



CAVES OF THE MID-SOUTH

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YOUTH NEWS

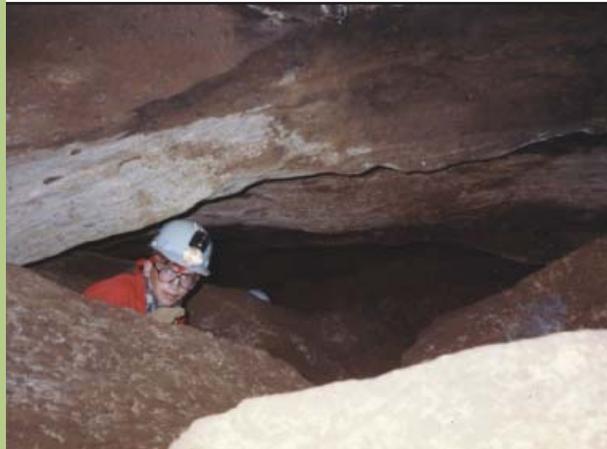
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Blue Jay Cave, Lobelville, TN
photograph by Mike Baldwin

Caves—Prehistoric people lived in them and painted images on their walls. For geologists, they're accounts of earth's history. For cavers, they're a source of discovery and adventure.

The most common type of cave is the limestone cave. Limestone caves are created when rainwater combines with carbon

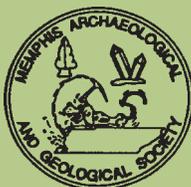
dioxide gas (from the atmosphere or soil) and creates a carbonic acid that runs down through joints in limestone rock dissolving calcium carbonate, one of limestone's main ingredients. This process is called carbonization. Joints are splits usually found near the surface of stressed rock. Over time the process of carbonization widens these joints, the holes and pockets become deeper in the limestone. The interiors of caves grow and become wider through this process.¹

The size and depth of many caves in the United States are very impressive. Many long cave systems can be found in the Mid-South. The longest cave in the US is the Flint-Mammoth Cave system in Kentucky (more than 350 miles long). The fifth longest cave in the US is Cumberland Caverns in Tennessee (32 miles). The Sloan Valley Cave system in Kentucky (22.4 miles) is the sixth, and Crevice Cave in Missouri (20.8 miles) ranks number seven.²

(see Caves of the Mid-South on page five)

AUGUST EVENTS

Aug 1	6:30p	Board Meeting: Barnhill's @ Eastgate Shopping Center
Aug 9	7:30p	General Meeting: Shady Grove Presbyterian Church, 5535 Shady Grove Rd., Memphis (no displays tonight) Program: 2nd Annual Summer Potluck Dinner and Rock Swap (bring your favorite dish to share and rocks to swap/sell)
Aug 15	7:00p	M ³ Meeting: Micromounting at Roger's house (see page 4)
Aug 24	9:00a	DMC Field Trip: Union Mills, North Carolina (see page 6)
Aug 24	8:00a	MAGS Field Trip: Blanchard Springs, Arkansas (see page 3)



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MAGS Rockhound News is published monthly by and for the members of the Memphis Archaeological and Geological Society. Please send your comments and articles to Mike Baldwin, 367 N. Main St., Collierville, TN 38017.

Greetings from the Prez

It sure is hot in the Ozarks during this time of the year, but I think everybody who went on the trip to Mount Ida had a really good time collecting quartz crystals anyway. Now the real work starts . . . cleanin' em up! If you're not sure how to clean 'em, you might want to look back to page five of the June *MAGS Rockhound News* for some tips.

I want to take a minute to mention the potluck and rock swap on August 9th. Most of you will remember last year's August Dinner/Rock Swap. We had such a good time that we figured it would be good to make it an annual event, so that's just what we did. The potluck and swap will take the place of our regular meeting in August. Bring your favorite appetizer, main dish or dessert (enough to share with lots of people), and don't forget to bring your own tables if you're planning on setting up to sell or swap your rocks and stuff. There will not be a regular Rock Swap in August.

I hope you can make it on the August field trip to Blanchard Springs Caverns. It's 58 degrees year round inside the cave, so this will be a break from all this Memphis summer heat. So mark your calendar now for August 24.

Let's give a great big thank you to Carolyn Hays for hosting the July Rock Swap at her house in Collierville. As always, it was a real treat to enjoy her backyard and deck, under the trees. 23 members and 2 guests (Mike Martin and Michelle Bryant) made it to the Rock Swap.

see you at the potluck dinner and bring a friend



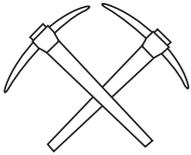
WELCOME NEW MEMBERS

Please welcome the following new members to MAGS:

- | | |
|--|--|
| (1) Charles & Emily Hill
Steven Walker
Lisa Walker
1070 Park Swain Road
Grand Junction, TN 38093
731-764-2753
hunter3006@aol.com | (2) Richard Butterick
William Butterick
4864 Dee Road
Memphis, TN 38117
901-685-9881
RButterick@aol.com |
|--|--|

UPCOMING MAGS FIELD TRIPS

- | | |
|---------------------|--|
| August 24 | Blanchard Springs Caverns, Arkansas [this is a change] |
| September 21 | MAGS Host DMC, Vulcan Quarry, Parsons, Tennessee |
| October 26 | Richardson Landing, Millington, Tennessee |
| November 23 | Birmingham Ridge, Tupelo, Mississippi |



MAGS FIELD TRIP BLANCHARD SPRINGS, AR

SATURDAY, AUGUST 24, 2002, 9:30am

FIELD TRIP LEADER DAVID McILWAIN (901) 465-7388

CAVERN TOUR: Blanchard Spring Caverns – Mountain View, Arkansas. This trip is open to MAGS members and their guests.

TOUR RATES: Group tour rates are available for all members and their guests. Adult tickets are \$4.50, children 6-15 year of age are \$2.50, and under 6 years of age are free.

MOTEL ACCOMODATIONS: (Optional): Econo Lodge – 619 Sylamor Ave, Mountain View, AR 72560; Phone (870) 269-3775; Fax (870) 269-2807; Email hotelhelp@choicehotels.com; Reservations 1-877-424-6423. 29 units located at the junction of Highway 66, and Highway 14. Please make your reservations ASAP.

MEETING TIME/PLACE: 9:30 a.m. We will meet at Blanchard Spring Caverns visitors center. We will begin tours promptly at 10:15 a.m. Please be on time.

DRIVING DIRECTIONS: From Memphis take I-40 W towards Little Rock; take I-55 N exit 277 towards Blytheville/Jonesboro. Take US-64 W exit 10 towards /Wynne/ Earle/Augusta/Bald Knob, then US-167 N towards Batesville. Take AR-14 W towards Mountain View, then go 8 miles northwest of Mountain View between Fifty Six and Alison to Blanchard Springs Caverns. Approximately 4.5 to 5 hours driving time.

SAFETY NOTE: While the caverns, all safety rules must be followed. All children and junior members must be supervised by an adult member at all times. Please be advised that there is always a possibility for injury, so please follow AFMS safety rules.

ACCESSIBILITY: All facilities at the visitors center are fully accessible. Only the Dripstone Trail is accessible to strollers and wheelchairs (you must provide your own).

SUGGESTIONS: Cave weather is constant with a year-around temperature of 58° and nearly 100% relative humidity, so bring a light jacket. The paved trails are wet, so you should definitely wear comfortable, non-skid shoes. Pictures can be taken, but I suggest snapping only after the tour guide has turned the formation's spotlight on.

PETS: Pets are not allowed in visitors center or caverns, except those trained for people who are disabled. There are no kennels available.

DIFFICULTY LEVEL: Level 2 to 4 on a scale of 1 (easy) to 10 (hard).

FIELD TRIP AGENDA

10:15am: Dripstone Trail Tour: This trail winds through the magnificently decorated upper level and passes through huge rooms filled with an incredible abundance of crystalline speleothems: sparkling flowstones, towering columns, cave drapery, the 'ghost room' and delicate stalactites. This is the shorter and easier of the two trails. It takes you .7 mile round-trip.

Noon: Around noon, we will break for lunch at a nearby restaurant of our choice.

1:30pm: Discovery Trail Tour: This is the longer, more strenuous of the two trails and explores the lower reaches of the caverns. It follows the path of the first explorers through water-carved passages, through the natural entrance, along the cavern stream and water-filled third level of the caverns. The last part of the tour contains great flowstones and crystalline formations. This trail is 1.2 miles long, with nearly 700 stairs. Don't take this trail if you have walking, heart, or breathing difficulties.

Please sign up at the August meeting. Contact David McIlwain if you need to cancel.



AUGUST BIRTHDAYS

August Birthstone is PERIDOT

- 3 - Lydia Haff
- 4 - Richard Butterick
- 4 - Edwin Rice
- 4 - Roger Van Cleef
- 4 - Donald Spencer
- 5 - John Patton
- 6 - Irma Idell
- 7 - Steven Ethridge
- 8 - Rusty Graber
- 13 - Steven Walker
- 11 - Paul Sides
- 15 - Lucile Cox
- 16 - George Loud
- 17 - Anna Sisk
- 19 - Ramon Gafford
- 19 - Rachel Huber
- 21 - Leslie Garth
- 22 - Idajeon Jordan
- 24 - Douglas Swink
- 25 - Sherri Baldwin
- 25 - Robert Foster
- 25 - Frances Walker
- 26 - Windsong Levitch
- 28 - Helen Gafford
- 28 - Natalie Parks
- 30 - Norm Hall
- 30 - Kimberly Novarese
- 31 - Abbey Vaughn



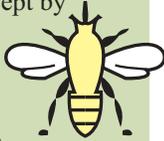
SUNSHINE REPORT

FRANK & FRANCIS WALKER—
Let's remember **Martha Rannels**, who has been in hospital; **Breezy Levitch**, who should be out of her cast soon; **Norm Hall's** difficult surgery and recovery; **Jean Helt**, recovering from a broken ankle; and **Kim Prudhomme**, recovering well from leg injuries.

If you, or a MAGS member you know, becomes ill, please call Frances and Frank Walker at 372-6206 and let them know.

BEE LINE

1. Africanized “killer” bees (A) are widespread in the southwest US.
2. “A” are indistinguishable from European bees (E) except by their actions.
3. “A” bees swarm up to 10 times per year. “E” bees only swarm 2-3 times.
4. “A” swarm are smaller (baseball size) than “E” swarms (basketball).
5. “A” usually swarms near bushes close to the ground. “E” swarms around high tree limbs.
6. All bees are attracted to dark clothing and large-sized bulk.
7. Bees are especially attracted to breath (good or bad).



IF YOU ARE ATTACKED:

1. Try to cover all bare areas, especially face and neck.
2. Get inside (building, house, car).
3. Some will follow but you can deal with them after you take cover.
4. Try to resist running. Bees fly at 15mph. You can't run that fast!
5. Try to resist fighting them, as it will make them more aggressive.
6. Don't jump into water over your head. They will wait you out. They have good vision and can smell your exhaled air bubbles.
7. Get the stinger quickly. It will pump venom for up to 5 minutes.
8. If you are stung many times in a short period, call 9-1-1.

(via [High Country Gleamings](#), 08.01)

FIVE GOOD REASONS TO GO DIGGING IN WINTER

1. All the bad stuff has frozen to death.
- 2.
- 3.
- 4.
- 5.

MICROMINUTES

ROGER VAN CLEEF–The MAGS Micro Mounters [**M³**; M Cubed] are off to a good start with support coming from some un-expected sources. Last week we received a large box of micromineral material from **Brenda Johnson** [editor of the Ozark Earth Science Club newsletter], Mountain Home, Arkansas. There were samples from some eight different areas which will be used during the next several meetings. Thank you, Brenda, for your generous donation. **George Fulghum**, a long-time MAGS Member, dropped by last week with more materials for **M³**. Included were mineral samples, mounted minerals, tools, microquartz from Jeffery Quarry, North Little Rock, Arkansas and a binocular dissecting microscope for viewing specimens. Thank you, George, for the material.

Just a reminder that **M³** meets at 7:00pm, the Thursday following the general meeting. The dates for the remainder of 2002 are August 15; September 19; October 17; and November 14. There will be no meeting in December. The meetings are held the home of Roger Van Cleef, 4683 Aloha, Memphis. Although space is limited, if you would like to drop by and see what we are about, give Roger a call at 794-1641.

Hope to see you at an **M³** meeting.

The July **M³** meeting was held on Thursday, July 18. Members present were Roger Van Cleef, Nancy Folden, Allen Helt, George Fulghum, Kelly Baldwin, Jennifer Baldwin, Sherri Baldwin, and Mike Baldwin. Roger

displayed a number of containers and mounting materials that can be purchased for use with micromounting. **M³** has the beginnings of a micromounting library, with a few very helpful books such as “Micromounts: Minerals For Everyone” by Milton L. Speckels. This book is out-of-print. If you know of a source that might have a few copies of this book, please contact Roger.

After an overview of the materials given by Brenda Johnson and George Fulghum, **M³** began a night of mineral exploration. You would be amazed at what certain minerals look like under a microscope. With two binocular microscopes in operation, we took turns examining micromount treasures like: brookite from Magnet Cove, AR; dolomite from Rush, AR; and quartz from Mt. Ida, AR. Then we pulled out the colorful specimens and examined the beauty of azurite [blue], chrysocolla [green], smithsonite [yellow orange], and vanadinite [orange]. George cracked open a barite rose for us to examine. In all, we took a look at more than 15 minerals under the microscope. We only stopped because it was 9:00 and time to go, but we all look forward to the next meeting of **M³**.



Kaolinite thin section photograph courtesy of NASA. <http://ftpwww.gsfc.nasa.gov/>

ONCE A PUN A TIME: Two bole weevils grew up in the deep South. One went to Hollywood and became a famous actor. The other stayed behind in the cotton fields and never amounted to much. The second one, naturally, became known as the lesser of two weevils.

CAVES OF THE MID-SOUTH

(continued from page one)

There are about 17,000 known caves in the United States. Caves occur in every State except Rhode Island and Louisiana. About 125 caves have been opened to the public for study and enjoyment. Of these, 15 are in national parks or monuments, and 30 are in state parks. The remainder are privately owned and operated. Most of these caves are in the Appalachian Mts., the Ozark Mts., the Black Hills, and the limestone regions of Kentucky, Tennessee, and Indiana.²

Three of the most prominent cave systems in the US are in the Mid-South: (1) Mammoth Cave in Kentucky; (2) Blanchard Springs in Arkansas; and (3) Cumberland Caverns in Tennessee.

MAMMOTH CAVE, KY

Beneath the sandstone-capped ridges of Mammoth Cave National Park in south central Kentucky lies the most extensively known cave system on Earth, with over 350 miles of passageway mapped and surveyed. And yet after 4,000 years of intermittent exploration, the full extent of this water-formed labyrinth remains a mystery.³

Today, science seeks to plumb the unknown through ongoing mapping, testing, and exploration, with a full understanding of the words of one of the old guides:

*"The Cave is not soon to give up its last, deepest secret."*³

BLANCHARD SPRINGS, AR

Located near Mountain View, Arkansas, Blanchard Springs is a "living" cave where glistening speleothems, like stalactites, stalagmites, columns, and flowstones are slowly changing. These crystalline formations are the result of minerals deposited by dripping water.⁴

Blanchard Springs Caverns is a 3-level system, but only two levels of the caverns are open for guided tours. The

first tour, the Dripstone Trail, opened in 1973, completing ten years of planning and development of the caverns. Another four years of work concluded with the opening of the second tour, the Discovery Trail. Two miles of trails are paved.⁴

CUMBERLAND CAVERNS, TN

Cumberland Caverns (in middle Tennessee) is one of Tennessee's most extensive cave systems. Cumberland displays some of the largest underground rooms in eastern America. It also features waterfalls, gleaming pools, spectacular formations, a historic 1812 saltpeter mine, and even a 3/4 ton chandelier. Portions of this system were originally known as Higgenbotham Cave and Henshaw Cave, but integration of these two caves plus considerable exploration of previously unvisited sections has considerably enlarged the cave in the past several years. More than 32 miles are now known.⁵

The picture on page one is from Blue Jay Cave near Lobelville, Tennessee. Blue Jay is one of hundreds of undeveloped, privately-owned caves in Tennessee. I have explored the three miles of hallways and rooms of Blue Jay more than 30 times, and each time yields a new discovery. Caves are as fascinating now as they were when prehistoric men roamed their passages and drew their stories on the walls.—MIKE BALDWIN

Works Cited:

1. *The Caving Pages: Types of Caves*; <http://www.rainierpubs.com/metro/caves/index.htm>; 06.27.02.
2. W. E. Davies and I. M. Morgan; *Geology of Caves; US Geological Survey*; <http://geology.wr.usgs.gov/docs/usgsnps/cave/cave.html>; 09.05.00.
3. *Mammoth Cave National Park*; <http://www.nps.gov/macac/home.htm>; 06.22.00.
4. *Blanchard Springs Caverns*; <http://www.fs.fed.us/oof/ozark/recreation/bsc.html>; 06.28.02.
5. *Cumberland Caverns*; <http://www.cumberlandcaverns.com/>; 02.22.02.

CAVE TERMS

COLUMN: Structure formed when stalactites join with stalagmites.

DRAPERY: A speleothem formed when water deposits calcite in thin sheets that hang in delicate folds.

SODA STRAW: A hollow stalactite that resembles the shape and dimensions of a soda straw. They can sometimes reach lengths as long as eighteen inches.

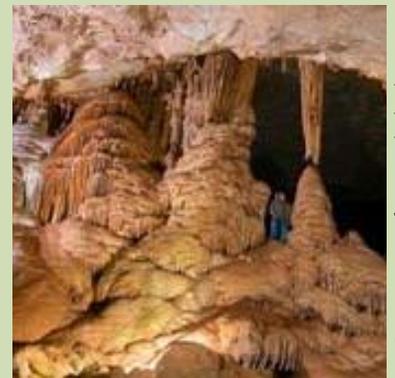
SPELUNKER: A person who likes to explore caves; a "caver."

SPELEOLOGIST: People who study the formations, geology, and hydrology of caves and their environment.

SPELEOTHEMS: (cave formations); Mineral deposits formed by the deposition of dissolved minerals in a cave.

STALACTITES: Formations formed from the cave ceiling downward. They are comprised of mineral deposits formed by water interacting with bedrock. Stalactites are usually of calcite, and hang from the ceiling of cave passages.

STALAGMITES: Formations formed from the cave floor upward in a mound-shaped mineral deposit. They are comprised of mineral deposits formed by water interacting with bedrock. Stalagmites are usually of calcite mineral-bearing solutions dripping from the ceiling, and often form under stalactites.



cave image courtesy of www.cumberlandcaverns.com

SFMS CLUBS SHOWS/EVENTS

AUG 17, 2002

1st Annual Rock Swap

Rockingham County Gem and Mineral Society, Reidsville, NC
Penn Civic Center, 324 Maple Ave.
contact: picnshovl@aol.com

AUG 30–SEP 2, 2002 • 10am–6pm

21st Annual Gem and Mineral Spectacular

Henderson County Gem & Mineral Society • Whitmore Activity Building, Lily Pond Rd., Hendersonville, NC
contact: Margaret Johnson, P.O. Box 6391, Hendersonville, NC 28739-6391 • 828-692-1249

AUG 31, 2002 • 9am–4pm

Annual Micromount Symposium

Henderson County Gem & Mineral Society • Salvation Army Bldg., Grove St. between 3rd & 4th
contact: Emily Adams, 355 Pelham Rd., Greenville, SC 29615 • 864-271-3877

SEP 6 & 7, 2002 • 10am–7pm

SEP 8, 2002 • Noon–6pm

31st Annual Gem & Mineral Show

Forsyth Gem & Mineral Club • Ed. Bldg, Dixie Classic Fairgrounds, Deacon Blvd., Winston-Salem, NC
contact: Paul Burton, 2001 Walker Rd., Winston-Salem, NC 27106 • 336-924-8510

WEB STATISTICS

Here's a brief look at our website (www.memphisgeology.org) from 01.21.02 through 07.23.02:

Visits* 9,345

Hits** 66,011

Average Visits Per Day 51

* visit=every time someone comes to the site

** hit=every page viewed on the site

FEDERATION NEWS



Dixie Mineral Field Trip: Hosted by the Western South Carolina Gem and Mineral Society
Saturday, August 24, 2002 • 8:30 am EDT
The Hall Farm, Lowndesville, SC

MINERAL: Amethyst (the South Carolina state gemstone)

TIME: 8:30 AM Saturday, August 24, 2002

COST: \$3.00 per person.

MEETING PLACE: Crawford Store in Antreville, SC on Highway 28

DIRECTIONS: From Interstate 85 follow Highway 28 south through Anderson, SC, continue south about 15 to 20 miles to Antreville. The Crawford Store is on the left on Highway 28.

CONTACT PERSON: Bill or Brandt Wetzel (864)306-6749 or wwetzel@earthlink.net

EQUIPMENT: A spade, picnic lunch, and drinks. Some form of sun shade such as a broad brim hat, beach umbrella or tarp shade is recommended.

OTHER INFORMATION: Children and pets are welcome. There are no close bathroom or restaurant facilities. Plenty of motel space in Anderson, SC. Camping facilities at the Anderson/Lake Hartwell KOA or Sadlers Creek State Park or Calhoun Falls State Park. Plenty of parking is available. The site is a large open field with trees around it, but little shade by the best digging areas. Good sized amethyst crystals are found about one foot down over a wide area. It appears that they have been scattered by plowing. A lot of digging is required to find a few good crystals. Spade away thin cuts of soil and feel and listen for the clink of the spade against the crystal. Three large veins containing amethyst have been found in the past so if you hit white sandy vein material dig deeper. Holes that are not deep enough to turn over a tractor do not need to be refilled.

NOTES: DMC field trips are exclusively for DMC member clubs! This trip is closed to non-DMC clubs, their members, or members of the general public.

SFMS PRESIDENT'S MESSAGE

Our Federation seems to be growing. We will be voting on the acceptance of two additional clubs in one of the next meetings. The enrichment to the Southeast Federation is exciting and shows that the interest in our hobby (profession?) is still alive.

At various club meetings and shows I have noticed a great interest in the Federation and a lot more enthusiasm for the unification of club interaction. Some of the younger people are already entering the annals of the Executive and Directors Boards. This thrills me and shows that my feelings were right in the beginning.

The older folk (like me) should encourage these enthusiasts, giving them all the help they ask for. The result will be a dynamic Federation for the future.

John Ferguson, SFMS President

MAGS REVIEW

BOARD MEETING JULY 2, 2002; 6:30pm

RAYNEE RANDOLPH: The July board meeting of MAGS was held 07/02/02 at Barnhill's, Park and White Station. The following were present: Mike Baldwin, Dr. Cole, Nancy Folden, Idajean Jordan, W.C. and Cornelia McDaniel, David McIlwain, Dick McKitrick, Park and Terri Noyes, Raynee Randolph, Bill Scheffer, and Lou White. The secretary's minutes from the June board and general meetings were accepted and approved as written. The following reports were given:

FIRST VICE PRESIDENT—The field trip June 29/30 was at Mt. Ida, Arkansas with 24 members in attendance. Magnet Cove, AR. Will be July 27th. August 23rd will be Blanchard Springs Cavern. September will be the DMC trip to Vulcan Quarry. See your newsletter for more details.

SECOND VICE PRESIDENT—The adult program for this month will be "Magnet Cove" presented by Mike Howard.

TREASURER—Bill Scheffer presented the financial report. Motion made, seconded, and carried to approve reports, subject to audit.

LIBRARY—New library cards and rules were passed out to the board. Motion was made and seconded to accept the rules with two changes, #2, #5. After further discussion the original motion was removed and further changes were made to the aforementioned numbers.

WEB—The web site has been redesigned to match the newsletter. August specimen of the month will be barite. More ideas are needed for the rest of the year. A motion was made to amend the bylaws to allow sister clubs to participate in field trips. Motion seconded and the vote carried the motion.

YOUTH—Youth program will be "Dreamcatchers."

MEMBERSHIP—Motion made, seconded, and carried to accept the application of the Charles Hill family. Enhancements are being proposed for the membership packets. Owners of the undelivered membership packets have been notified by phone to please pick them up.

SHOW—The committee for the 2003 show will soon be forming. Connie Devine will audit the show books.

ANNOUNCEMENTS—Our "Rock food" table will be on display at the "Big Scoop" sponsored by RMH. Volunteers needed to man the table @ 1 hour intervals to pass out business cards and answer questions about the club—at the Agri Center July 27th.

OLD BUSINESS—Delta State proposal is on hold. Chucalissa associates membership is also on hold.

SUGGESTIONS—Show profits for 2003 to go to RMH and Chucalissa.

Adjourned at 8:30.

GENERAL MEETING JUL 12, 2002; 7:30pm

CORNELIA McDANIEL:

GUESTS—Blake Leonard, Ann Waters, Richard Butterick, Pat Long, Michael Long, James Butchko, and Hunter Hill.

FIELD TRIP—Magnet Cove, sign up and see the newsletter; safety rules reviewed.

PROGRAM—"Magnet Cove" by Mike Howard, Arkansas Geology Commission.

ANNOUNCEMENTS—[1] Volunteer request to help host the club's "Food Table" at the RMH Big Scoop at the Agricenter on Saturday 27Jul2002.

[2] Passed out reminder of July Rock Swap at Carolyn Hay's and August Membership Meeting picnic and swap. [3] Roger Van Cleef extended invitation to Micromount.

SUNSHINE—Martha Rannels was in hospital with Urinary Tract infection. Breezy Levitch should soon be out of her cast. Norm Hall surgery has been rough and not yet recovered. Jean Helt broken ankle. Kim Prudhomme recovering well from leg injuries in crystal mine.

LIBRARY—Librarian announced new policy and library card procedure to soon take effect. \$5.00 fine for books and videos not returned by the next meeting. Each family gets a card and parent has to give approval for those under 17..

Former member Bowman retired to Rush, AR and son David donated material and hand-made tumbler to club. Board will decide how to offer to members so proceeds can benefit the club.

DISPLAYS—[1] Blue Coral from Hawaii by Lou White; [2] New Mexico collection from Enchanted Circle and Taos by Mary Gibson. Mary won.

DOOR PRIZES—[1] Ann Waters; [2] Rena Everett; [3] Park Noyes
Adjourned at 9:20.

MAGS ROCK SWAP & POTLUCK FRIDAY, AUGUST 9, 7:30

Bring pot luck dish, dessert or snack food. Bring a table if you plan to swap. No displays.

The Second Annual Summer Rock Swap & Potluck Dinner will be held at Shady Grove Presbyterian Church on August 9. There will not be a regular program for adults or youth that night. This will be a great opportunity for you to meet some new folks and do a little bit of trading or selling.

BEHIND THE SCENES AT THE PINK PALACE

"Behind the Scenes: Curious Collections of the Pink Palace", features hundreds of items from the museum attic (Native American artifacts, fossils, minerals, toys, and other mysterious and unusual pieces).

One of the most curious collections is "The Curator's Office" which features a picture of our very own Roger Van Cleef. As a matter of fact, Roger plays a prominent role in several areas of the collection. The picture below is from the "The Fossil Collection" which is accompanied by the following placard. "There were only 100 specimens in the paleontology collection in 1970 when staffers Roy Young, Ron Brister, and Roger Van Cleef began intensively collecting Paleozoic and Mesozoic fossils in Tennessee, Arkansas and Mississippi. The museum's purchase of the Cretaceous Period Coon Creek site in 1987 provided a rich collecting area. In 1995, the museum completed its regional coverage by acquiring John Connaway's collection of 2,000 Ice Age (Pleistocene) vertebrate fossils. Today, the Pink Palace owns one of the finest regional paleontological collections in the southeast."



"Behind the Scenes" will be on display until October 20. You really shouldn't miss it!

YOUTH

A VISIT WITH SUE AT THE FIELD MUSEUM: PART 3: THE SKULL

by Kelly Baldwin (MAGS Youth Member)

Last month I told you about Sue's skeleton. This month will be last article in the Sue Series and I'm going to tell you about the most important part of Sue's entire skeleton . . . the skull. The reason Sue's skull is so important is because it holds clues about certain features of the Tyrannosaurus rex. For example: the structure and arrangement of the skull can help scientists tell how Sue ate, breathed, sensed it's environment or surroundings, or even how Tyrannosaurus rex may be related to other animals.

At first, both halves of Sue's skull were smashed together and the inside was filled with rock. The snout looks like it was probably crushed shortly after Sue died. The position of the bones show that rushing water may have flipped Sue's pelvis onto her head.

Sue had 58 teeth and some of them were a foot long. Only about a third of each tooth was visible. The rest was buried deep inside the jawbone. Sue's teeth were made for grabbing and stabbing prey to keep meals from slipping forward in Sue's mouth. The teeth had a backward curve. This picture shows some of Sue's teeth.



Sue image courtesy of www.fnmnh.ufl.edu/sue/

[Sue at the Field Museum: Some Interesting Sue Facts](#); ©1997; Chicago Field Museum

[The Field Museum GEO86129_49c](#); <http://www.fnmnh.org/sue/discovery.html>; April, 2002

YOUTH NOTES

BLANCHARD SPRINGS

Don't miss the August Field Trip to Blanchard Springs, Arkansas. Cool caves! 58° cool.

POTLUCK DINNER IN AUGUST

There will not be a separate youth program in August. MAGS Youth will join the adults for a fun-filled evening of food and fellowship.

PAGES WELCOME NEW YOUTH MEMBERS

William Butterick, Stephen and Lisa Walker became new youth members this month. Welcome to the club and we hope you have a great time with MAGS!

COLLECTOR'S CARDS: Cut out the Dinosaur Card, and the Specimen-of-the-Month card, fold on the dotted lines, tape them closed and add them to your collection.

Did You Know . . .	Avimimus
<p>When first discovered, Avimimus was thought to look so much like a bird that its name literally means that it imitates a bird. Later discoveries have demonstrated to scientists that it was not a bird. Recent evidence suggests that it may have had feathers. Some scientists believe that the discovery of Chinese feathered dinosaurs suggests that Avimimus also had feathers. Avimimus looked much like a large reptilian roadrunner in life, as it had long, slender back legs built for fast running. Its front legs were lightly built and equipped with sharp, curved claws. Avimimus had a long, lean neck topped by a short skull with a toothless beak and a relatively large braincase.</p> <p><small>©2002 Memphis Archaeological and Geological Society</small></p>	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 10px;">MAGS DINOSAUR CARD</div> <div style="text-align: center;">  </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>Avimimus portentosus</i> Pronounced: AYV-ee-MIME-us Diet: Debated–Omnivore Name Means: "Bird mimic" Length: 5 feet (1.5 m) Height: 2 feet (.7 m) Weight: 45 pounds (20 kilos) Time: Late Cretaceous–95 MYA</p> </div>

Did You Know . . .	Barite Rose $BaSO_4$
<p>Barite is found in sedimentary rock and as a mineral in ore veins. Roses of red-brown color and sandy texture are found near Norman, Oklahoma. The word "barite" originates from Greek "baryos" for "heavy". Barite is made up of Barium (58.84% Ba; 65.70% BaO), Sulfur (13.74% S; 34.30% SO₃), and Oxygen (27.42% O). Barite can be found in white, yellowish white, grayish white, brownish white, or dark brown. Crystal Habits include the bladed crystals that are dominated by two large faces top and bottom and small prism faces forming a jutting angle on every side. There are many variations of these faces but the flattened blades and tabular crystals are the most common.</p> <p><small>©2002 Memphis Archaeological and Geological Society</small></p>	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 10px;">MAGS SPECIMEN CARD</div> <div style="text-align: center;">  </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>Barium Sulfate; Barytes; Cawk</i></p> <p>Hardness: 3-3.5 Luminescence: Phosphorescent Luster: Vitreous (Glassy) Streak: white Crystal System: Orthorhombic–Dipyramidal</p> </div>

COLLECTING MICROMETEORITES

KELLY BALDWIN (MAGS Youth Member)–My 2003 Science Fair Project will be about "Metallic Micrometeorites" and I need your help. Small bits of rock and metal collide with Earth's upper atmosphere every day. Because of friction, they burn up. The flash of light from their burning is called a meteor. Larger objects do not burn up completely. Surviving fragments fall through the atmosphere and land on Earth. Once these objects land they are called meteorites. Most meteorites fall in the ocean. Micrometeorites are microscopic in size and tons of them fall to Earth every day. Metallic meteorites are much easier to collect than rock ones because we can use metal detectors and magnets to scan for them, then look at them under a microscope.

Here's where I need your help. I want to collect micrometeorites from as many locations as I possibly can (hot, dry places; cold, wet places; plains and mountains; you name it). If you are willing to help me collect micrometeorites, please email me at rockclub@earthlink.net with your mailing address. I will send you a small container to place out in your yard, on your patio, on top of a fence post or anywhere that you can leave it open for two or three weeks. The micrometeorites will fall through the atmosphere and settle into your container. You probably won't be able to see them, but they will be there. If rainwater fills your container, leave it in there. I will check it for more micrometeorites. When I send you the container, I will also send you enough postage to send it back to me. I'm ready to get started. I hope you are too!

CHECK IT OUT CONGRATULATIONS COLLEGE GRADUATE

NANCY FOLDEN—Your new MAGS Library Card is ready and waiting for you at the librarian’s table. Pick it up at your convenience and start taking advantage of the books and videos that the MAGS Library has to offer you.



Ruth and Edwin Rice have been members of MAGS for a long, long time. One of Ruth’s life-long dreams has been to graduate from college. What better time than now to do just that. Ruth received her degree in May. The day she graduated from college just happened to be her birthday too—her 80th birthday. Congratulations and happy birthday to you Ruth, from all your friends in the Memphis Archaeological and Geological Society. Thanks to Vivian Sharpe, another long-time MAGS member, for telling us about Ruth.

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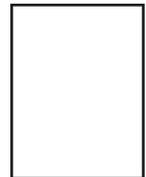
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The Memphis Archaeological and Geological Society’s main purpose is to promote and advance the knowledge of the Lapidary Sciences in the mining, identification, cutting, polishing and mounting of gems, minerals and fossils to the utmost of our geological and lapidary capabilities.

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**MARK YOUR
CALENDAR
TODAY**

MAGS Meeting
August 9

M³ Meeting
August 15

DMC Field Trip
August 24

MAGS Field Trip
August 24

