

Bill Alcott
Arkansas Rockhound News Editor
430 Stoney Point Church Rd
Beebe, AR 72012-9688



Arkansas Rockhound News

May 2011

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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Next meeting is June 28, 2011 at 6:30pm at the Terry Library

Call James (501-568-0315), Dave (870-255-3679) or Obie (501-804-2331) to find out about the field trip plans.

2011 Officers:

President: Mike Austen

steelpony@aol.com

Phone 868-4553

Vice President: Tom Sharp

thom61847@yahoo.com

Past President: Jim Schenebeck

jsjimstone@yahoo.com

Secretary/Treasurer: Lenora Murray

218 Old Hwy 11 South

Hazen, AR 72064

(870) 255-3679

Committees / Chairs:

Programs: Pearl Roth

Library: Ann Austen

Membership: Mike Austen

Field Trips: James Burns

Show Chair: Dave Murray

Editor: Bill Alcott

Club Contact: Ann Austen

Sunshine Chairman: Angelee Peeler

Junior Programs: Obe Willix

Webmaster: Bill Alcott

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.

2011 Meeting Schedule

Jan 11	Feb 22	Mar 22	Apr 26
May 24	Jun 28	Jul 26	Aug 23
Sep 27	Oct 25	Nov 22	

There is no meeting in December

President's Message



As I write this message, hail stones are bouncing off the window again. Are we every going to catch a break with the weather? Oh well, in a few days we will all be complaining about how hot and dry it is. On the bright side, just think of all the new material that is being washed out just for us to find on our next field trip.

I would like to give a big thank you to Pat and her helpers for all their work on the Boy Scout merit badge class. It went well and the boys really seemed to enjoy it. The people from UALR were a big help too, and the class rooms and displays were great. I hope the club can work with them again in the future, They are an important resource that we need to use.

The program this month on gemstones in the USA, was really interesting. I was surprised and did not know we had such great gems in this country. You hear a lot about gems from all over the world, but very little about our home grown beauties. I just wish I could find some of them. Maybe I should start planning a field trip to find some right now.

Mike

MINUTES for the MAY Meeting of Central Ark. Gem, Mineral and Geology Society

The April meeting was called to order by President Mike Austen on Tuesday May 24 2011 at the Terry Library. There were 20 members present, with some April birthday folks who received birthday rocks. Mike Austen mentioned the upcoming show dates; Tulsa June 4-5, Park Hills, Mo. June 11-12, St Louis August 19-20 and the Midwest Federation at Toledo, Oh. on Sept 9-11. He also shared the notes he had about the 8.66 carat diamond found in Murfreesboro recently. Our next meeting will be June 28.

REPORTS: The secretary-treasurer report for April was approved as posted. Since James Burns, the field trip chair, was not present, there was no new field trip mentioned. The Magnet Cove trip is still a possibility. Please call James (501- 568-0315) for meeting time and location if you are interested. Mike Austen reported that due to the success of the first two trips to the Geology Commission, Mike Howard will give the club another date to allow members who missed the first trip to take a tour of the facilities. Check your newsletter for dates, or give Mike Austen a call. Dave Murray and Mike again mentioned there are some overnight field trips possible if there is enough interest by club members. Ann Austen, librarian, reminded us there is a new Mineralogical Record. And, if you want any of the many books on the library list, please call her so she can bring them to the meeting for you to check out.

Old Business - The Boy Scout Merit Badge program on May 14 was a great success. Pat Kissire, Angelee Peeler and Sharon Watson did a great job setting up the posters and stations. Unfortunately, Sharon was ill and couldn't attend the program, but our ever-prepared President Mike and Weldon Kissire stepped in and ran two of the stations. Angelee took the third, with a state geologist and two UALR geology students presenting other parts of the program. Pat kept it all moving efficiently, while Lenora Murray discussed our club's many geology-related activities. The scout leaders who were present complimented the whole team on a well-presented complete merit badge program. 20 Boy Scouts were able to complete most of the Geology Merit badge in this

one day's presentation. Hopefully, this is something we can include in our October show! Special thanks goes to the UALR Geology Department, where volunteers set up special displays of fossils found in Arkansas. Unfortunately, Pat and Angelee both missed the meeting. So to both of you (and Weldon and Mike) Please know the whole club says THANKS for a job well done! We're glad you're home, and hope you're doing better Pat.

Dave Murray reported that almost all the inside tables for the October Show are sold. But there is still room for outside dealers. Contact Dave if you are interested. The SHOW FLYERS are available, thanks to the hard work of David Dodson. Thank you so much Mr. Recent Retiree! Please contact Dave Murray or Mike Austen if you will be traveling and willing to pass some flyers out at rock shows or businesses. Two members, Bill Alcott and Roy Matthews volunteered to set up display cases for the fall show. There are 5 available, so please let Dave know if you want to set one up!

New Business – No new business.

Show and Tell: Roy Mathews showed off a beautiful Moroccan trilobite. Mike Austen brought quite an assortment of quartz from a recent collecting trip to McCurtain County, Oklahoma. Some had chlorite, gray, green, or smoky inclusions. And Lenora Murray showed off the citrine and topaz faceted gemstones Dave made, along with her two pieces of stained glass she made at the William Holland Lapidary School.

Raffle: New items were in the raffle, and the two best of show pieces were won by Diana Moxley, an azurite and malachite specimen and Bill Alcott, a polished agatized coral.

Program: The much anticipated movie on Gemstones in the US was very informative. It mentioned some very famous mines in Utah, California, Maine, Montana, Nevada and Arizona, explaining what gemstones are found in each. And it explained what steps need to be taken to turn the rock into valuable gemstones. Everyone seemed to really enjoy it. Next month the program will be either a slide show on Yellowstone, or part of the 85min film on the Crater of Diamonds. There being no other business, the meeting was adjourned.

Respectfully submitted, Lenora Murray, Secretary-Treasurer

Members' Birthdays coming up

JUNE

Mike Austen
Barry Findley
Madelyn Anderson
Steve Losey
Tom Sharp
Reece Watson
Obe Willix

JULY

George Gray Major
Bill Alcott
Mitchell Meux
Philip Nierstheime
Mike Howard

Happy Birthday!

Mineral IQ Test

by Anita Westlake via Tips & Trips, April 2011

1. What is black mica called?
2. What color streak does hematite leave on an unglazed porcelain tile?
3. What does pseudomorph mean?
4. What is the purple variety of quartz called?
5. Are diamonds found in meteorites?
6. In the mineral kingdom, what is a halfbreed?
7. Johann Wolfgang von Goethe had what mineral named after him?
8. What mineral is 4 on the Mohs Hardness scale?
9. Which mineral is a natural magnet?
10. Which is the stalagmite and the stalactite?
11. What is another name for pyrite?
12. What is a "thin section"?
13. What's the difference between magma and lava?
14. What is silver/clear mica called?
15. Is amber a mineral?
16. What are aa and pahoehoe?
17. What's the difference between a meteorite and a meteor?
18. Do meteorites come from meteor showers?
19. Where in outer space do meteorites originate?
20. Which mineral has variable hardness?

21. What is the principle use of bauxite?

22. What is "quicksilver"?

23. Why is Rancho La Brea famous?

24. What common natural glass is still used in eye surgery?

Polishing Apache Tears

1. Fill a Loritone Barrel Tumbler with 2.75 pounds of unpolished Apache Tears to 1" from top of barrel with water to top of the Apache Tears.
2. Add coarse grit [2-2.5oz.] and one small baby food bottle of plastic pellets or small pieces of rubber inner tube. Tumble for three weeks, 24 hours a day.
3. Add fine grit [2.5 oz.] and one small bottle of pellets or small pieces of rubber inner tube. Tumble for two weeks, 25 hours a day.
4. Add pre-polish [2oz.] and one small bottle of pellets or small pieces of inner tube. Tumble for two weeks, 24 hours day.
5. Add polish [2oz. of tin oxide], one small bottle of pellets or small bits of rubber inner tube, and three tablespoons sugar. Tumble for two weeks, 24 hours a day.
6. Add two tablespoons of Spic & Span soap, one bottle of pellets or small bits of rubber inner tube. Tumble for one hour.

Note: After each step, thoroughly wash Apache Tears, pellets or small bits of rubber inner tube and tumbler barrel. Add fresh water with each step. from Golden Spike News-12/97 via Rock Rollers, 3/01

HINT – By using small pieces of styrofoam plastic; instead of the hard, round little plastic beads, your polishing agent will do a better and quicker job. Those hundreds of polish-impregnated little Styrofoam pieces will really put a shine on everything in the tumbler and will disappear from sight by the end of the polishing cycle.

from Rock Rollers, 3/01
via Rockcollor 4/01

Note from the editor: I'd bet one bean bag chair from a yard sale or flea market would yield enough styrofoam beads to tumble polish for a LONG time!

Finding And Finishing Ammonites
By Dave Daigle, Edmonton, Alberta, Canada
rokhound@planet.eon.net

Collecting Ammonites:

Somewhere in the Lower Middle Devonian, some group of Nautiloids gave rise to a modest group of coiled Cephalopods, the Ammonites. They really picked up their pace in the Mesozoic Period and became more plentiful and varied, and were dispersed almost worldwide. They differed somewhat from their modern day cousins, mainly by internal structure.

As they died on the ocean floor, they were buried in the sea mud. In North America that mud became, for the purpose of this paper, either shale or Ironstone. Normally the mud would be pressed into flat layers of shale by the pressure of the sea and mud above it, but the hard bodies kept their shape and became concretions. Those concretions, or roundish UFO shaped nodules of shale and Ironstone, are found in the Aragonite Zones of the Badlands, in Southern Saskatchewan, Southern and Mid Alberta, and Northern Montana and are the geologic structures where Ammonites are found today. You usually find concretions in the upper sides of banks on existing rivers, such as the Bow River, or in the Badlands banks, which were rivers at one time. Surface collecting is easiest, although some rockhounds have adapted a type of long tined pitchfork for prodding down into the soft Bentonite beds in hope of striking a concretion.

Once found, the trick is to break open the concretion. If cleaned off carefully, one can usually see small fracture lines or, sometimes, a piece of the Ammonite peeking through a spot at the edge of the nodule. A sharp chisel, a hammer, and a steady hand, and most concretions will break in half where the Ammonite is laying usually exposing a concave side of the concretion with shell attached and the Ammonite itself imbedded in the other half. If you are after the Gem...or shell ... then you can break the Ammonite out of the now halved concretion. But, if you want a complete Ammonite, if indeed it is complete, than traditional methods of removing a fossil from matrix are used. (Thank goodness for Foredoms and Dremels.)

Trivia time....The Ammonites got their name from the chief God of the Triad of Thebes Amun, who

was often depicted as a Ram with curved horns. The area covered by the Bearspaw Sea, which included Northern Montana, Alberta and Western Saskatchewan is where we find most of the Placenticerias Meeki species. The Meeki is, in my humble opinion, the best gem quality shell. These concretions with, hopefully, Mekki inside them, can be anywhere from 6" to 3" in diameter! The bigger ones, and most others, are "halved" right on the spot to see what treasures they hold and to more easily get them back to your transport. Most will fit into a backpack but some we have to "sling" and carry these on our backs also. Heavy?You Bet! But alas, sometimes you find the other kind, what we call barren shale, and your efforts of digging them out and breaking them in half are not rewarded.

Hmmm, heavy Reminds me of a time when I was loaded down with a heavy pack full of Ammonite, walking on a game trail at the bottom of a coulee on the way back to my truck. I came around a corner, with my head down .. of course, (typical Rock hounding syndrome) and came face to face with a huge Whitetail Buck! Now, it's nice to see nature from a distance, but up close those bucks are huge!!! He startled me and I fell backwards on my pack and watched as the buck took off straight up the side of the coulee like the hounds of hell were chasing it. I recall, as I laid there looking up, that the bank was about 100 feet high and pretty well straight up! Well, after kicking my legs for a while, and laughing at my predicament of looking, for all the world, just like a turtle flipped on it's back with it's legs wiggling, and rocking my body I finally rolled on my side and managed to get back on my feet. To this day, I still don't know which one of us were scared more, the buck or me.

Do you still want to go hunting for these concretions with that beautiful Ammonite shell inside? A word of warning, you must, at least in Canada, have the appropriate Ammonite permit to collect Ammonites! The fine can be severe for collecting without one. But it doesn't stop with a license, once you have returned home with your treasures, you must then fill out a disposition form and take pictures of your finds, which are sent off to the Tyrell Museum, where the experts look things over. If you have not discovered a new species or anything of paleontological value, they send you a

reply...and then the Ammonites are yours.

From Raw To Gem Ammonite

I will attempt, in my humble way, to describe to you the way in which I work Ammonite. Please bear with me, as writing is not my forte'.

Once I have gotten my Ammonites home, It's time to clean them to see what I've got. This can involve anything from muriatic acid baths...remember AAA, always add acid...never water to acid, to a simple cleaning with a brush and water. Some Ammonite has a thin film of white, or unformed calcite on top of the gem, this is when acid is used in dilute amounts to clean it off. If it's too filmy it usually extends down through the shell and makes it rather useless for gem quality pieces. Although with acid, the colors are still there.

Next comes the decision to keep it whole. If indeed you found a whole one in one piece, you should keep it as such Or to "gem it", if it's in many fractured pieces. If it's whole, it's sanded by hand later. I've found no better way to do it, although I've experimented plenty.

Ammonites, it seems, always start their lives with dark colored, blue and green shells. Probably to aid them in hiding from their many predators. Their shell is in layers, starting from red, to the oranges and yellows and then to the greens and blues of the last layers. So, if you feel brave, you can continue to sand down through the layers to get at the rare greens and blues. But, like an opal, be careful, after the last blue color....there's nothing but shale and you will have lost your color!

But alas, I wander off....Back to it then. There is much to do before laying on the sandpaper. Firstly, if not whole, you must cut away the excess shale, this can be a tricky process also. You should try and keep about 1/2 of shale still attached to the Ammonite Gem. Remember, the Ammonite is a Nautiloid and shaped accordingly, albeit flattened out somewhat from the pressures of time. Therefore there will be gem on "both sides" of the Ammonite, and you have to decide where to cut it. Flat spots are preferred, but they are rare in a Nautiloid shaped body.

Depending upon the color of the shale you probably have to seal the Ammonite. If whole, then you seal the whole Ammonite. But for this paper, let's assume that you have Ammonite pieces. The reason

for sealing the Ammonite is to darken the shale down and to seal the gem shell to the shale beneath it. Again, referring to opal, the darker the matrix, such as Black Mintabe Opal, the brighter the color or fire is seen. Same thing with Ammonite gem. The darker the shale below, the brighter the colors of the gem will seem to be.

Sometimes, Ammonites come with the shell sitting loosely on the shale cores. This is where the Optican Sealer comes in. You need to heat the Ammonite pieces up to about 150 degrees and then apply the sealer to the gem with a brush. I use sheets of 1/2 inch steel and lay them across the burner elements of a kitchen range. But if you're doing a single piece, or just a few, a slow oven will do just nicely. The warm stone will actually draw the sealer down through the gem and into the shale beneath it, thus effectively sealing the gem to the shale and making the shale darker. Take the pieces off the heat and let them sit for a few days. The sealer never quite seems to harden, but almost. Now, the pieces have to be cut into fairly flat pieces or freeforms. Not too small yet as you have to use the lap wheels next. I guess this part just takes practice, but you can actually find some fairly flat pieces on the Ammonite ... you just have to picture flat enough places and sizes to eventually make gems from. Sometimes your pieces are small. But they are flat.

The Gem Quality of the pieces are important and could alter your decision for gem or freeform pieces. "A" grade or better have a finely fractured texture with either a multitude of colors or a single brilliant color. The grades differ to c, b, a, aa and triple a grades. Now that we have formed the AFAC we hope that the grades can be regulated. But for now beware, some peoples ideas of A grade are not always the same as someone else's. Some gem has wide fracture lines and poorer colors and are therefore of lesser quality. After you have done it for a while, you can tell this when you first crack open the concretion.

Next comes the flat laps. I usually start with about a 400 grit ... carefully ... the gem is not that hard. Think of it as a regular shell and you'll be fine. All you want to do in this stage is to "flatten" the piece you are working on. Some of it, of course, can never be flattened and I believe these pieces would be great for intarsia work, but since I haven't got

that figured out yet, for freeform pieces. Once you have your piece fairly flat, look at the center of the piece, you'll probably find ... if you stopped soon enough .. that it's the green or blue color. If you didn't stop soon enough, then you'll find shale,...Damn! And you start over with a flatter piece. Seriously though, keep an eye on it and you'll be fine. This is the stage where you must decide, freeform or gem quality. If you are doing gems instead of freeform, you cut out your gems before you start your 600 stage. The most popular way to cut gems ... which also gives you the least waste ... is the rock bandsaw. But, the traditional saw is fine, just plan your gems out carefully as to waste as little of it as possible It's expensive stuff! An oval of 10x14 can be \$80.00 or more if it's "AA" or better! I dip my gems with a two part 5 minute epoxy on to welding rod pieces. Just warm up the metal rods with a torch slightly and stick it to the already placed epoxy on the back of the gem (the shale). I round them into calibrated shapes with a 400 or 600 grit expandable wheel with sc grit. Finally, the gem must be capped. Some lappers use glass, some use a product such as Envirotex .. a two part sealer/glue that hardens rock solid. These methods are ok, but for rings and high abuse jewelry you still can't beat Spinel or Quartz caps. I use tempered glass or I make my own caps from quartz, for brooches and most of my freeforms. I hope I have been able to shed some light on the long kept secrets of Ammonite Gems. But if we are going to sell rough, people need to know how to work it properly. It is too precious and beautiful a gem for people to have to learn the hard way, as I did.

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Via RMFMS Newsletter 2/01

Polishing a stone all over, front, back, and edges, acts as a sealer. It seals and keeps the water in opal; it prevents natural corrosion in rhodonite (that

corrodes to a black ore called wad) and it helps stop the absorption of harmful substances such as perspiration.

The Ammonite 6/94, via Beehive Buzzer 8/97
via News & Views 9/97

History of Wire Art Jewelry

Wire wrap jewelry has recently gained popularity among all groups of people. For a small investment, any person can have a unique piece of wearable artwork created. Bold, angular designs to smooth flowing curves can change a common gemstone into an heirloom. Ancient Phoenicians are credited with the creation of wire wrap jewelry, but the art form goes nearly 1000 years earlier. In the Biblical record, detailed instructions are given to Moses to construct the tabernacle and the priestly garments and attire. The design for the breastplate of Aaron, the High Priest is found in Exodus 28, verses 15 and on. It was to have 12 gems: sardius (ruby), topaz, carbuncle, emerald, sapphire, diamond, jacinth, agate, amethyst, beryl, onyx and jasper. All were to be set in gold filigree. Filigree was gold or silver hammered into thin sheets, then cut into thin strips and the edges filed smooth, thus making wire. The wire was woven into a basket of filigree and set into the breastplate. Later in Exodus, more detailed instructions were given about setting other gemstones into the rest of the priestly garments. Biblical scholars have placed this event near 1446 BC, nearly 1000 years ahead of the Phoenicians. There was a change in the Egyptian sarcophagus around 1900 BC, about the time that Joseph traveled to Egypt and brought his family there to avoid the famine in Israel. The sarcophagus, prior to that time were layered with fine sheets of gold. About 1900 to 1800 BC, the sarcophagus changed to include woven strands of gold and silver, hinting that the Hebrew artists brought this art form to their new homeland. Wire was produced this way through the rise of the Phoenician Empire. Phoenician culture thrived on arts and performance. As a semi-nomadic group of people, the Phoenician people took their art forms across the known world. At the height of the Phoenician Empire from 1250 to 500 BC, their jewelry was prized through the world. When the Greek navy came to power, the Phoenician trade started to dwindle and finally was engulfed totally by the rise of the Roman Empire.

Although Roman culture was one to absorb other art and cultural ideas into their own, the wire wrap art was abandoned for more traditional silversmith techniques. The earliest reference to drawn wire was in the 8th century of France and the first commercial wire operation was in 1270 AD in France. During the Medieval period, Knights brought wire back to England to make chains and mail for their armor. Gold and silver wire were drawn in France and transported back to England. The earliest mention of wire production in England was 1465. Wire wrapping was limited to fastening crucifix and other religious symbols to lanyards and chains. During the late 1800's the Bohemian culture used wire to string chips of polished glass and stone beads to make necklaces and bracelets. This was popular among the European aristocracy for nearly 50 years. These hand-forged chains were so popular that if you were found out to not have an authentic Bohemian piece of jewelry, you were shunned and scorned. From 1837 to 1901, the Victorian Age had emerged. Among the most popular pieces of jewelry was the cameo. Wire art combined the two most popular forms of jewelry of the time: sculpture and cameo. Wire artists created jewelry that has been handed down from generation to generation. The truest form of Wire Art Sculpture has only recently been seen. Many artists have introduced this art form into almost every culture of America. Hundreds of artists now create all forms of wearable art such as rings, pendants, hair barrettes, broaches, bracelets, and stick pins. Modern wire artists combine gemstones, beads, antiques, family heirlooms and even mineral specimens with gold, silver, gold fill wire. Other artists also use copper, jeweler's brass and German silver in some of their designs. (From the Internet, The History of Wire Wrap via Snoopy Gems, Sept 08)

Mineral Test Answers

1. Biotite
2. Red to Brownish Red
3. False-Form
4. Amethyst
5. Yes, most notably in Canyon Diablo
6. A specimen of half silver and half copper
7. Goethite
8. Fluorite

9. Magnetite
10. Stalagmite grows up mighty from the ground. Stalactites have to hang on tight to drip from the ceiling
11. Fool's Gold
12. A wafer thin slice of a mineral or meteorite that is virtually transparent. It is placed in a polarized microscope to identify individual minerals and their crystal structures.
13. Magma forms inside the volcanic chamber lava flows outside the chamber and is visible to the eye.
14. Muscovite
15. No it does not pass one of the five characteristics of a mineral most specifically "inorganic"
16. Types of lava. Aa is named for the sound one makes when walking upon its rough surface pahoehoe is ropy lava.
17. A meteorite is a rock from space that makes it to the ground. A meteor is the LIGHT you see when the meteoroid hits the earth's atmosphere and briefly catches fire.
18. No-Meteor showers are cyclical and are the result of comet trails intersecting with earth's orbit.
19. The asteroid Belt between Mars and Jupiter
20. Kyanite
21. Aluminum
22. Mercury (the liquid metal that used to be in thermometers)
23. The La Brea Tar Pits where hundreds of animals were found preserved in tar
24. obsidian

Note from the Editor: While all the articles in this newsletter are interesting and informative, they don't say much about what we, as a group, are doing. What are YOU doing? Going on a rock hunt? Making jewelry? Trying to learn all those impossible to remember crystal structures? How about sharing it with the rest of us? Articles, photos, stories or anything else you think of would be greatly appreciated! Send it to me at mister.bill@starband.net and I'll get it in the next newsletter! Thanks much!