



Arkansas Rockhound News



Mother's Day May 9th

May 2010

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

CAGMAGS

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

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Member of: American Federation of Mineralogical Societies
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CAGMAGS
4900 Sparks Rd.
Little Rock, AR 72210

Next Meeting: May 25, 2010 6:30 PM - Terry Library

Call James (501-568-0315), Dave (870-255-3679) or Obie (501-337-0511) to find out about the field trip plans.

2010 Officers:

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Library: Ann Austen

Membership: Mike Austen

Field Trips: James Burns

Show Chair: Weldon Kissire

Editor: Barbara Nierstheimer

Club Contact: Lenore Murray

Sunshine Chairman: Angelee Peeler

Junior Programs: Obe Willix

Webmaster: Phillip Nierstheimer

phillspa@hotmail.com

Time and Location of Meetings:

4th Tuesday of the month (January-November)

6:30 PM Terry Library, 2015

Napa Valley Drive, Little Rock, AR 7221

(Non-smoking) Visitors are always Welcome

Membership Dues \$15 Individual \$25 Family

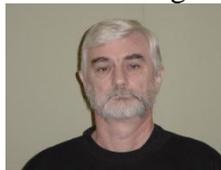
(Yearly)

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.

2010 Meeting Schedule

May 25	June 22	July 27
August 24	September 28	October 26
November 23		

President's Message



I have had a very busy time since the last newsletter. The first thing was a trip to Nebraska for the Lincoln show. I talked to some old friends and made some new ones, and got lots of new stuff. A few days were spent in my home town collecting with an old rockhound buddy, and I got more stuff. Then came our club swap at Burns Park, a great time was had by all. Twelve people had tables and around 80 people showed up. I declare it a big success, and I got more stuff. The Memphis show was next, I had a great time and would you believe it? I got more stuff. Well, enough about me and my need for a bigger house with room for more stuff.

The April meeting was again marked by a new member, that is a new member every month this year, let's keep the string going. Our field trip for May might be to Razor Rock quarry, but it is not set yet, I will let you know the details later. The program for May will be by a member of the Arkansas Geology Commission, those are always great programs. In June the club is planning a picnic at the Burn's place at Malvern along with some collecting and maybe an auction. Make sure not to miss out on that one, it will be great. Time to go now and find a place for all my new stuff.

MIKE

April Rockhounds - Happy Birthday to club member Jerry Moore

April 2010

Club events

Apr 17 Swap Meet at Burns Park

June 12 Field trip and picnic at the James Burns home in Malvern

Oct 2-3 Club Show at Jacksonville

Central Arkansas Gem, Mineral and Geology Society

Minutes for April 27, 2010

President Mike Austen called the meeting to order. There were 22 members and one guest, Bob Taylor. Irish Alcott, wife of Bill Alcott, became a new member. There were no members present celebrating a birthday in April.

Coming events were mentioned including shows on May 14 at Enid Oklahoma, June 5th at the Crater of Diamonds, June 5th at Tulsa Oklahoma, and June 10 at Park Hills Missouri. Mike Austen reported on a show in Lincoln and a fieldtrip in Nebraska. He showed several types of Nebraska agates, and a baby mammoth tooth. Several members reported on the Memphis show and agreed it was great.

The club swap in Burns Park reported 12 tables, 29 members and 36 nonmembers present. This did not include all spouses and children so the total number of those present was close to 90. Everyone said they had a great time and the swap was a big success. The auction brought in enough to cover the cost of the pavilion, advertising and food. The same location has been reserved for April 9, 2011.

There were no minutes or treasury reports available from the March meeting. There was no field trip report, the May trip might be to Razor Rock but details will be confirmed later. Ann reported that the club library had received a large collection of lapidary magazines donated by George Sterpka.

There was no old business. New business talked about was the possible trip to the Burn's in Malvern in June. A picnic with possible field trip and club

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auction might be included.

The program for May will be a given by Angela from the Arkansas Geology Commission. Possible future programs may be presented by Mike Howard on Arkansas quartz and Glenn Worthington on Arkansas diamonds.

Show and tell items included plume agates from Woodward, Texas by Reese Watson; whale vertebrae by John Peeler; a raw mine emerald in matrix by Gerald Roth; and a Sweetwater agate by Bill Alcott.

The raffle best-of-show items went to George Gray-Major (Muscovite) and Spud Frost (silver sheen obsidian)

The program was by Pearl Roth on different rock types including their classifications and origins.

The meeting adjourned followed by much discussion and socialization.

Respectfully submitted,

Mike Austen



May Birthstone, Emerald

Emeralds, like all colored [gemstones](#), are graded using four basic parameters, the four Cs of Connoisseurship; *Color*, *Cut*, *Clarity* and *Crystal*. The last C, *crystal* is simply used as a synonym that begins with C for transparency or what [gemologists](#) call *diaphaneity*. Prior to the 20th Century jewelers used the term *water* as in "a gem of the finest water"^[4] to express the combination of two qualities, color and crystal. Normally, in the grading of colored gemstones, color is by far the most important criterion. However, in the grading of emerald, crystal is considered a close second. Both are necessary conditions. A fine emerald must possess not only a pure verdant green [hue](#) as

described below, but also a high degree of [transparency](#) to be considered a top gem.^[5]

Scientifically speaking, color is divided into three components: [hue](#), [saturation](#) and [tone](#). Yellow and blue, the hues found adjacent to green on the spectral color wheel, are the normal secondary hues found in emerald. Emeralds occur in hues ranging from yellow-green to blue-green. The primary hue must, of course, be green. Only gems that are medium to dark in tone are considered emerald. Light toned gems are known by the species name, *green beryl*. In addition, the hue must be bright (vivid). Gray is the normal saturation modifier or mask found in emerald. A grayish green hue is a dull green.

Emerald tends to have numerous inclusions and surface breaking [fissures](#). Unlike diamond, where the [loupe](#) standard, i.e. 10 X magnifications, is used to grade clarity, emerald is graded by eye. Thus, if an emerald has no visible [inclusions](#) to the eye (assuming normal visual acuity) it is considered flawless. Stones that lack surface breaking fissures are extremely rare and therefore almost all emeralds are treated, "oiled", to enhance the apparent clarity. Eye-clean stones of a vivid primary green hue (as described above) with no more than 15% of any secondary hue or combination (either blue or yellow) of a medium-dark tone command the highest prices.^[5] This relative crystal non-uniformity makes emeralds more likely than other gemstones to be cut into [cabochons](#), rather than faceted shapes.

Most emeralds are oiled as part of the post [lapidary](#) process, in order to improve their clarity. [Cedar oil](#), having a similar [refractive index](#), is often used in this generally accepted practice. Other liquids, including synthetic oils and polymers with refractive indexes close to that of emerald such as *Opticon* are also used. The [U.S. Federal Trade Commission](#) requires the disclosure of this treatment when a treated emerald is sold.^[6]

A rare type of emerald known as a *trapiche* emerald is occasionally found in the mines of [Colombia](#). A trapiche emerald exhibits a "star" pattern; it has raylike spokes of dark carbon impurities that give the emerald a [six-pointed radial pattern](#).^[citation needed]

Emeralds come from three main emerald mining areas in Colombia: Muzo, Coscuez, and Chivor.

Emerald is regarded as the traditional [birthstone](#) for May, as well as the traditional gemstone for the [astrological signs](#) of [Taurus](#), [Cancer](#) and sometimes [Gemini](#). One of the more quaint anecdotes on emeralds was by the 16th-century historian [Brantome](#), who referred to the many impressive emeralds the Spanish under [Cortez](#) had brought back to Europe from Latin America. On one of Cortez's most notable emeralds he had the [text engraved](#) *Inter Natos Mulierum non sur-rexit mayor* (Among them borne of woman there hath not arisen a greater Man. XI, 11) which referred to [John the Baptist](#). Brantome considered engraving such a beautiful and simple product of nature sacrilegious and considered this act the cause for Cortez's loss of an extremely precious pearl (to which he dedicated a work *A beautiful and incomparable pearl*) and even for the death of King [Charles IX of France](#) who died soon after.^[13]

Mine Safety Training

Early March found Barbara, Phillip and Dave Murray at the Arkansas Department of Labor with Bobbie Via, MSHA Training Instructor, for two days of Mine safety training that included first aid and CPR. Sound too dull, right? Not at all, each of us found examples of hazards we have witnessed, and caused. Bobbie is a very good instructor and kept the class very interesting. We have noticed we are more aware and exercise more caution at work and at home.

A day of on-site training is required and Rebecca Young did this for us at Sweet Surrender Crystal Mine. A day with Becky at the mine was a pleasant informative experience. The examples of safe and dangerous areas we learned in class were enforced and Becky suggested a safety kit we are putting together for our rock hounding trips. Also, the buddy system and a life line to someone when we go on trips were great suggestions. If alone in the field we will check in every once in a while to say I'm OK. The life line is someone who knows where we were going and when we should return so they can send help if we don't contact them after returning home. Our safety kit is a tackle box with a first aid kit, a fire extinguisher, a blanket, a couple

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of days of meds and fresh water. The kit should also include sunscreen and bug repellent. You may have other emergency items that could come in handy. As Becky says it is too easy to overlook safety issues or to pack the safety items when we get into rock frenzy.



Iridescent ancient ammonite fossil on display at the American Museum of Natural History, New York City, around 2.5 feet in diameter.

Ammonites

Ammonites, as they pertain specifically to the order Ammonitida, are an extinct group of marine animals belonging to the [cephalopod](#) subclass [Ammonoidea](#). They are excellent [index fossils](#), and it is often possible to link the rock layer in which they are found to specific [geological time periods](#).

The closest living relative of the Ammonitida is not the modern [Nautilus](#), which they somewhat outwardly resemble, but rather the subclass [Coleoidea](#) ([octopus](#), [squid](#), and [cuttlefish](#)).^{[[citation needed](#)]}

Their [fossil](#) shells usually take the form of planispirals, although there were some helically-spiraled and non-spiraled forms (known as "heteromorphs"). Their name came from their spiral shape as their fossilized shells somewhat resemble tightly-coiled [rams'](#) horns. [Pliny the Elder](#) (d. 79 A.D. near Pompeii) called fossils of these animals *ammonis cornua* ("horns of Ammon") because the Egyptian god Ammon ([Amun](#)) was typically depicted wearing ram's horns.^[1] Often the name of

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an ammonite genus ends in *-ceras*, which is [Greek](#) ([κέρας](#)) for "horn" (for instance, *Pleuroceras*).

Because ammonites and their close relatives are extinct, little is known about their way of life. Their soft body parts are very rarely preserved in any detail. Nonetheless, much has been worked out by examining ammonoid shells and by using models of these shells in water tanks.

Many ammonoids probably lived in the open water of ancient seas, rather than at the sea bottom. This is suggested by the fact that their fossils are often found in rocks that were laid down under conditions where no [bottom-dwelling](#) life is found. Many of them (such as *Oxynoticeras*) are thought to have been good swimmers with flattened, discus-shaped, streamlined shells, although some ammonoids were less effective swimmers and were likely to have been slow-swimming bottom-dwellers. Ammonites and their kin probably preyed on [fish](#), [crustaceans](#) and other small creatures, while they themselves were preyed upon by such marine [reptiles](#) as [mosasaurs](#). Fossilized ammonoids have been found showing teeth marks from such attacks. They may have avoided predation by squirting [ink](#), much like modern cephalopods; ink is occasionally preserved in fossil specimens.^[2]

The majority of ammonite species feature a shell that is a planispiral flat coil, but other species feature a shell that is nearly straight (as in [baculites](#)). Still other species' shells are coiled helically, superficially like that of a large [gastropod](#) (as in *Turrilites* and *Bostrychoceras*). Some species' shells are even initially uncoiled, then partially coiled, and finally straight at maturity (as in *Australiceras*). These partially uncoiled and totally uncoiled forms began to diversify mainly during the early part of the Cretaceous and are known as **heteromorphs**.

Perhaps the most extreme and bizarre looking example of a heteromorph is [Nipponites](#), which appears to be a tangle of irregular whorls lacking any obvious symmetrical coiling. However, upon closer inspection the shell proves to be a three-dimensional network of connected "U" shapes. *Nipponites* occurs in rocks of the upper part of the [Cretaceous](#) in [Japan](#) and the [USA](#).

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Ammonites vary greatly in the ornamentation (surface relief) of their shells. Some may be smooth and relatively featureless, except for growth lines, and resemble that of the modern *Nautilus*. In others various patterns of spiral ridges and ribs or even spines are shown. This type of ornamentation of the shell is especially evident in the later ammonites of the Cretaceous.

Some ammonites have been found in association with a single horny plate or a pair of calcitic plates. In the past it was assumed that these plates served to close the opening of the shell in much the same way as an operculum, however more recently it has been postulated that they were instead a jaw apparatus. ^[citation needed]

The plates are collectively termed the aptychus or aptychi in the case of a pair of plates, and anaptychus in the case of a single plate. The paired aptychi were symmetrical to one another and equal in size and appearance.

Although ammonites do occur in exceptional lagerstätten such as the Solnhofen limestone, their soft part record is surprisingly bleak - beyond a tentative ink sac and possible digestive organs, no soft parts are known at all. ^[4] It can be tentatively assumed that they had numerous tentacles, each quite weak, and engulfed prey almost whole. ^[4]

Few of the ammonites occurring in the lower and middle part of the Jurassic period reach a size exceeding 23 centimetres (9 inches) in diameter. Much larger forms are found in the later rocks of the upper part of the Jurassic and the lower part of the Cretaceous, such as *Titanites* from the Portland Stone of Jurassic of southern England, which is often 53 centimetres (2 feet) in diameter, and *Parapuzosia seppenradensis* of the Cretaceous period of Germany, which is one of the largest known ammonites, sometimes reaching 2 metres (6.5 feet) in diameter. The largest documented North American ammonite is *Parapuzosia bradyi* from the Cretaceous with specimens measuring 137 centimetres (4.5 feet) in diameter, although a new 2.3-metre (7.5-foot) British Columbian specimen, if authentic, would appear to trump even the European champion. ^[5]

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When ammonites are found in clays their original mother-of-pearl coating is often preserved. This type of preservation is found in ammonites such as *Hoplites* from the Cretaceous Gault clay of Folkestone in Kent, England.

The Cretaceous Pierre Shale formation of the United States and Canada is well known for the abundant ammonite fauna it yields. Many of these also have much or all of the original shell, as well as the complete body chamber, still intact.



An iridescent ammonite from Madagascar.

Other fossils, such as many found in Madagascar and Alberta (Canada), display iridescence. These iridescent ammonites are often of gem quality (ammolite) when polished.

Ammonites and Birthstone courtesy of Wikipedia, the free encyclopedia



Memorial Day - May 31

April 2010

CALENDER OF AREA ROCK SHOWS

(from Rock and Gem Magazine)

May 2010:

7-9--COLUMBIA, MISSOURI: Show and sale; Central Missouri Rock & Lapidary Club; Boone County Fairgrounds, 5212 N. Oakland Gravel Rd.; Fri. 1-8, Sat. 8-5, Sun. 9-3; adults \$5, students \$3, good all three days, children 11 and under free; demonstrations, mineral exhibits, special kids' mine; contact Robert McConnell, 1601 N. Earthland Rd., Columbia, MO 65202, (573) 445-5415; e-mail: bobmc@socket.net

14-16--ENID, OKLAHOMA: Annual swap; Enid Gem & Mineral Society; Oakwood Mall, 4125 W. Owen K. Garriott Rd.; silent auction, kids' area, lapidary work, rocks, gems, minerals, fossils, jewelry; Fri. 10-8, Sat. 10-8, Sun. 12-5; contact Stan Nowak, (580) 484-2785; e-mail: snowak48@yahoo.com

15-16--BEREA, OHIO: 42nd annual show; Parma Lapidary Club; Cuyahoga County Fairgrounds, Bagley Rd.; Sat. 9-6, Sun. 10-5; adults \$6, children 12 and under and Scouts in uniform free; live demonstrations, raffles, silent auction, competitive exhibits, Kids' Korner; contact Parma Lapidary Club, 926 Lake Breeze Rd., Sheffield Lake, OH 44054; Web site: www.parmalapidary.com

29-30--FORT WORTH, TEXAS: 59th annual show, "Fabulous Fossils"; Fort Worth Gem & Mineral Club; Will Rogers Memorial Center, Amon G. Carter Exhibit Bldg., 3401 W. Lancaster; Sat. 9-6, Sun. 10-5; adults \$5, seniors \$4, children under 12 free; 30 dealers, kids' games, hourly door prizes, grand prize, silent auction, exhibits; contact Steve Hilliard, P.O. Box 418, Decatur, TX 76234; (817) 925-5760; e-mail: fwgmc@embarqmail.com; Web site: www.fortworthgemandmineralclub.org

Classified Ads**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 Mike Austen steelpony@aol.com

Phone 868-4553

Learning to do Pearl Knotting

Pearl Roth is teaching pearl knotting classes at 939 Rector Street, Hot Springs, Ar.

Pearl knotting can be used best with any kind of round, oval, or roundish bead. call 501-623-7753.

The equipment needed: Hands that work; knowledge of how to use a needle; Silk thread and needle; mineral beads or pearls: clasps of sterling silver and gold filed or you can make them from gold filed, or sterling silver wire; a mat or towel or bead board; either bees wax or a bar of soap; a scissors; a thimble; a thin straw; and clear nail polish any brand.

You will learn how to make some simple knots, a very simple tin cup pearl necklace and/or bracelet, a complete pearl necklace, a continuous pearl or bead necklace or a bracelet.

Kid's Corner

From

Rockhounding Arkansas



Experiments in Growing Crystals

Kitchen chemistry is fun for science projects and learning. Here's how to grow your own crystals and cave formations. If you are a kid, get an adult to help you. If you are an adult, get a kid to help you.

Grow Alum Crystals

You will need:



One ounce of alum (you can buy alum in the grocery store in the spice section. It is used for making pickles crispy. An ounce is about 2 1/2 tablespoons, but you won't need all of it, just what will dissolve in the solution)

1/2 cup hot water from the faucet, not boiling water

sewing thread or nylon thread (cotton is easier to tie, but will grow crystals along its length, nylon won't)

2 clean jars or cups
a spoon for stirring
a popsicle stick, flat plastic knife, or pencil to suspend your crystal

coffee filter to act as a dust cover



Step 1.

Add the alum slowly to the cup of hot water. Stir in all the alum that the water will dissolve, not the whole ounce. Cover loosely with

the coffee filter to keep out dust. Let the cup sit overnight.

Step 2.

On the next day, pour the alum water into the other empty cup. A few chunks or crystals of solid alum will have formed in the bottom of the jar. These pieces will be your "seeds" to start the new crystal. Tie a piece of thread around the largest, best formed crystal, and then tie the other end of the thread to the middle of the stick. A slip knot works well, and tying the knot on the crystal is the hardest part of this whole procedure. Suspend the seed in the alum water, with the stick resting across the jar of solution. The seed should dangle in the alum water. Cover loosely with the coffee filter.

Step 3.

Look at your experiment a couple of times a day. What is happening? If crystals start forming in the bottom of your jar of solution, remove your stick and carefully pour or spoon the alum water into another clean jar, being very careful not to let the crystals on the bottom get into your other jar. They will also act as seeds, and will keep your big crystal from growing.

Rock Candy

Dissolve 1 1/2 cups sugar in 1/2 cup boiling water. This is thick, hot syrup. It will burn you and keep on burning your skin because it is sticky, so be **very** careful not to spill it on yourself! We put our solution in a 1 1/2" deep tray, and suspended crochet twine from chopsticks for the crystals to grow on to. These crystals grew for about two and a half weeks before we couldn't stand it anymore and took them out.

