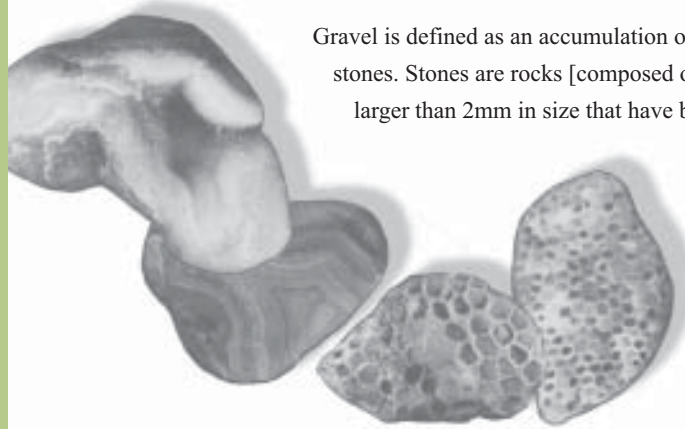


ROCKS AND FOSSILS FROM MISSISSIPPI GRAVELS



Gravel is defined as an accumulation of rounded, water-worn, stones. Stones are rocks [composed of one or more minerals] larger than 2mm in size that have been transported by

natural processes from their parent bedrock.

As most "bedrock" in Mississippi is not rock but compacted clays and sands, the state's gravel deposits

were transported from the rocky terrains of other

states. Stones from these terrains were carried to the state by ancient rivers. Some stones contain marine fossils, the

Stones and Corals

[Left to right] Geode, agate, tabulate coral, and tabulate coral found in Mississippi's gravels. Semi-precious stones found in Mississippi were precious in ancient times. Mississippi corals contributed to reefs in ancient times. Specimens above courtesy of the Mississippi Office of Geology, *Mississippi Geology*, June 1995.

imprints or hard remains of ancient sea creatures. These fossils are evidence of past oceans that covered North America some three hundred million years ago. In the northeastern part of the state, gravel is mined from the Cretaceous-age Tuscaloosa Group and from the Tombigbee (see Mississippi Gravel on page five)

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APRIL EVENTS

- Apr 03 6:30p Board Meeting: Blue Plate Café, 5469 Poplar Avenue
- Apr 11 7:30p General Meeting: Shady Grove Presbyterian Church, 5535 Shady Grove Rd., Memphis [bring displays & refreshments]
Adult Program: "Effects of Hurricane Andrew on the Ooid-Sand Shoals, Joulter's Cays, Great Bahama Bank" presented by R. P. Major, Department of Geology and Geological Engineering, The University of Mississippi
MAGS Youth [Mini-MAGS] Program: "Gemstones" presented by Idajeane Jordan
- Apr 12 8:30a MAGS Field Trip: Memphis Stone and Gravel [see page 3]
- Apr 17 7:00p M³ Micromounters Meeting @ Roger Van Cleef's home
- Apr 19 10:00a Show Work Day @ WC McDaniel's [see page 8]
- Apr 19 9:30a DMC Field Trip: Indian Mountain, Alabama [see page 6]
- Apr 25 6:30p MAGS Members/Dealers Show Dinner [see page 8]
- Apr 26-27 24th Mid-America Mineral, Fossil, Jewelry Show [page 8]

2003-2004 MAGS BOARD

President--W.C. McDaniel

2038 Central Ave, Memphis, TN 38104
901-274-7706 • cfmcddaniel@worldnet.att.net

1st VP (Field Trips)--David McIlwain

305 Catlin Dr, Oakland, TN 38060
901-465-7388 • djmclwain@earthlink.net

2nd VP (Programs)--Paul Sides

1062 CR 739, Wynne, AR 72396
870-238-8078 • rockclub@earthlink.net

Secretary--Raynee Randolph

6578 Birch Walk Dr, Memphis, TN 38117
901-367-9329 • wrandol1@midsouth.rr.com

Treasurer/Co-Editor--Bill Scheffer

2959 Sky Way Dr, Memphis, TN 38127
901-358-1194 • schefwb@midsouth.rr.com

Director--Idajean Jordan

104 Plainview, Memphis, TN 38111
901-452-4286 • rockclub@earthlink.net

Director--Terry Noyes

3366 Rosita Circle W, Memphis, TN 38116
901-396-5835 • RNJ1958TLE@aol.com

Director--Kim Prudhomme

3870 Robin Hill Dr, Bartlett, TN 38135
901-266-5848 • dvdandkm@midsouth.rr.com

Director--Dennis Sanders

2261 Scenic View Dr, Nesbit, MS 38651
662-449-5199 • rockclub@earthlink.net

Director--Lou White

3805 Melanie June, Bartlett, TN 38135
901-937-8522 • Axelrod300@aol.com

Editor/Web Coordinator--Mike Baldwin

367 N Main St, Collierville, TN 38017
901-853-3603 • rockclub@earthlink.net

Librarian--Nancy Folden

379 McDermit, Memphis, TN 38120
901-683-8497 • nfolden@kroger.com

Membership--Cornelia McDaniel

2038 Central Ave, Memphis, TN 38104
901-274-7706 • cfmcddaniel@worldnet.att.net

Show Chairperson--W.C. McDaniel

2038 Central Ave, Memphis, TN 38104
901-274-7706 • cfmcddaniel@worldnet.att.net

Youth Program--Idajean Jordan

104 Plainview, Memphis, TN 38111
901-452-4286 • rockclub@earthlink.net

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 or email them to rockclub@earthlink.net .

From the President

Its time to move from talking and planning about the show to doing things for the show. The March meeting got the show off to a good start as members stamped and labeled over 2000 postcards for mailing to past show attendees. Some (but not enough) volunteered to work during the show. The schedule will be posted at the April meeting and I will email it to those on the list. Sign up today. Look at the show article for specific show details. Don't forget on Friday night, April 25th we have our annual show dinner.

The February and March field trips are behind us. In April we go to the gravel pits of the Memphis Stone and Gravel Company in search of agates, fossils and petrified wood. This is a good trip with good and sometimes rare finds. In May MAGS gets a triple hitter. Druse quartz and calcite from Missouri and geodes from Indiana. Plan your Memorial Day weekend for a great adventure. In June we journey to Arkansas for quartz crystal and a side trip to Magnet Cove for minerals.

Thanks to George and Rena Everett for their display of items from South America, Sherri Baldwin for her display of finds from several recent MAGS' field trips. And I brought a display of Brazilian Agates. The Everetts were the display winners and were presented with a certificate. For the April meeting bring your gravel bar/pit treasures for display. Remember our monthly winners are eligible for prize drawings at our Christmas party. W.C. McDaniel

DEAR FRIENDS OF CHUCALISSA

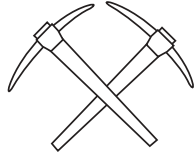
MAGS Members: As members of MAGS you are also members of Friends of Chucalissa. At the Friends of Chucalissa general meeting in March the formation of three new committees was discussed: Strategic Planning, Music Festival, and Hut Restoration. Members interested in the Music Festival should contact Guy Weaver (email GuyW555@aol.com). Members interested in hut restoration contact me. We are looking for a chairperson for the Strategic Planning committee, contact President McNutt (email p.mcnutt@worldnet.att.net) if you are interested. Please consider contributing your time to a committee.

Drew Buchner, Secretary, Friends of Chucalissa

WELCOME NEW MEMBERS

Welcome to all of our new members. May all your journeys be filled with gems.

- [1] Kathy L. Hemingway • P. O. Box 1303 • Wynne, Arkansas 72396 • 870-731-5664
- [2] Matthew & Carol Lybanon and Granddaughter, Karen Schaeffer
2019 Littlemore Drive • Cordova, TN 38016 • 901-757-2144
- [3] Theodore & Myrna Muir and Granddaughter, Sharon Muir • mdollarmuir@msn.com
2052 Cranbrook Drive • Germantown, TN 38138 • 901-754-6816
- [4] Mary E. Slesinger • 3171 Wilcox Avenue • Memphis 38111 • 901-458-0182
- [5] Joe McKinnon • 4920 Alden lake Drive West • Nesbit, MS 38651 • 662-280-7116
- [6] James A. Butchko • Jim.Butchko@Expanets.com • 4220 Dunn • Memphis 38111 • 743-0058



MAGS FIELD TRIP MEMPHIS STONE & GRAVEL

SATURDAY, APRIL 12, 2003, 8:30am
FIELD TRIP LEADER, ALAN PARKS, 901-454-5195

Collection Site Location: Memphis Stone and Gravel Company

What to collect: Chert gravels with fossils, petrified wood, agate, conglomerate, variety of local rocks and minerals associated with regional Pleistocene / Pliocene alluvial terrace deposits.

Site Description: We will be collecting the gravel from stockpiles.

Estimated Driving Time: 30 minutes from Memphis

Meeting Site: Will meet at Memphis Stone and Gravel Company's Love Mine at 8:30am and will collect there. Time permitting, we may visit other mines in the area. Plan to collect about 5 hours or so.

Directions: The site is located appx. 25 miles south of Memphis and is about 5 miles south of Hernando, MS. Take I-55 south from Memphis to Exit 280 (Hernando, MS). Go right (i.e., west) to US Hwy 51 and turn left (i.e., south). The mine entrance is on Breshears Road and will be on the left side (i.e., east) about 5 miles. Look for the Memphis Stone and Gravel Co. sign.

Difficulty Level (1 {easiest} to 10): 1

Restrictions: This field trip is open to anyone

Tools: Bucket and rock hammer, we will be surface collecting and no digging is necessary. Spray bottle is very helpful.

Safety: All safety rules must be followed. A copy of the safety rules can be obtained from the Field Trip Leader or by visiting the MAGS website at <http://www.memphisgeology.org>. If a person continues to perform an unsafe act that endangers himself, others, or property, they will be required to leave the site. All young children must be supervised. Remember, any time eye hazards may exist, such as hammering or prying, safety glasses must be worn. Also, if you want to venture away from the group, please let the Field Trip Leader know.

Field Trip Leader: Alan Parks (home phone 454-5195)

Please Note: This field trip will be conducted the day after the April General Meeting. This trip is open only to MAGS members and their guests.



APRIL BIRTHDAYS

April Birthstone is DIAMOND

- 1 Frank Walker
- 7 Michael Kingsley
- 7 Charley McPherson
- 7 Kerri Williams
- 9 Karen Ehrlich
- 9 Debbie Parker
- 10 Leah Novarese
- 11 Ruth Ault
- 12 Shelby Swink
- 13 Joyce Stafford
- 14 Cedric Vaughan
- 15 Teresa Ward
- 20 Tyler Murphrbe
- 22 Carlene Bell
- 22 Mildred Johnson
- 23 Helen Rodgers
- 27 Kathy Bullard
- 28 Ruth Rice



SUNSHINE REPORT

CORNELIA McDANIEL—Best wishes to Charley McPherson [recent hospital stay], Joe Devine [recent hospital stay], and Debbie Butchko [recent hospital stay]. Our condolences to Melissa Johnston who recently lost her brother-in-law. Continue to remember our brave men and women in harm's way on the battlefields of war, as we also remember the innocent people whose lives are affected by the war. May the conflict end soon!

If you, or a MAGS member you know, becomes ill, please call Cornelia McDaniel at 274-7706 and let her know.

“One who values stones is surrounded by treasures
wherever he goes.” —Pär Lagerkvist, *Dvärgen*

MARCH M³ MEETING

NOTES FROM MAGS MICRO MOUNTERS

JENNIFER BALDWIN—Roger Van Cleef, George Fulghum, Nancy Folden, Idajean Jordan, Cornelia

McDaniel, WC McDaniel, Sherri Baldwin, Mike Baldwin, Jennifer Baldwin, and Kelly Baldwin attended the March 20 M³ meeting at the home of Roger Van Cleef. Nancy brought Apache Tears from Utah to share with everyone. George and Cornelia brought a collection of spring flowers to view under the microscope. Cornelia and Sherri brought specimens to be identified. Roger identified Cornelia's piece as a Pleistocene fossil [maybe a rib bone]. Roger identified Sherri's specimens as a Pleistocene wing bone, Pleistocene limb, Pleistocene tooth, and a piece of paleo-indian burned [petrified] wood. Roger conducted a short lesson on glues: Elmer's glue for a filler, Super glue for thin cracks; Elmer's on one piece, Super glue on the other creates an instant bond. We then took a look at a number of fossils from Roger's recent acquisition of material from Mississippi: shark's teeth, bone, coprolites, turtle shells, and a theropod bone [meat-eater ie T-rex]. We looked at specimens collected from the grey material along the banks of the Nonconah: Blue Spruce cones, pine cones, hickory nuts [23kyo], and grass seeds. Under the microscope we observed: [1] Boulder Opal, Lightning Ridge, South Australia; [2] Mematite from Utah; [3] Ammonite from Madagascar; [4] spring flowers Early Snow Drops, Grape Hyacinth, Spring Beauty, Henbit, Kidney-leafed buttercup, and Forsythia. Idajean identified several pieces from Mike's Australian Micromount collection: [1] Malachite; [2] Amethyst; [3] Specular Hematite; [4] Basalt [black]/Zeolite/Chabazite [orange]; [5] Basalt w/Vesicles; [6] Copper ore; [7] Heulendite; [8] Basalt w/ druse crystals; [9] Heulendite; [10] Malachite; [11] Silver; [12] Selenite; [13] Chabazite. Our next meeting will be April 17.

APRIL GENERAL MEETING PROGRAM

The Effects of Hurricane Andrew on the Ooid-Sand Shoals, Joulters Cays, Great Bahama Bank will be presented on April 11, 2003 by R. P. Major, Department of Geology and Geological Engineering, The University of Mississippi

Joulters Cays are three small islands surrounded by ooid-sand shoals on the windward coast of Great Bahama Bank approximately 25km north of Andros Island. Individual sand grains are composed of calcium carbonate (aragonite) precipitated in concentric layers around a nucleus. Calcium carbonate precipitates from seawater as cool water from depth is swept onto the warm shallow banks and CO₂ is removed from solution as the water is agitated by wave. Ooid sand in this area can be divided into several sedimentary facies based on sorting, mud content, and types of plants that stabilize the sediment. Partly lithified layers and a few isolated mud layers characterize the shallow subsurface of the shoal.

Hurricane Andrew, a category four hurricane with wind velocities of approximately 240 km/h, passed over Julters Cays in a westerly direction on August 23, 1992. The hurricane profoundly changed the surface topography of the shoal by transporting ooid sand seaward leaving a nearly flat shoal crest overlain by a laterally continuous, decimeters-thick lens of well-sorted ooids that thins seaward and bankward. Post hurricane tidal currents deposited a centimeters-thick discontinuous layer of carbonate mud over this lens of ooid sand.

This thin layer of mud is suspended during high tides and has a relatively low preservation potential. However, had the hurricane taken a slightly more southerly course the mud layer would have been much thicker and would have had a much greater preservation potential.

Reference: Major, R. P., Bebout, D. G., and Harris, P. M., 1996, Recent evolution of a Bahamian ooid shoal: effects of Hurricane Andrew: Geological Society of America Bulletin, v. 108, no. 2, p. 168–180.

R. P. Major holds the Ph.D. degree in geology from Brown University and was a National Research Council Postdoctoral Associate with the U.S. Geological Survey in Denver. He has held several university teaching and/or research positions, notably at the University of Texas at Austin, the University of Colorado at Denver, and Union College. He is a former Senior Geologist with Amoco Production Company, and he has served on the editorial boards of the Journal of Sedimentary Research and the American Association of Petroleum Geologists Bulletin. Since 1998 he has been Professor and Chairman of the Department of Geology and Geological Engineering at the University of Mississippi.

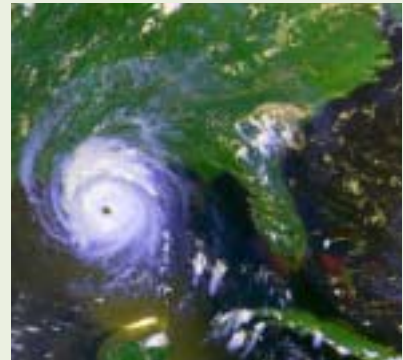


Photo courtesy of NASA; winds.jp1.nasa.gov/news/hurricaneandrew_image.html

MISSISSIPPI GRAVEL

(continued from page one)

River Alluvial Plain in which the Tuscaloosa gravels have been redeposited. It is also mined in high-level terrace deposits of the Tennessee River. In the southern part of the state, gravel is found in the Pliocene to Pleistocene-age Citronelle Formation. A belt of Pleistocene-age gravel underlies the loess belt of western Mississippi. These gravels contain an abundance of petrified wood.

AGE AND ORIGIN OF MISSISSIPPI GRAVELS

Geologic ages are periods of time, which are based on the presence or absence of certain fossils. The oldest fossils are from the Paleozoic Era, an era whose name means old [Paleo] life [zoic]. Fossils of this age include trilobites, segmented arthropods. The next eras, the Mesozoic Era--middle [Meso] life [zoic], was a time of dinosaurs. A dinosaur bone is clear evidence of a Mesozoic age. The greatest diversity of mammals lived in the Cenozoic Era--recent [Ceno] life [zoic], which continues to the present. Most mammal fossils indicate a Cenozoic age.

Mississippi's gravels are stream-transported pebbles from eroded rocks of the Paleozoic Era. Most fossils found in these gravels are of Devonian or Mississippian age and are between 320 and 408 million years old. Rocks of that age can only be found in the

northeastern corner of the state.

The oldest gravel deposits in Mississippi are in the 86 to 90 million year old Tuscaloosa Group. Pliocene to Pleistocene gravel deposits of the Citronelle Formation are between 1 and 2 million years old, and the loess belt deposits are about a million years old or less. These gravels contain petrified wood that is the same age as that of the ancient river deposits. This wood is much younger than the Pleozoic pebbles with which they are found.

WHAT'S IN THE GRAVEL?

Oolitic chert [whose carbonate particles formed at the bottom of a shallow tropical sea], quartz crystal lined geodes, gray and brown Mississippi agates, petrified wood which has been replaced by chalcedony, banded chert with alternating dark and light colors, and the red, translucent silicate Carnelian [prized as a gemstone in ancient times] are among the treasures to be found in Mississippi gravels. Quartzite, Milky quartz, laminated chert, fossil corals, brachiopods, bryozoans, crinoids, and [on very rare occasions] trilobites all lurk within the gravel.

Ref: David T. Dockery III; *Rocks and Fossils Collected from Mississippi Gravel*; *Mississippi Geology*; Mississippi Office of Geology; Jackson, MS, Volume 16, Number 2, June 1995. Information gathered for educational purposes under the provisions of the "Fair Use Act of 1976".



Sources areas

for Paleozoic pebbles found in Mississippi's gravels. Source area A is the Nashville Dome. Source area B includes metamorphic rocks of the Appalachian Mountains and Piedmont. Arrows indicate the direction of stream transport, and black areas indicate gravels deposits. This figure is courtesy of the Mississippi Office of Geology, *Mississippi Geology*, June 1995.

ARKANSAS QUARTZ

AVAILABLE AT OUR SHOW



At the **Mid-America Mineral, Fossil, and Jewelry Show** on April 26-27, you will be able to see a collection of quartz crystals put together by the Arkansas state mineralogist. This selection is both varied and interesting. From a large selection of mines and veins, predominantly, but not restricted to deposits in the Ouachita Mountains, Mike Howard has assembled a collection of the ordinary and extraordinary from Arkansas. Spanning over 40 years of active collecting, and silver picking, Mike has graduated from collecting typical specimens of Arkansas crystal, to looking for the most interesting, esthetic, and attractive pieces available.

Size is no matter in this collection, but uniqueness of the individual specimen is featured. Also specimens that show typical features for given mines are included. A free brochure with information about the geology of the Arkansas deposits will be given to all who request it. Also in this brochure is information on fee-pay sites in the state.

Some of the specimens in this collection also feature other minerals from Arkansas as accessories, such as ankerite, calcite, brookite and sphalerite.

Come, see, and enjoy all the variability the designated Arkansas mineral quartz has to offer the collector!

PHOTO AND COPY CREDIT TO MIKE HOWARD;
<http://www.rockhoundingar.com/quartz.html>

SFMS CLUBS SHOWS/EVENTS

APR 12, 2003 • 10am-7pm
APR 13, 2003 • 10am-6pm
APR 14, 2003 • 10am-5pm
Greensboro's Quality Gem,
Mineral, & Jewellery Show •
Greensboro Gem & Mineral Club •
Greensboro Coliseum, 1921 W.
Lee St. 12th, Greensboro, NC •
Contact Karen Channell, 336-668-
2081, celdon@att.net or
[www.thedepot.com/Groups-
rockhounds](http://www.thedepot.com/Groups-rockhounds)

APR 19, 2003 • 4pm-9pm
APR 20, 2003 • 10am-6pm
APR 21, 2003 • 10am-5pm
34th Annual Gem, Jewelry,
& Mineral Show & Sale •
Charlotte Gem & Mineral Club •
Metrolina Expo Center, 7100
Statesville Rd., Charlotte, NC •
Contact Becky Strickland, 704-
537-6010 or
www.charlottegem.freeservers.com

APR 26, 2003 • 9am-6pm
APR 27, 2003 • 10am-5pm
24th Annual Mid-America
Mineral, Fossil, Jewelry
Show • Memphis Archaeological
and Geological Society • Pipkin
Building, Mid-South Fairgrounds,
Memphis, TN • Contact WC
McDaniel-901-274-7706 or email
cfmcdaniel@worldnet.att.net

MAY 9-10 • 10am-7pm
MAY 11 • Noon-5pm
35th Annual Gem and
Mineral Mother's Day Show
Georgia Mineral Society • Cobb
Civic Center, 548 S. Marietta
Pkwy., Marietta, GA • Contact; Jay
Gorday 770-986-0822 • Web link
www.gaminal.org/may-show.htm

FEDERATION NEWS



**Dixie Mineral Field Trip: Hosted by the
Carroll County Gem and Mineral Society
9:30am [EST], Saturday, April 19, 2003
Indian Mountain, Alabama**

Indian Mountain is a well-known location for Phosphate minerals, particularly of the micro variety. Some of the minerals found there include Wavellite, Rockbridgeite, Strengite, Varisite, Dufrenite, Churchite, Goethite, Beraunite, Jarosite, Cacozenite, and Iridescent Hematite.

Directions: From Cedartown, GA take Hwy. 278 West. After crossing the Alabama state line on Hwy. 278, mark 5.0 miles, at that point there is a gravel parking lot on the left. This will be our meeting place, and the meeting time will be 9:30AM. From the meeting place we will have to walk less than 3/10th's of a mile to pick up the trail, uphill to the mine. Once on the trail it's a hike [not difficult] uphill to the site. Children are welcome, but should be closely watched to keep them safe

What to bring: [1] HAMMERS, a rock hammer will work, but I would recommend a 3- 4 lb. crack hammer or cross-peen; [2] SAFETY GLASSES are highly recommended as although hard rock, it is well foliated and when it does come apart, shards will fly a good distance. Safety glasses and some consideration of your fellow rockhounds will go along way here; [3] MAGNIFIER will be a handy tool, and help discern micro-mineral deposits; and [4] Other tools which may come in handy would be a sledge hammer, small and large pry bars, and a cart capable of some trail navigation to be useful. Thanks to a local hiking organization, the trail up the hill is pretty clear of debris. Some packing materials to protect your samples will be useful, and necessary for maintaining the fine micro-specimens!

What to wear: Typical late winter hiking apparel would probably be best, dress in layers. Sturdy shoes or boots will help, as we will be working tailings piles left from the old mining operation, and there is a lot of loose rock. A slip or slide down the rock pile could adversely effect the enjoyment of your trip!

What we'll find: Wavellite is one of the most prevalent mineral deposits, and the radiating fiber deposits are the easiest to see as well. Some splays of radial fibers over an inch across within seam have been found in thin seams through the host rock. A small opening or vug allows for some beautiful white flowers of radial fibers formed of Wavellite. Goethite is quite prevalent as well, as is Rockbridgeite. Some Goethite appears as a shiny black deposit of nodules, some of which is quite thick. Strengite crystals can be found as well, just look for tiny white nodules scattered about small vugs in the host rock. There are many other minerals here some in abundance.

Hope to see you there! Bill Spencer • Email free_da_crystals@yahoo.com

NOTE: 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.

MAGS REVIEW

Written in Stone
A MAGS Glossary of Terms

BOARD MEETING FEB 6, 2003; 6:30pm

RAYNEE RANDOLPH: The February board meeting of MAGS was held 02/06/03 at Blue Plate Café, 5469 Poplar Avenue. Present were: Mike Baldwin, Nancy Folden, Idajeon Jordan, W.C. and Cornelia McDaniel, David McIlwain, Park and Terry Noyes, Raynee Randolph, Bill Scheffer, Roger Van Cleef, and Lou White. Highlights are as follows:

Treasurer: 2003 budget in the works.

1st VP: February field trip to Nonconah Creek on the 15th. March 22nd, Florence, AL. April 19th, Memphis Stone and Gravel. May 24-26, Potosi MO and Hamilton, IL for geodes.

2ND VP: Adult program: "Egyptian Artifacts" presented by Dr. Patricia Podzorski.

Web/Editor: All 2002 newsletters have been burned to CD. If you want a CD, see Mike Baldwin. Tina King of the Tennessee Earth Science Association would like to publish articles about the geology of West Tennessee in our newsletter. A motion was passed to invite guest editorials.

Library: Lapidary Journals are now in the new cabinet. Duplicate journals and National Geographics will be passed out at the general meeting.

Juniors: Bring bases for gem trees. Adults may also make gem trees this summer.

Membership: Reminder cards will be mailed to members who are delinquent with their dues. New member application for Michael McGunnigle was accepted.

Show: Tickets coming soon to the general meeting.

Old Business: (1) Our five-year strategic plan will begin again in March. Operations manuals needed for each board position. (2) Finish the calendar of events for the year. (3) Display winners will receive a certificate.

New Business: (1) Science fair judging will be March 4th. Judges will be Mike Baldwin, W.C. McDaniel, and Roger Van Cleef. Awards ceremony is March 18th. Prizes will be awarded and maybe a free membership to MAGS; (2) U of M wants to publish a rock-related course in their continuing education program. Ideas are needed; (3) GSA will be meeting at U of M; (5) We should be able to provide our guest speakers with PowerPoint or Internet accessibility. We would need a projector and a lap top computer. A couple of fund-raisers might just do it!!! (6) Historical material including pictures have been donated to the club from the family of Bill Sipe. (7) A book will be purchased for the library in memory of Bill Sipe.

Meeting adjourned at 8:00pm

GENERAL MEETING FEB 14, 2003; 7:35pm

RAYNEE RANDOLPH: MAGS February General Membership meeting, held at Shady Grove Presbyterian Church, was called to order by President W.C. McDaniel at 7:35pm on Friday, February 14, 2002. There were 53 members and 10 visitors present. Visitors were Carol and Matthew Lybanon, Karen Schaeffer, Mary Slesinger, Dr. Patricia Podzorski, Joe McKinnen, Jennifer Lazar, Jim Parsons, Anna Marsh, and Jordon Cole.

President: (1) February's field trip will be to Nonconah Creek. Due to the amount of rain and the depth of the creek, the trip will be moved to March 1st. Still meet at the Mall of Memphis parking lot at 10:00am. March 22nd we will be going to Florence AL. for fossils. (2) If you have not paid your dues for this year, you will not be receiving the club directory and March will be your LAST newsletter. Please see Bill Scheffer and make your payment. (3) If you have an e-mail address please make sure that it makes the directory. See Bill Scheffer for that also. (4) Show tickets are now available for the membership. Remember to sign your name on these tickets as you hand them out to you guests. The bearer of these tickets will receive free admission to the show and the signature on the ticket will pay the club \$1.00. Take several and pass them out.

Program: Our program tonight will be given by Dr. Patricia Podzorski pertaining to ancient Egyptian rocks and there uses.

Displays: [1] Roger Van Cleef–Archaeopteryx; [2] Nancy Folden–Shadowbox of field trip memories. Display Winner was Roger Van Cleef

Door Prizes went Hunter Hill and Karen Schaeffer. Meeting adjourned at 9:00pm followed by refreshments.

This month's glossary terms are from *The Cambridge Planetary Handbook*, Michael E. Bakich, Cambridge University Press, 2000.

ASTEROIDS: small bodies composed of rock and metal which orbit the Sun. Most [95%] lie in a belt between the orbits of the planets Mars and Jupiter.

BASALT: a general term for dark-colored, igneous rocks composed of minerals that are relatively rich in iron and magnesium.

BRECCIA: a coarse-grained rock, composed of angular, broken rock fragments held together by a mineral cement or a fine-grained matrix.

FAULT: a fracture or zone of fractures along which the sides are displaced relative to one another, parallel to the fracture.

FUMAROLE: volcanic vent from which gases are emitted.

MAGMA: mobile or fluid rock material; lava; generalized to refer to any material that behaves like silicate magma in the Earth.

SILICATE: a rock or mineral whose structure is dominated by bonds of silicon and oxygen atoms.

TERRESTRIAL PLANETS: the four small inner planets; Mercury, Venus, Earth, Mars; named due to the similarities in size and composition with Earth.

SIXTH ANNUAL
**MISSOURI
MINES
ROCK SWAP**
JUNE 13-15, 2003

Missouri Mines State Historic
Site • Park Hills, Missouri •
South Side of Hwy. 32, 1.5 miles
west of US Hwy. 67

**SWAP – SELL – BUY
ROCKS – MINERALS –
FOSSILS – ROCKS –
JEWELRY/CRAFTS**

- Modest Space Fee
- Bring Your Own Tables
- Limited Area Under Canopy
- Primitive On-Site Camping
- Nearby Motels and Campgrounds
- Anticipate Big Local Attendance
- Potluck Dinner Sat. Evening
- Tour Mining – Mineral Museum Free
- Auction – To Benefit Museum

**FOR MORE INFORMATION
OR SPACE RESERVATION:**

**Missouri Mines
P.O. Box 492
Park Hills, MO 63601**

Or call: Missouri Mines State
Historic Site – 573-431-6226;
Lloyd & Betty Marlar –
573-431-2951 (chairman);
Allys Bell – 573-756-7710; or
Willis Smith (St. Louis) –
314-521-8896

SPONSORED BY:

Mineral Area Gem and Mineral
Society, the Greater St. Louis
Association of Earth Science
Clubs, Missouri Mines State
Historic Site, and the Missouri
Department of Natural Resources

SHOW 2003

**Memphis Archaeological and Geological Society presents the 24th annual
Mid-America Mineral, Fossil, Jewelry Show, April 26 and April 27**

W.C. McDANIEL—As the show dates get closer all MAGS' club members are requested to help with these key needs:

April 11—Membership meeting (last meeting before show) • Signup sheets for volunteer help during the show. Look at April 24-27 entries for types of help we need. • Signup sheets for the Friday night show dinner will be available. • Pickup show tickets and announcements for distribution • Bring material for the gem dig and grab bags

April 19- Show work day (10 am. To 2:00 p.m.) 2038 Central Avenue (W.C./Cornelia's house 274-7706) • Transport material and items between storage (near Fairgrounds) to 2038 Central. • Help clean gem dig pea gravel • Help sort gem dig material • Help sort, label and pack the grab bags • Work on checking out, repairing and upgrading display boxes • Pack show information bags • Enjoy lunch on the show

April 24—Thursday afternoon (if building is available) • Begin moving items from storage to Pipkin • Begin layout of building and arrangement of tables—Note table vendor will unfold and place tables in approximate location • Begin decorating display/exhibit tables

April 25- Friday • Complete bringing items from storage • Continue layout of building • Help dealers/exhibitors setup • Setup building for Friday night dinner • After dinner convert area to ROCKZONE • Friday night security

April 26 –Saturday show date opens at 9:00 a.m. • Work ticket/information booth, ROCKZONE and hospitality – 6-8 volunteers for every hour • Saturday night security

April 27- Sunday- show opens at 10:00 a.m. • Work ticket/information booth, ROCKZONE and hospitality • Close of show at 5:00 p.m. break down show and take items back to storage

Dealers as of 3/30/03(dealer space sold out)

[1] Stones and Bones—Georgia; [2] Treasure Chest—Missouri; [3] Criss. Inc.—Mississippi; [4] Marble Gems—Florida; [5] Exquisite Stones—Louisiana; [6] McNeil Minerals—Mississippi; [7] Terra Firma—Wisconsin; [8] Crystal Warehouse—Arkansas; [9] Austin Gem and Beads—Arkansas; [10] Javeds—Georgia; [11] Mineral House—Ohio; [12] Gem and Crystals Unlimited—Georgia; [13] Janda Gems—Alabama; [14] Quest Crystals—Ohio; [15] B&J—Alabama; [16] Mo' Rocks—Missouri; [17] G.P. Rock Company—West Virginia; [18] Palmetto Designs—South Carolina; [19] Rock Barrel—Tennessee; [20] Blue Chip Minerals—Kentucky; [21] Sculptured Originals—Florida; [22] J. R. Rocks—South Carolina; [23] Laster Gemstones—Mississippi; [24] Jim's Minerals—Tennessee; [25] Lincoln Curios—Nebraska; [26] Volunteer Gems—Tennessee; [27] Memphis Novelty Works—Tennessee; [28] Pete's Gems—Alabama; [29] Boutwell Tumbled Stones—Indiana; and [30] Geodite Minerals—Oklahoma

CLASSES- New show feature (note times subject to some modification)

- Saturday 10am ... wire wrapping beginning level- \$10
- Saturday 2pm stretch bracelets beginning level- \$10
- Sunday 10am ... stretch bracelets beginning level- \$10
- Sunday 1pm wire wrapping beginning level- \$10
- Sunday 3pm wire beading/necklace design intermediate level- \$15

Classes include all supplies and equipment, limited class size.

MINI MAGS

GEMSTONES: BIRTHSTONES TO STATE STONES

Kids, join us on April 11, and explore the world of gemstones. Idajean Jordan will be your tour guide as you learn about the beauty and value of the rocks and minerals around us.

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.

[M&M's] WHAT'S UP WITH THE KIDS

APRIL: This is going to be a big month around here. The Mid-America Mineral, Fossil, and Jewelry Show will be April 26-27 and we need a lot of help preparing for it. You and your family can volunteer. Check out page eight of this newsletter to see where you are needed. There will be a great field trip this month also. It will be sponsored by Memphis Stone and Gravel on April 12. It's always a treat when we visit with the folks at Memphis Stone and Gravel. Not only are the folks there super nice, but we come home with tons of nice rocks and fossils too.

YOUTH NEWSLETTER:

You will receive your copy of the *April MAGS Explorer* at the April meeting. If you miss the meeting, you can read it online or download it from our website at <http://www.memphisgeology.org/images/explorer0403.pdf>. Send your articles to rockclub@earthlink.net. *MAGS Rocks!*

WEB STATISTICS


Here's a brief look at our website (www.memphisgeology.org) from 01.21.02 through 03.26.03:


Visits* 53,462
Hits** 273,104

Top pages in March

RockNews0203.pdf 393 hits
geology.html 192 hits
RockNews0602.pdf 189 hits
Average visits per day in Mar 230

* visit= every time someone comes to the site
** hit= every page viewed on the site

Did You Know . . .	Zuniceratops
<p>This is the oldest known member of the horned dinosaur family to actually have horns over its eyes. Christopher Wolfe, the 9-year-old son of scientist Doug Wolfe, found this rather small ancestor of Triceratops. It was a plant-eater which probably lived in herds.</p> <p>It had small brow horns and is a nice example of a transition between the earlier frilled dinosaurs such as Protoceratops, and the later, larger ceratopsians that had some very large horns and frills. It also supports the theory that the ceratopsian dinosaur lineage may have a North American origin.</p> <p>It was found in the Zuni formation, named for a Native American tribe. This North American formation has yielded many very important Cretaceous fossils.</p> <p><small>©2003 Memphis Archaeological and Geological Society</small></p>	<div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: small;">MAGS DINOSAUR CARD</div>  <div style="border: 1px solid black; padding: 5px; font-size: small;"> <p><i>Zuniceratops christopheri</i> Pronounced: Zoo-nee-Sair-o-tops Diet: Herbivore (plant-eater) Name Means: "Zuni Horn Face" Length: 10 ft. (3m) Height: 4 ft. (1.3m) Weight: 450 lbs. (200 kilos) Time: Cretaceous-90 mya</p> </div>

Did You Know . . .	Calcite CaCO ₃
<p>Calcite, which gets its name from "chalix" the Greek word for lime, is one of the most common minerals on the face of the Earth, comprising about 4% by weight of the Earth's crust and is formed in many different geological environments. Calcite can form rocks of considerable mass and constitutes a significant part of all three major rock classification types. It forms oolitic, fossiliferous and massive limestones in sedimentary environments and even serves as the cements for many sandstones and shales. Limestone becomes marble from the heat and pressure of metamorphic events. Calcite is even a major component in the igneous rock called carbonatite and forms the major portion of many hydrothermal veins. Some of these rock types are composed of better than 99% calcite.</p> <p><small>©2003 Memphis Archaeological and Geological Society</small></p>	<div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; font-size: small;">MAGS SPECIMEN CARD</div>  <div style="border: 1px solid black; padding: 5px; font-size: small;"> <p>Composition: CaCO₃ Hardness: 3 Crystal sys.: faceted Cleavage: perfect Fracture: conchoidal Streak: white Color: clear to creamy; or pale red, yellow, pink or blue</p> </div>

SCIENCE FAIR RESULTS

WC McDaniel and Mike Baldwin represented the Memphis Archaeological and Geological Society again this year as judging in the Earth Sciences category of the 2003 Memphis Shelby County Science Fair [grades K-6] held on March 4, and again as judges in the Earth Science category of the 2003 Memphis Shelby County Science and Engineering Fair [grades 7-12] held on March 18. At the K-6 grade fair, Outstanding Achievement in Earth Sciences awards were presented to: [1] Leah Ford, 4th Grade, Altruria Elementary School, for "How Do Sugar Crystals Grow?"; [2] Tatiana Nunez, 4th Grade, Macon Hall Elementary School for "How To Detect An Earthquake"; [3] Mrs. Wilson's 1st Grade Class, Macon Elementary School for "Rocks"; [4] Mrs. Payne's 3rd Grade Class, Macon Elementary School for "Amazing Rocks"; and [5] Mrs. Beasley's 3rd Grade Class, Holmes Road Elementary School for "Weathering Rocks". At the 7-12 Grade Fair, an Outstanding Achievement in Earth Sciences award was presented to Jessica Wargo, 7th Grade, Schilling Farms Middle School for "What's In A Rock?"

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AFMS NEWSLETTER AWARDS:

New Editor 7th Place-95 • Junior Article 3rd Place-98

SFMS NEWSLETTER AWARDS:

New Editor 1st Place-86 • New Editor 2nd Place-88, 97

Certificate of Excellence-89, 90, 91, 92, 93 • Large Bulletin-87

Art-77, 80, 81, 82, 86 • Original Articles-(4) 85, (6) 87, (2) 89, (2) 90, (5) 91, (3) 92

DUES:

Family-\$20.00

Single-\$16.00

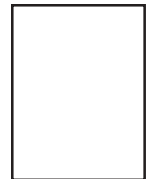
Junior-\$8.00

Associate: \$13.00

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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MAGS Rockhound News
367 North Main Street
Collierville, TN 38017-2301



MARK YOUR CALENDAR

Board Meeting
April 3

General Meeting
April 11

MAGS Field Trip
April 12

M³ Meeting
April 17

Show Work Day
April 19

DMC Field Trip
April 19

Show Dinner
April 25

MAGS Rock Show
April 26-27

