



# Arkansas Rockhound News



Official Newsletter of the  
Central Arkansas Gem, Mineral and Geology Society

August 2009

Next Meeting: August 25, 2009, 6:30 PM - Terry Library

Please call James to find out about the June field trip.  
He should have something exciting planned.

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2009 CAGMAGS Annual Show  
October 3-4, 2009  
More info to come!!  
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2009 Meeting Schedule  
August 25                      October 27  
September 22                November 24

## CAGMAGS

The Arkansas Rockhound News is Published monthly by the **Central Arkansas Gem, Mineral, and Geology Society**  
**Colors: Blue and White**

**Website:** [www.centralarrockhound.org](http://www.centralarrockhound.org)

**Member of:** American Federation of Mineralogical Societies  
Midwest Federation of Mineralogical Societies

### Time and Location of Meetings:

4th Tuesday of the month (January-November) 6:30 PM Terry Library, 2015 Napa Valley Drive, Little Rock, AR 72212,  
(Non-smoking) **Visitors are always Welcome**                      **Membership** Dues \$15 Individual \$25 Family (Yearly)

### Mission Statement:

The Central Arkansas Gem, Mineral and Geology Society is dedicated to promoting interest in mineralogy and the related sciences, interest in lapidary and the related arts; to encourage field trips and the enjoyment of collecting and preserving minerals as they occur in nature, and the study of geological formations, especially those of our Natural State of Arkansas. We are a small group of people that enjoy getting together to share our common interests.

### 2009 Officers:

**President:** Jim Schenebeck 501-223-3668 [jsjimstone@yahoo.com](mailto:jsjimstone@yahoo.com)

**Vice President:** Mike Austen [steelpony@aol.com](mailto:steelpony@aol.com)

**Past President:** David Murray 870-255-3679 [davidmur99@hotmail.com](mailto:davidmur99@hotmail.com)

**Secretary/Treasurer:** Pat Kissire, 4900 Sparks Rd., Little Rock, AR 72210, 501-821-2346,  
[pkissire@sbcglobal.net](mailto:pkissire@sbcglobal.net)

**Committees / Chairs Programs:** TBA                      **Library:** Ann Austen    **Membership:** TBA

**Field Trips:** James Burns 501-568-0315    **Show Chair:** TBA

**Editor/Webmaster:** Barbara & Phillip Nierstheimer [phillspa@hotmail.com](mailto:phillspa@hotmail.com)



Olive Green Peridot



Peridot with milky inclusions

## August Birthstone: Peridot

**Peridot** (pronounced [/ˈpɛrɪdɒt/](#) or [/ˈpɛrɪdɔʊ/](#)) is gem-quality [forsteritic olivine](#). The chemical composition of peridot is  $(\text{Mg}, \text{Fe})_2\text{SiO}_4$ , with Mg in greater quantities than Fe.

The origin of the name "peridot" is uncertain. The [Oxford English Dictionary](#) suggests an alteration of Anglo-Norman *pedoretés* (classical Latin *paederot-*), a kind of opal, rather than the Arabic word *faridat*, meaning "gem".

[Olivine](#) in general is a very abundant mineral, but gem quality peridot is rather rare.

Peridot is one of the few gemstones that occur in only one color: basically an olive green. The intensity and tint of the green however depends on how much [iron](#) is contained in the crystal structure, so the color of individual peridot gems can vary from yellow-green through olive green to brownish green. The most valuable is considered a dark-olive green color.

Peridot crystals have been collected from some [Pallasite meteorites](#). A famous Pallasite was offered for auction in April 2008 with a requested price of close to \$ 3 million at Bonhams, but remained unsold.[\[1\]](#) Peridot is the only gemstone found in meteorites.

Peridot olivine is the [birthstone](#) for August. It is sometimes mistaken for [emeralds](#) and other green gems. In fact notable gemologist George Frederick Kunz [\[2\]](#) discussed the confusion between emeralds and peridots in many church treasures, notably the "Three Magi" treasure in the [Dom](#) of [Cologne, Germany](#).

Olivine, of which peridot is a type, is a common mineral in [mafic](#) and [ultramafic rocks](#), and it is often found in [lavas](#) and in [peridotite xenoliths](#) of the [mantle](#), which lavas carry to the surface; but gem quality peridot only occurs in a fraction of these settings.

Peridot olivine is mined in [North Carolina](#), [Arizona](#), [Hawaii](#), [Nevada](#), and [New Mexico](#), in the US; and in [Australia](#), [Brazil](#), [China](#), [Kenya](#), [Mexico](#), [Myanmar](#) (Burma), [Norway](#), [Pakistan](#), [South Africa](#), [Sri Lanka](#), and [Tanzania](#). High quality peridot olivine is mined in the eastern lava fields of [Saudi Arabia](#). However the best quality gems are considered to come from [Pakistan](#) and most other Peridot is now mined by Native Americans in the San Carlos Reservation in Arizona.[\[3\]](#)

In much antique jewelry, peridot could have come from Egypt: in the late 18th/early 19th century, peridot was taken from Egyptian ecclestial and other ornaments and reused in jewelry. Furthermore a location in Egypt was (re-) discovered but its location remains unknown.[\[4\]](#) The largest cut peridot olivine is a 310 [carat](#) (62 g) specimen in the [Smithsonian Museum](#) in [Washington, D.C.](#)

(Birthstone and mineral of the month courtesy of [www.wikipedia.com](#).)

## August Program

Mike Howard, Geology Supervisor/Mineralogist for the Arkansas Geological Survey for the past 35 years, continues to work on several long term projects: 1. The Arkansas Mineral Commodity database....about 55% completed for the state; 2. the Arkansas portion of the USGS National Geochemical Survey, soil and stream sediment chemical analysis and spacial analysis of that data; 3. digitizing 35 mm slides taken by staff geologists over the past 50+ years, about 1650 done and about 2000 more to go.

As a portion of Project 3, he has digitized many slides of minerals and put together some of his more popular talks from years ago, now in Powerpoint presentation format. The Mineral Tour of Arkansas, that will be presented to our club, is one such example. He is also scheduled this Fall to give this talk to the Spring River Gem & Mineral Club and as part of the Naturalist Series of Lectures for Crater of Diamonds State Park.

Mike is scheduled to retire from state employment on June 30, 2014, but will continue giving lectures and presentations upon request, even then.

## President's Message

Dear members:

Wow, we have just about finished another month, where does the time go..

I might add that this was the most agreeable month as far as the weather goes when it is usually blistering hot, but I like it this way. Now to business, we only have one month to go before our big show and I hope everyone is ready. We will be discussing some of it at our next meeting but keeping it short because of our program by Mr. Mike Howard so come if you can, it promises to be a good one. We still need help in several areas of the show so please let me or Weldon know that you want to help. The show is sold out and the fun begins soon so make your plans.

I hope everyone is feeling good and in good health. Mark you calanders for the show and get ready to come for a good time.

Jim Schenebeck



MINERAL of the Month: **Dolomite**

**Dolomite** (pronounced /'dɒləmaɪt/) is the name of a [sedimentary carbonate rock](#) and a [mineral](#), both composed of [calcium magnesium carbonate](#)  $\text{CaMg}(\text{CO}_3)_2$  found in [crystals](#).

Dolomite rock (also [dolostone](#)) is composed predominantly of the mineral dolomite. [Limestone](#) that is partially replaced by dolomite is referred to as dolomitic limestone, or in old U.S. geologic literature as *magnesian limestone*. Dolomite was first described in 1791 as the rock by the [French naturalist and geologist, Déodat Gratet de Dolomieu](#) (1750–1801) for exposures in the [Dolomite Alps](#) of northern [Italy](#).

The mineral dolomite crystallizes in the [trigonal-rhombohedral](#) system. It forms white, gray to pink, commonly curved crystals, although it is usually massive. It has physical properties similar to those of the mineral [calcite](#), but does not rapidly dissolve or effervesce (fizz) in dilute [hydrochloric acid](#) unless it is scratched or in powdered form. The [Mohs hardness](#) is 3.5 to 4 and the [specific gravity](#) is 2.85. [Refractive index](#) values are  $n_{\omega} = 1.679 - 1.681$  and  $n_e = 1.500$ . [Crystal twinning](#) is common. A solid solution series exists between dolomite and [iron rich ankerite](#). Small amounts of iron in the structure give the crystals a yellow to brown tint. [Manganese](#) substitutes in the structure also up to about three percent MnO. A high manganese content gives the crystals a rosy pink color noted in the image above. A series with the manganese rich [kutnohorite](#) may exist. [Lead](#) and [zinc](#) also substitute in the structure for magnesium.

Recent research has found modern dolomite formation under [anaerobic](#) conditions in [supersaturated](#) saline [lagoons](#) along the [Rio de Janeiro](#) coast of [Brazil](#), namely, Lagoa Vermelha and Brejo do Espinho. One interesting reported case was the formation of dolomite in the kidneys of a [Dalmatian](#) dog. [[citation needed](#)] This was believed to be due to chemical processes triggered by bacteria. Dolomite has been speculated to develop under these conditions with the help of [sulfate-reducing bacteria](#). [[citation needed](#)]

Dolimitization of calcite also occurs at certain depths of [coral atolls](#) where water is undersaturated in [calcium carbonate](#) but saturated in dolomite. Convection created by tides and sea currents enhance this change. Hydrothermal currents created by volcanoes under the atoll may also play an important role.

Dolomite is used as an [ornamental stone](#), a concrete aggregate, a source of [magnesium oxide](#) and in the [Pidgeon process](#) for the production of [magnesium](#). It is an important [petroleum reservoir](#) rock, and serves as the host rock for large strata-bound [Mississippi Valley-Type \(MVT\) ore](#) deposits of [base metals](#) (that is, readily oxidized metals) such as [lead](#), [zinc](#), and [copper](#). Where [calcite limestone](#) is uncommon or too costly, dolomite is sometime used in its place as a [flux](#) (impurity remover) for the [smelting](#) of iron and steel. Large quantities of processed dolomite are used in the production of [float glass](#) (flat glass)

In [horticulture](#), dolomite and dolomitic limestone are added to soils and soilless potting mixes to lower their acidity ("sweeten" them). Home and [container gardening](#) are common examples of this use.

**Club T-shirts**

They are a Royal Blue with a large Club logo and the established club date.

Sizes are Medium, Large, X-Large, and XX-Large Price is \$8 each.

Contact George-916-221-1568

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 Dave and Lenora Murray are now OFFICIAL Arkansas dealers for the GEM SCOOP . (Now known as the TREASURE SCOOP)  
 We have the old standby 36" and a new 42" scoop. Both will be available at the rock show in October, along with great rock hammers. Or, call us , and we can bring yours to the club meeting.  
 That's **D.L.M. Gem 'N' STEM** at 870-255-3679.

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 In November 2006 John, Obe, and Aaron Willix acquired the Rock & Mineral collection created by Hughey Howard Killough. Over 5000 rocks (moss agates, fossils, copper ore, petrified wood, chalcedony, plume agates, thunder eggs, rose quartz, wulfenite, halite, amethyst, quartz, jade, tiger eye, etc.), four agate windows, a large Brazilian agate, a large Arkansas quartz crystal, 7 large antique oak display cabinets, one ring cabinet, over 156 pieces of jewelry, lamps, stands and various other misc. items.

Presently the collection is on display in Magnet Cove, Arkansas and can be seen by appointment. Anyone with an interest in rocks and minerals is welcome. Just call or email **John** 501-351-0049 or [jwillix@newcopiers.net](mailto:jwillix@newcopiers.net), **Obe** 501-804-2331, or **Aaron** 501- 337-0511. The best times for us are Wednesdays all day or Saturday after 1 PM. Please feel free to visit us. We would like to share the collection with everyone. Prices anywhere from give away to trade to \$1 to \$2500. We are open minded and just having fun.

**2009 Show Dates****August****2009:**

8-30--SOUTH BEND, INDIANA: 46th annual show and sale; Michiana Gem & Mineral Society; St. Joseph County 4-H Fairgrounds, 5177 S. Ironwood Rd. (at Jackson Rd.); Fri. 2-7, Sat. 10-6, Sun. 10-4; adults \$2.50, children 6-12 \$1, under 6 free; dealers, gems, fossils, minerals, jewelry, demonstrations, exhibits, Kids' Korner, silent auction; contact Kathy Miller, (574) 291-0332, or Marie Crull, (574) 272-7209; e-mail [crullb2@sbcglobal.net](mailto:crullb2@sbcglobal.net)

**SEPTEMBER****2009:**

15-6--ARLINGTON, TEXAS: 51st annual show, "Nature's Kaleidoscope"; Arlington Gem & Mineral Club; Arlington Convention Center, 1100 Ballpark Way; Sat. 10-6, Sun. 10-5; adults \$6, seniors and children \$3; dealers, jewelry, beads, gems, minerals, fossils, Kids' Korner, Rock Food Table, professional gem identification, silent auctions, hourly door prizes, ; contact Karen Cessna, 1408 Gibbins Rd., Arlington, TX 76011, (817) 277-2286; e-mail: [cessnak@ont.com](mailto:cessnak@ont.com); Web site: [www.agemclub.org](http://www.agemclub.org)

1-13--MARIETTA (ATLANTA), GEORGIA: Show; Frank Cox Productions; Cobb County Civic Center, 548 S. Marietta Pkwy.; Fri. 1-5, Sat. 10-5, Sun. 10-5; gems, jewelry, beads; contact Frank Cox Productions, 755 S. Palm Ave. #203, Sarasota, FL 34236, (941) 954-0202; [frankcox@comcast.net](mailto:frankcox@comcast.net); [www.frankcoxproductions.com](http://www.frankcoxproductions.com)

11-13--MARIETTA (ATLANTA), GEORGIA: Show; Frank Cox Productions; Cobb County Civic Center, 548 S. Marietta Pkwy.; Fri. 1-5, Sat. 10-5, Sun. 10-5; gems, jewelry, beads; contact Frank Cox Productions, 755 S. Palm Ave. #203, Sarasota, FL 34236, (941) 954-0202; [frankcox@comcast.net](mailto:frankcox@comcast.net); [www.frankcoxproductions.com](http://www.frankcoxproductions.com)

12-13--SILOAM SPRINGS, ARKANSAS: Annual fall swap; Northwest Arkansas Gem & Mineral Society; clubhouse, Hwy. 43, just north of Siloam Springs; Sat. 9-5, Sun. 10-5; free admission; kids' gem wash, auction; contact Dave Leininger, (479) 263-1324; e-mail: [Hulagrub@aol.com](mailto:Hulagrub@aol.com); Web site: [www.nwarockhounds.org](http://www.nwarockhounds.org)

18-20--ENID, OKLAHOMA: Show; Enid Gem & Mineral Society; 4125 W. Owen K. Garriot Rd., 1705 S. Johnson St.; Fri. 9-6, Sat. 9-6, Sun. 10-5; contact Billy Wood, 1705 S. Johnson St., Enid, OK 73703, (580) 234-5344; e-mail: [baronladislaus@att.net](mailto:baronladislaus@att.net)