MOROKS

AUGUST 2011

Monrovia Rockhounds Newsletter

P.O. Box 553
Monrovia, CA 91017
Editor – Janie Duncan

MOROKS AUGUST 2011

SUN	MON	TUE	WED	THU	FRI	SAT
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MOROKS NEWSLETTER AUGUST 2011

MONROVIA ROCKHOUNDS

Club Information
Our Website is www.moroks.com

ELECTED OFFICERS

PRESIDENT – Cal Matthews	(626) 798-7481
VICE PRESIDENT – Janie Duncan	(626) 358-8157
SECRETARY – Michele Silcock	(626) 357 8425
TREASURER – Jim Lloyd	(626) 793-9239
BOOKEEPER – Jo Anna Ritchey	(626) 359-1524
REPRESENTATIVE – Ray Ritchey	(626) 359-1624
REPRESENTATIVE – Linda Wu	(626) 357-4296
REPRESENTATIVE – Rodney Warner	(626) 444-9013
FEDERATION – Jo Anna Ritchey	(626) 359-1624

CHAIRPERSONS

HISTORIAN – Nancy Hamrick	(626) 357-4106
BULLETIN – Janie Duncan	(626) 358-8157
CUSTODIAN – Jim Lloyd	(626) 793-9239
CLUB SHIRTS – Linda Wu	(626) 357-4296
PICNIC – Donald Sneberger	(626) 941-6214
SHOW – Jo Anna Ritchey	(626) 359-1624
WEBSITE – Jo Anna Ritchey	(626) 359-1624
ROCK RAFFLE - Louise Stack	(626) 966 0350
FIELD TRIP – Ray Ritchey	(626) 359-1624
PHOTOGRAPHER – Rodney Warner	(626) 444- 9013
FELLOWSHIP/cards – Louise Stack	(626) 966 0350

Membership: Annual donations are $15.00 per member and $5.00 per each additional member at the same address. $10.00 per name badge is payable on the date of initiation.

Meetings: MOROKS meetings are held on the 3rd Thursday of each month. At 7:00 pm, in the basement of the United Methodist Church of Monrovia, located at 140 E. Palm Ave. Monrovia CA 91016. The building is on the corner of Ivy & Palm Ave. We use the door where there is handicapped access in the alley on the west side of the building. Do not try to enter from the front of the building. Guests are always welcome at our General Meetings. Please come and share our love of rocks.

Information: Monrovia Rock Hounds Inc. was founded August 28th, 1957. The club colors are green & white. The club is a non-profit organization dedicated to providing knowledge of the lapidary arts, geology, mineral logy, and other related fields. Members enjoy slide shows, lectures, demonstrations, displays, lapidary classes, our club library as well as field trips for exploration, study and collecting specimens.

VISITORS ARE ALWAYS WELCOME

If you have any submissions for this newsletter or need to contact the editor Janie Duncan please email her at janieduncan@altrionet.com

Monrovia Rockhounds August Birthdays

Thomas Fuentes	21	John Matthews	7
Beverly Davila	25	Nancy Hamrick	19
William Davis	13	Hoang Nguyen	20

Official Hawaii State Gem: Black Coral

Hawaii designated black coral as the official state gemstone in 1987. Black coral are animals that live in colonies up to six feet high though individual polyps may be less than 1 millimeter in diameter. Polyps are cylindrical with six non retractable tentacles armed with stinging cells. Black coral has been harvested for centuries as a charm and medicine. Mature colonies may take 50 years to grow. The first new Black Coral bed found in centuries was discovered by Maui Divers in the waters off LaHaina, Maui in 1958. Today, Hawaiian Black Coral, the worlds finest, is carefully collected by hand by divers at depths that exceed 200 feet. To ensure the future of Hawaiian Black Coral, Maui Divers strictly adhere to state regulations that prohibit the harvesting of immature colonies. via Delvings

March 30, 2009, President Obama approved H.R. 146, the **Omnibus Public Land Management Act** of 2009, as Public Law 111-11. Title VI, Subtitle D of the act directs the Secretaries of the Interior and Agriculture to implement a comprehensive paleontological resource management program on federal lands. The requirements in Subtitle D will provide increased protection, enhanced management tools, and greater scientific and public understanding of NPS fossil resources. The Paleontological Resources Preservation Act requires the agencies to 1) promulgate regulations as soon as practical; 2) develop plans for fossil inventories, monitoring, and scientific and educational use; 3) manage and protect paleontological resources on Federal land using scientific principles and expertise; 4) establish a program to increase public awareness about the significance of paleontological resources; 5) allow casual collection of common invertebrate and plant fossils on BLM, Forest Service and Bureau of Reclamation lands where consistent with the laws governing those lands; 6) manage fossil collection via specific permitting requirements; 7) curate collected fossils in accordance with the Act's requirements; 8) implement the Act's criminal and civil enforcement, penalty, reward and forfeiture provisions; and 9) protect information about the nature and specific location of fossils where warranted. The Act authorizes appropriations necessary to carry out these requirements. Based on available data, 228 units are known to contain fossil resources either in-situ, in museum collections, and/or in a cultural context. This number is likely to increase as future inventories are completed. NPS museum collections contain more than 445,000 cataloged paleontological specimens. Via Rockette

PREZ SEZ Attendees had an interesting meeting lecture on meteorites this past month. Ask one of us how we can tell if a heavy, dark, magnetic mass could be a meteorite or not! ! The speaker, Walter Lombardo, is the owner of Nevada Mineral & Book Company now in Orange Co. He showed us many mis-identified rocks as well as some spectacular other-worldly specimens. Enjoy the weather while you can and hope you don't have a trip to Phoenix or Dallas this month.

Cal Matthews

VICE PREZ SEZ Please join me for this trip to the San Bernardino County Museum on August 26th Friday. I have been there and it is a very nice air conditioned museum. You may bring guests. Just let me know so we can arrange parking please. Janie Duncan

JULY 7th MONROVIA ROCKHOUNDS BOARD MEETING

President: *Cal Matthews* called the meeting to order at 7:01 PM.

Vice President: *Janie Duncan* July is Walter Lombardo on "Meteorites." August will be Andrew Wilson on "Crystal Lore." September is open. October is the Silent Auction. November is Dr. Ralph Mitchell "The Molecular Structure of Gemstones." December is the Christmas Party.

Secretary: *Michele Silcock* was absent. Cal asked for any corrections or additions to the minutes of last month's Meeting as stated in the bulletin? The minutes were approved as written in the newsletter.

Treasurer: *Jim Lloyd* We have 32 paid members.

Representative: *Linda Wu* was absent. *Ray Ritchey* absent *Rodney Warner* no report.

Fellowship: *Louse Stack* Ray is still having trouble with his mouth and his brace. Micelle is not well.

Great Rock Drawing: *Louise Stack* July will be an amethyst geode cut and polished.

Rock of the Month Talk: The talk for July will be Rodney Warner.

Fieldtrip: *Ray Ritchey* was absent. Janie will give us a date at the general meeting for a trip to the San Bernardino Museum in riverside.

Federation: *Jo Anna Ritchey* No report.

Custodian: *Jim Lloyd* Janie will need the picnic box.

Photographer: *Rodney Warner* We have A pic from a member of his jade garden to put into the newsletter

Historian: *Nancy Hamrick* was absent.

Show: *Jo Anna Ritchey* It looks like we get Ayers Hall after all.

Website: *Jo Anna Ritchey* Needs to be updated.

Bulletin: *Janie Duncan* looks good. We have been getting more exchange bulletins.

Refreshments: Louise Stack has volunteered for July.

Picnic: *Donald Sneberger* Janie needs reimbursement some for picnic.

Old Business: *Cal Matthews* Budget next month.

New Business *Cal Matthews* J1.anie needs a check tonight to mail in our application for the Monrovia Arts Festival booth. We hope to get the same spot. $25.00 fee to join MAFA.

2. Janie has maps from Aynn Dayne. She made copies for all present.
3. 3. We got the new raffle drum and Jim put it together. We still need to get rid of the old one.

President: *Cal Matthews* adjourned the meeting at 8:15pm

BenchTips by Brad Smith

More BenchTips by Brad Smith are at Face Book or at groups.yahoo.com/group/BenchTips

MAGNETIC HOLDER FOR FILES

An easy way to keep all your files organized at the bench is to use a magnetic tool strip. They're not expensive and help keep a lot of small tools from cluttering the bench top. I got a couple of them from Harbor Freight for about $5 each. See http://www.harborfreight.com/18-inch-magnetic-holder-65489.html

Only regret was putting some of my small drills on the magnets. The drills got a little magnetized and now stick together when I carry them in a bottle in my tool box.

JULY 16TH MONROVIA ROCKHOUNDS GENERAL MEETING

President: *Cal Matthews* called The meeting was called the meeting to order at 7:05PM and lead we the Pledge of Allegiance.

Vice President: *Janie Duncan* Tonight is is Walter Lombardo on "Meteorites." August will be Andrew Wilson on "Crystal Lore." September is open. October is the Silent Auction. November is Dr. Ralph Mitchell "the Molecular Structure of Gemstones." December is the Christmas Party.

Secretary: *Michele Silcock* was absent. The minutes were approved as written in the bulletin

Representative: *Ray Ritchey* discussed where dino dung (corprolite) could be made of chapinite.

Representative: *Linda Wu has* absent

Representative: *Rodney Warner* no report

Great Rock Drawing: *Louise Stack* A large amethyst Geode half was won by guest Laurie.

Website: *Jo Anna Ritchey* was absent It needs to be updated.

Federation: *Jo Anna Ritchey* was absent

Fellowship: *Louse Stack* We had 3 guest our speakers present and 1 rock hound. Ray Ritchey is still dealing with some health issues and Michelle is having problems with her medication.

Treasurer: *Jim Lloyd* He reported 32 paid members.

Photographer: *Rodney Warner* took pics tonight and we have one from a club member to put in the newsletter of his jade garden

Field trip: *Ray Ritchey* **August 26th Friday. San Bernardino Museum Redlands off the 10 Freeway. Meet at 9am at Janie's House and carpool. See fliers We might go to lunch after out there somewhere.**

·Adult: $8 · Senior (60 or over) & Military: $6 · Student (with I.D.): $5 · Child 5 through 12 - $4 RSVP Janie 358 8157

Rock of the Month Talk: Rodney Warner talked on Mouqi Marbles. Yvette Fitzgerald volunteered for Aug.

Bulletin: *Janie Duncan* **Great Rock Drawing:** *Louise Stack* The rock was a large plate of stone covered with quartz crystals. It was won by Camille Rutkowski.

Custodian: *Jim Lloyd* Will put the new raffle drum back in the garage.

Refreshments: Louise Stack brought them tonight. Denise Davis volunteered for August.

Show: *Jo Anna Ritchey* was absent October is the MAFA Booth.

Historian: *Nancy Hamrick* no report.

Old Business: *Cal Matthews* 1. Ann Dayne has given the club some old fieldtrip maps.

2. Denise Davis will buy the old raffle drum and paid tonight.

3. We will vote on the budget next month.

New Business: *Cal Matthews* 1. the check was sent in for the October MAFA booth.

DUES ARE VERY PAST DUE! **$15.00 for individuals and $5.00 for each other person at the same address.**

Mail to PO Box Address or to Janie Duncan

Gypsum and Anhydrite

Lawrence H. Skelton Wichita KS via April May Strata Gem UT

The mineral gypsum and its waterless companion, anhydrite, are among the more often encountered minerals found in the earth's crust. Together, they are the earth's most common sulfate mineral. Gypsum is calcium sulfate, CaSO4.2H2O and anhydrite is calcium sulfate or CaSO4. Both minerals form as sedimentary rocks from the evaporation of seawater. The name derives from the Greek word *gypos* that means chalk or plaster. In 2008, gypsum was mined from 51 mines located in 29 different states. U. S. estimated production that year was 12.9 million tons. The world's leading producer is China, which is followed by 88 other nations. Gypsum was used as mortar in construction of the pyramids in ancient Egypt and has a variety of modern uses. Drywall & plaster-of-Paris, fertilizer and soil conditioner for alkaline soils, in foods, glass making, smelting, in paper products, in toothpaste, blackboard "chalk," foot cream, shampoos and hair-care products. Gypsum processing factories are located near the mines, both being centrally located within a given marketing area and in order to economize in transporting a heavy, bulky product of relatively low cash value. Gypsum has a Mohs hardness of 2.0, specific gravity of 2.2 to 2.4 and crystallizes in the monoclinic system. Anhydrite displays Mohs hardness of 3.0 to 3.5, specific gravity of 2.7 to 3.0 and crystallizes in the orthorhombic system. Anhydrite can naturally absorb groundwater and convert to gypsum. When it does so, it expands 33% to 62% its original volume and distorts overlying strata. Both minerals are soluble in ground water causing creation of a karst topography of sinkholes and caverns. Gypsum may occur in any of five natural forms: selenite, satin spar, alabaster, gypsite and rock gypsum. Selenite is the transparent, crystalline form, which occurs in clay or shale as single crystals, rosettes, or fishtail twins. Its exterior surface is pitted or striated and the interior often contains shale or clay inclusions. Satin spar has a fibrous, crystalline form and occurs in layers that sometimes are several inches thick. The fibers are oriented at right angles to the layering. Satin spar may form as layers within rock gypsum and is sometimes replaced by calcite forming a pseudomorph after satin spar alabaster is a massive, fine-grained, white to pinkish gypsum. It is used for sculptures and as a building stone in arid zones. Gypsite is an earthy, granular form of gypsum that may form at the earth's surface or in low, marshy areas. It is formed by the evaporation of ground water that has become saturated with calcium sulfate. It is non-coherent, light gray in color and can be excavated with a shovel. Gypsite deposits may be several feet thick. Rock gypsum is massive, thick-bedded, gray to white or rarely pink, coarsely crystalline rock. It forms deposits ranging in thickness from a few inches to as much as 1,325 feet. The 275 square mile WhiteSands desert in NM is composed of sand-sized gypsum grains. gypsum and anhydrite both are precipitated by evaporation of seawater. The average concentration of all dissolved minerals in seawater is 35,000 parts per million of which calcium sulfate comprises 3.60%. Evaporation of 1,428 feet of sea-water is required to precipitate one foot of gypsum. Gypsum also may be deposited by hot springs, volcanic vapors and sulfate solutions reacting with limestone or other calcium-bearing minerals. Whether gypsum or anhydrite is precipitated in a sedimentary basin depends on water temperature and degree of salinity. When evaporation results in salinity 3.35 times that of normal seawater, gypsum forms until a concentration of 4.8 times normal concentration. Above that, anhydrite forms. Once halite precipitation begins, only anhydrite will form. Water temperature exceeding 42oC. (ca. 105oF.) causes precipitation of anhydrite. Cooler temperatures result in formation of gypsum. Subsequent hydration or dehydration may result in one changing to the other. Gypsum mined in Kansas averages 8 to 9 feet in thickness in the Blue Rapids area in Marshall County and ranges from 10 to 30 feet in thickness in Barber County. Anhydrite ranges in thickness from 100 to 150 feet or more beneath the salt beds in a section extending from eastern Dickinson to western Ellis counties. The Permian age deposition basin holding these rocks was not sufficiently deep to precipitate such quantities in a single evaporation phase. There were several phases of flooding and subsequent evaporation of this Permian inland sea. A connection to the ocean is thought to have existed in the TX/NM area where high tides and severe storms repeatedly refilled the evaporative basin in what is now KS and OK Dry periods permitted the deposition of thin layers of red clay and mud on the surface of the exposed beds of evaporite minerals, layers which were covered by more gypsum, anhydrite or salt during the next flooding phase. These clay and mud deposits formed red or gray lines visible in gypsum mines. KS gypsum deposits occur in strata of Permian age and in the Oaks shale, the uppermost member of the Admire group re-designated to be of upper PN age. Gypsum seams and selenite crystals are found in Cretaceous age shale formations in western KS. Gypsum and anhydrite are widely distributed in the Permian age. At present, commercial mining is carried on in the Blaine Formation Barber County and in Marshall County. Since gypsum is soluble in ground water, collapsed layers of gypsum form an aquifer, which supplies water to parts of the eastern Wichita area. The calcium and sulfate contribute to the hardness and sometimes sulfuric taste and odor of that water. Potentially useful gypsum deposits in KS were first identified in 1854, along the Smoky Hill River Saline County. During the following century, gypsum or gypsite was mined at some time in 19 different locations in 10 different counties: Barber, Butler, Clay, Dickinson, Harvey, Marion, Marshall, Saline, Sedgwick and Sumner. During the 67 years from 1889, when the state began keeping mineral production records until 1956, KS produced 8.4 million tons of gypsum. Gypsum is and has been an important contributor to the economy of KS and other producing states. Although supplies are not infinite, the volume is sufficient for centuries to come. In use at least since the pyramids were constructed, gypsum truly is the "rock of ages."

WHITBY JET

Jet by Mary Sue Bucher

In the year 1861, Prince Albert, husband to Her Royal Majesty Queen Victoria of England, died of typhoid fever. For the remainder of her life, which numbered forty years, she remained in mourning and dressed only in black. Back then, mourning attire included beads fashioned from jet - a strange but beautiful gemstone which is a form of Lignite ... coal. Jet is a fossil mineraloid, sometimes called Black Amber, Agstein, Scorpion Stone, and Witch's Amber. Most jet originated in the Jurassic period, approximately 182 million years ago from the remains of Araucaria conifer trees whose living relatives we call Monkey Puzzle trees. It's lightweight, has a distinctive "coal" smell to it, is known to be flammable, and like amber, it takes on a static charge when rubbed. It is soft, with a Mohs hardness of 2-4 and is known to polish to a luster resembling black velvet. Victorian mourning jewelry has a distinct "look" to it; the beads are, of course, black and are usually faceted. Long ropes of these faceted jet beads were common, and they remained popular well into the 1920s when they were adopted by young "Flappers" to wear with their short, straight dresses. After jet beads became popular, there were, of course, imitators such as Ebonite, also called Vulcanite (hardened rubber). Unlike jet, Vulcanite was molded rather than cut and if heated, smelled like rubber instead of coal. It also bleached out with age to an olive-brown color. "French Jet, Paris Jet, or Faux Jet," is glass, and is the most common imitator of jet; it's easy to distinguish from real jet as it's heavy and has a cold feel to it. Bakelite is a type of vintage plastic that was sometime tinted black to resemble jet. Bakelite, in its own right, has become valuable. About ten years ago, a friend asked me to pick up a Bakelite bracelet for her at an antique show. Turns out most of the good ones that I saw were being offered for around five hundred dollars and needless to say, she didn't get her bracelet. Jet has been imitated by Bog Oak, a type of black wood found in Irish peat bogs, and jewelry makers have also used Cannel Coal, Shale, Horn, and a few things that aren't around anymore. Then, of course, there's onyx, or black chalcedony, obsidian, schorl, coral, and tone that's been dyed. Queen Victoria could afford the real thing, and the only jewelry allowed at court during the mourning period was real jet - preferably, mined from Whitby England, which is known to have the finest jet in the world. Whitby is also a source of Ammonite fossils. An old legend tells of St. Hilda of Whitby who hundreds of years ago was credited with turning a plague of snakes into stone. They do some beautiful jet carvings in Whitby and that's not all they've carved. As proof of St. Hilda's miracle, local artisans carve snake's heads on the ammonite fossils and sell them as a cottage industry. The coat of arms of Whitby is adorned with three of these "Snake Stones. from SFGMS Mineralog, 8/10 via Gem Cutter News 9/10 via Livermore Lithogram

OUT OF THE EARTH

E T I L U C I M R E V E S K Z
M S A Z A W R X J N U I G D F
E Y C S T Y O A L I T H I U M
R H I O Y R S X B L R D P V O
A T L N G P A D G A R N E T L
L E I T E R N U P M N Y X I L
D M S R U O A S Q R N N M O A
A A L F M R D N U U Y E I T O
E E L A E L Q R I O S B Y C C
L U I V E M T U E T I R U Z A
S D L F L A P O O H E K W R L
I I E G L R T N T I C F B O C
S H Y C O B E A U P S O B S I
R M I C A L A B A S T E R F T
U D R R G E D Q N I L O A K E

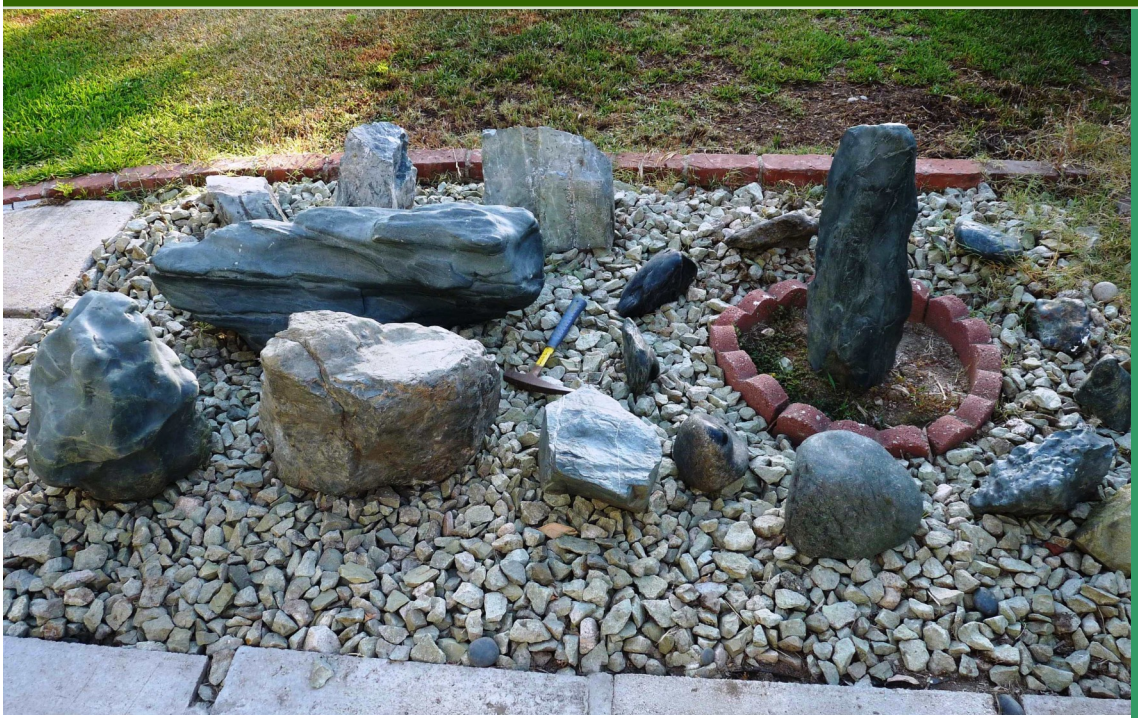
ALABASTER	FELDSPAR	LITHIUM	SILVER
AMETHYST	GARNET	MARBLE	SULFUR
AZURITE	GOLD	MICA	TALC
CALCITE	GRANITE	OCHER	TOURMALINE
CINNABAR	JASPER	OPAL	TURQUOISE
COAL	KAOLIN	QUARTZ	VERMICULITE
DIAMOND	LEAD	RUBY	
EMERALD	LIMESTONE	SILICA	

Answers on page 8

Great Rock drawing for August will be

A large Calcite Specimen

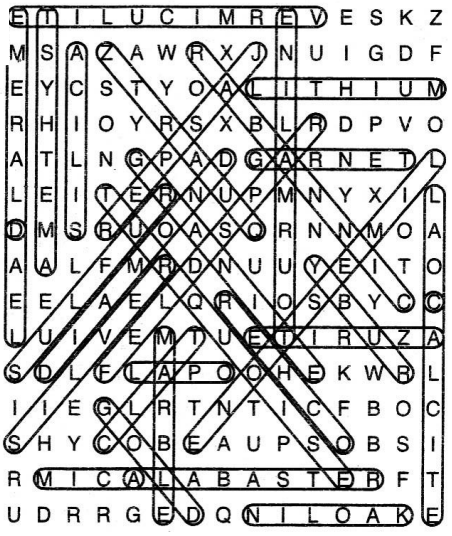
MONROVIA ROCKHOUNDS PICTURE PAGE



JADE GARDEN BELONGING TO A MONROVIA ROCKHOUND MEMBER

Alexandrite via Rockette

A relatively modern gem, *Alexandrite*, was first discovered in Russia in 1831 during the reign of its name-sake, Czar Alexander II, and is an extremely rare chrysoberyl with chameleon-like qualities. Its color is a lovely green in both daylight and fluorescent light; it changes color to a purplish red in incandescent light. Due to its rarity, some jewelers stock synthetic versions of this enchanting gemstone. (Synthetic gemstones are man-made alternatives to the natural material, possessing the same physical, optical, and chemical properties as the natural gemstone.) http://www.americangemsociety.org



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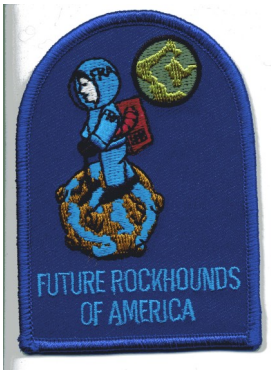
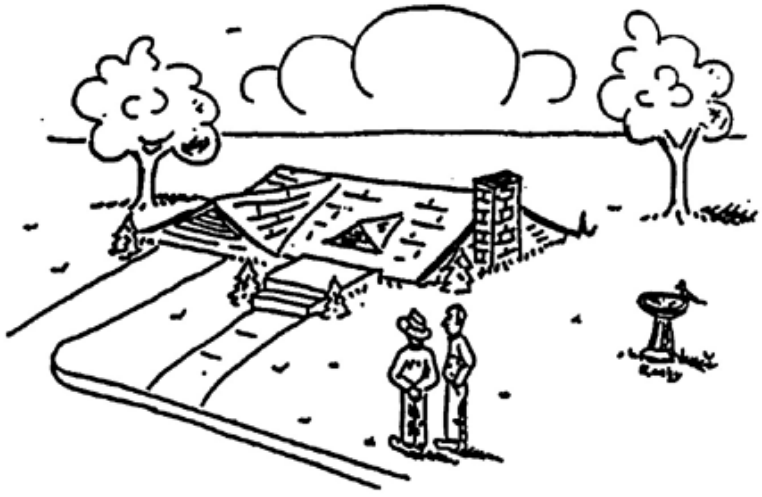


"This map says there's suppose to be geodes around here."

via Gneiss Times 6/02
Gem-N-i.org 8/10

A cloud of ash billowing from Puyehue volcano near Osorno in southern Chile, 870 km south of Santiago, on June 5, 2011. Puyehue volcano erupted for the first time in half a century on June 4, 2011, prompting evacuations for 3,500 people as it sent a cloud of ash that reached Argentina. The National Service of Geology and Mining said the explosion that sparked the eruption also produced a column of gas 10 kilometers (six miles) high, hours after warning of strong seismic activity in the area. AFP PHOTO/CLAUDIO SANTANA

Lightning flashes around the ash plume at above the Puyehue-Cordon Caulle volcano chain near Entrelagos June 5, 2011



I Knew Ole Rocky Was Getting Too Many Rocks In His Basement!

by Rocky West in the T-Town Rockhound 7/61
via Beehive Buzzer 10/98 & others

Moonstone via Rockette

It was given its name by the Roman natural historian Pliny, who wrote that moonstone's appearance altered with the phases of the moon—a belief that held until well after the sixteenth century. A phenomenal gemstone, moonstones show a floating play of light and sometimes show either a multirayed star or a cat's eye. Considered a sacred stone in India, moonstones often are displayed on a background of yellow and are believed to encapsulate within the stone a spirit whose purpose is to bring good fortune. A mineral *feldspar*, moonstone occurs in many igneous and metamorphic rocks and comes in a variety of colors such as green, blue, peach, and champagne. Moonstones are from Sri Lanka. India, Australia, US, Mayanmar, and Madagascar.

CFMS AUGUST SHOW DATES

August 5-7 - NIPOMO, CA Orcutt Mineral Society St. Joseph's Church Recreation Hall 298 S. Thompson Ave. Hours: 10-5 daily Gloria Dana (805)929-6429 Email: info@onsinc.org Website: www.omsinc.org

August 6-7 - SAN FRANCISCO, CA San Francisco Gem & Mineral Society Golden Gate Club 136 Fisher Loop, The Presidio of San Francisco Hours: Sat. 10-6; Sun. 10-5 Carleen Mont-Eton (415) 564-4230 Email: publicity@show.sfgms.org Website: www.sfgms.org

MOROKS FIELDTRIP August 26th Friday. San Bernardino Museum Redlands off the 10 Freeway. Meet at 9am at Janie's House and carpool. See fliers We might go to lunch after out there somewhere. ·Adult: $8 · Senior (60 or over) & Military: $6 Student (with I.D.): $5 · Child 5 through 12 - $4 GUESTS/KIDS WELCOME RSVP Janie 358 8157

Nevada Mineral & Book Company (NMBC) was established in 1985, when we started selling mineral specimens and out-of-print publications at gem & mineral shows and through mail order. In 1989 we acquired the inventory of the Mineralogical Record Book Department, and incorporated in-print books and journals into our offerings. Over the past 20 years, we have evolved to offer the researcher, educator and collector a wide variety of publications and specimens in a "one-stop" shopping environment. In 2001 we opened our first retail location in Henderson, Nevada. In August, 2009 we relocated and opened our new store and gallery in Orange, California. We offer a wide variety of new, used and out-of-print publications, as well as mineral and fossil specimens, lapidary and decorator items, and mining stock certificates and other ephemera. We have one of the largest inventories of earth science-related publications in North America, so plan on staying a while if you come to visit our store while in Southern California. You will not be disappointed.

Walter Lombardo

He did an excellent program on Meteorites For the Monrovia Rockhounds July Meeting

Nevada Mineral & Book Co. • 342 S. Tustin Street • Orange, CA 92866

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A meteorite is a natural object originating in outer space that survives impact with the Earth's surface. Meteorites can be big or small. Most meteorites derive from small astronomical objects called meteoroids, but they are also sometimes produced by impacts of asteroids. When it enters the atmosphere, impact pressure causes the body to heat up and emit light, thus forming a fireball, also known as a meteor or **shooting/falling star**. The term **bolide** refers to either an extraterrestrial body that collides with the Earth, or to an exceptionally bright, fireball-like meteor regardless of whether it ultimately impacts the surface. Meteorites that are recovered after being observed as they transited the atmosphere or impacted the Earth are called **falls**. All other meteorites are known as **finds**. Via Wikipedia