesses - It's summertime, and that means activities and fun under the sun! Whether you love putting on shorts and feeling the warm outdoors, or find it hot and sticky, everyone must be careful not to let a heat-related illness spoil the day.

Normally, the body has ways of keeping itself cool, by letting heat escape through the skin, and by evaporating sweat (perspiration). If the body does not cool properly or does not cool enough, the victim may suffer a heat-related illness. Anyone can be susceptible although the very young and very old are at greater risk. Heat-related illnesses can become serious or even deadly if unattended.

Stages of Heat-Related Illness - Heat-related illness usually comes in stages.

1. The signal of the first stage is heat cramps in muscles. These cramps can be very painful. If you are caring for a person who has heat cramps, have him or her stop activity and rest. If the person is fully awake and alert, have him or her drink small amounts of cool water or a commercial

sports drink. Gently stretch the cramped muscle and hold the stretch for about 20 seconds, then gently massage the muscle. Repeat these steps if necessary. If the victim has no other signals of heat-related illness, the person may resume activity after the cramps slop.

2. The signals of the next, more serious stage of a heat-related illness (often called heat exhaustion) include—
   - Cool, moist, pale skin (the skin may be red right after physical activity).
   - Headache.
   - Dizziness and weakness or exhaustion.
   - Nausea.
   - The skin may or may not feel hot.
   - The signals of the late stage of a heat-related illness (often called heat stroke) include--Vomiting.
   - Decreased alertness level or complete loss of consciousness.
   - High body temperature (sometimes as high as 105 deg. F).
   - Skin may still be moist or the victim may stop sweating and the skin may be red, hot and dry.
   - Rapid, weak pulse.
   - Rapid, shallow breathing.
   - This late stage of a heat-related illness is life threatening. Call 9-1-1 or the local emergency number.

General Care for Heat Emergencies

- Cool the Body
- Give Fluids
- Minimize Shock

For heat cramps or heat exhaustion:

- Get the person to a cooler place and have him or her rest in a comfortable position.
- Give a half glass of cool water every 15 minutes.
- Do not let him or her drink too quickly.
- Do not give liquids with alcohol or caffeine in them, as they can make conditions worse.
- Remove or loosen tight clothing and apply cool, wet cloths such as towels or wet sheets.

For heat stroke:

- Heat stroke is a life-threatening situation! Help is needed fast. Call 9-1-1 or your local EMS number.
- Move the person to a cooler place.
- Quickly cool the body. Wrap wet sheets around the body and fan it. If you have ice packs or cold packs, wrap them in a cloth and place them on each of the victim's wrists and ankles, in the armpits and on the neck to cool the large blood vessels.
- (Do not use rubbing alcohol because it closes the skin's pores and prevents heat loss.)
- Watch for signals of breathing problems and make sure the airway is clear.
- Keep the person lying down.

Preventing Heat-Related Illness

- Dress for the heat. Wear lightweight, light-colored clothing. Light colors will reflect away some of the sun's energy. It is also a good idea to wear hats or to use an umbrella.
- Drink water. Carry water or juice with you and drink continuously even if you do not feel thirsty.
- Avoid alcohol and caffeine, which dehydrate the body.
- Eat small meals and eat more often.
- Avoid foods that are high in protein which increase metabolic heat.
- Avoid using salt tablets unless directed to do so by a physician.
- Slow down. Avoid strenuous activity. If you must do strenuous activity, do it during the coolest part of the day, which is usually in the morning between 4:00 a.m. and 7:00 a.m.
- Stay indoors when possible.
- Take regular breaks when engaged in physical activity on warm days. Take time out to find a cool place. If you recognize that you, or someone else, is showing the signals of a heat-related illness, stop activity and find a cool place. Remember, have fun, but stay cool!

Know What the Following Heat-Related Terms Mean

- **Heat Wave:** More than 48 hours of high heat (90 deg. F or higher) and high humidity (80 percent relative humidity or higher) are expected.
- **Heat Index:** A number in degrees Fahrenheit that tells how hot it really feels with the heat and humidity. Exposure to full sunshine can increase the heal index by 15 deg. F.
- **Heat cramps:** Heat cramps are muscular pains and spasms due to heavy exertion. They usually involve the abdominal muscles or the legs. It is generally thought that the loss of water and salt from heavy sweating causes the cramps.
- **Heat Exhaustion:** Heat exhaustion is less dangerous than heat stroke. It typically occurs when people exercise heavily or work in a warm, humid place where

body fluids are lost through heavy sweating. Fluid loss causes blood flow to decrease in the vital organs, resulting in a form of shock. With heat exhaustion, sweat does not evaporate as it should, possibly because of high humidity or too many layers of clothing. As a result, the body is not cooled properly. Signals include cool, moist, pale, flushed or red skin; heavy sweating; headache; nausea or vomiting; dizziness; and exhaustion. Body temperature will be near normal.

- **Heat Stroke:** Also known as sunstroke, heat stroke is life-threatening. The victim's temperature control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly. Signals include hot, red and dry skin; changes in consciousness; rapid, weak pulse; and rapid, shallow breathing. Body temperature can be very high--sometimes as high as 105 deg. F.

For more information, contact the American Red Cross.

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August Gem & Mineral Shows

6-8 — NEW CARROLLTON, MD: 55th annual show; Gem, Lapidary & Mineral Society of WA, D.C.; Ramada Hotel & Exhibition Center, 8500 Annapolis Rd., I-95 Beltway exit 20B; Fri. 12-7, Sat. 10-6, Sun. 10-5; adults $6, seniors $5, children under 16 free with adult; dealers, club displays, gems, jewelry, minerals, findings, beads, tools, rough; contact Russ Shew (301) 493-8936.

6-8 — NIPOMO, CA: 37th annual show; Orcutt Mineral Society of Santa Maria Valley; St. Joseph's Church, 298 S. Thompson Ave.; Fri. 10-5, Sat. 10-5, Sun. 10-5; free admission; 60 tailgaters and nine inside dealers, demonstrators, exhibits, BBQ Sat. night; contact Wes Lingerfelt, (805) 929-3788; e-mail: rocks4u@prodigy.net; Web site: www.omsinc.org.

6-9 — SANTA BARBARA, CA: Gem Faire; Earl Warren Showgrounds, 3400 Calle Real; Fri. 12-7, Sat. 10-7, Sun. 10-5; admission $5 (weekend pass); gem faire; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com.

7-8 — SAN FRANCISCO, CA: 50th annual show, "Golden Gateway to Gems" San Francisco Gem & Mineral Society; San Francisco County Fair Bldg., Golden Gate Park, 9th Ave. and Lincoln Wy.; Sat. 10-6, Sun. 10-5; adults $6, seniors $5, children under 12 free with adult; contact Ellen Nott, (415) 564-4230; e-mail: ellen_nott@yahoo.com; Web site: www.sfgms.org.

12-15 — BUENA VISTA, CO: 21st annual show, "Contin-tail Show" CO Federation of Gem & Mineral Societies; Rodeo Grounds; Thu. 9-5, Fri. 9-5, Sat. 9-5, Sun. 9-5; a gathering of rockhounds, 200,000+ square feet of rocks, minerals, jewelry and beads; contact Carolyn Tunnicliff, (303) 709-4212; e-mail: ctunnicliff@msn.com; Web site: www.COrocks.org.

13-15 — COSTA MESA, CA: Gem Faire; Orange County Fairgrounds, Bldg. 12, 88 Fair Dr.; Fri. 12-7, Sat. 10-7, Sun. 10-5; admission $5 (weekend pass); gem faire; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com.

13-15 — PORT TOWNSEND, WA: Annual show; Port Townsend Rock Club; Jefferson County Fairgrounds; Fri. 10-10, Sat. 10-10, Sun. 10-6; contact Kathy Sahli, 3030 Center Rd., Chimacum, WA 98325, (360) 732-4678; e-mail: sahli@olympus.net.

13-15 — SEASIDE, OR: 8th annual show, "Seaside Gem Show" Jean and Wayne Miller; Seaside Convention Center; free admission; minerals, crystals, gems, books, tools, jewelry mounting, demonstrations, handcrafted items; contact Jean Miller, P.O. Box 136, Molalla, OR 97038, (503) 829-2680; e-mail: shadow92337@aol.com.

14-15 — LAKEVIEW, OR: Annual show; Tallman Rock Chippers; Fairgrounds, Hwy. 140; Sat. 10-5, Sun. 10-4; free admission; dealers, displays, field tips, silent auction, door prizes; contact Tallman Rock Chippers, P.O. Box 563, Lakeview, OR 97630.

20-22 — SACRAMENTO, CA: Gem Faire; Scottish Rite Center, 6151 H St.; Fri. 12-7, Sat. 10-7, Sun. 10-5; admission $5 (weekend pass); gem faire; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com.

21-22 — KALISPELL, MT: Show; Kalispell Rockhound Club; West Coast Hotel, Center Mall, 20 Main N.; Sat. 10-6, Sun. 10-5; adults $2, children under 12 free; dealers, demonstrators, silent auction, door prizes, displays; contact Sandy Dahl, MT Within Rock Shop, 1761 Columbia Falls Stage, Columbia Falls, MT 59912, (406) 755-4788.

27-29 — SAN DIEGO, CA: Gem Faire; Scottish Rite Center, 1895 Camino del Rio S.; Fri. 12-7, Sat. 10-7, Sun. 10-5; admission $5 (weekend pass); gem faire; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com.

28-29 — CRESTONE, CO: Show; High Country Trader; White Eale Inn & Conference Center; Sat. 9-5, Sun 9-5; free admission; gem and mineral dealers, healers and visionaries, free seminars, indoor and outdoor vendors, rocks, gems, minerals, crystals, spiritual and crystal healers, stone massage, CO specimens, rough and cut stones, carvings, spheres, fountains, pyramids, jewelry, gifts, lapidary, faceting, prospecting equipment, books, maps, tapes, CDs, lectures, slide show, exhibits; contact High Country Trader, P.O. Box 5172, Buena Vista, CO 81211, (800) 707-3707 or (719) 395-3884; e-mail: hctrader@chaffee.net.

28-29 — WALNUT CREEK, CA: Show, "Great Contra Costa Crystal Fair" Pacific Crystal Guild; Civic Park Community Center, 1375 Civic Dr. (at Broadway); Sat. 10-6, Sun. 10-4; Jerry Tomlinson, (415) 383-7837; e-mail: sfxtl@earthlink. net; Web site: www.crystalfair.com.