

INSIDE THIS ISSUE

FEATURE ARTICLES

5,300-Year-Old Ice Man	1
Lewis and Clark Revisited	4
How is Loess Pronounced?	5
How Much Does the Earth Weigh?	7
GSA Meeting in Memphis	8

MEMBER PAGES

From The President	2
Board Members	2
MAGS Field Trip: Nonconnah	3
Equipment For Sale	3
Welcome New Member	3
February Birthdays	3
Sunshine Report	3
Jan Board Meeting Notes	7
Jan General Meeting Notes	7
Written in Stone: Glossary	7
Web Statistics	8
In Memory of Bill Sipes	10

MICROMOUNTERS [M³]

New Jersey Amber Find	4
Halite-Rock Salt	4
Mircromount Notes	10

SHOW 2003

Show 2003 Update	8
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MINI MAGS [MAGS YOUTH]

Gem Trees Coming Soon	9
What's Up With The Kids	9
Dino Card: Utahraptor	9
Specimen Card: Pyrite	9

FEDERATION NEWS

DMC Field Trip: Stevenson, AL	6
SFMS Clubs/Events	6
Midwest Federation	6
Wildacres/William Holland	6



5,300-YEAR-OLD ICE MAN SCIENTISTS SAY HE DID NOT DIE BY ACCIDENT



Ötzi, a 5,300-year-old man

was discovered thawing in the Alps 11 years ago and is now on exhibit at the South Tyrol Museum of Archaeology in Bolzano, Italy. Photo courtesy of the South Tyrol Museum of Archaeology.

The saga of Ötzi, a 5,300-year-old Tyrolean man discovered thawing in the Alps 11 years ago, continued in 2002. This man, who climbed up to the icy heights of the Schnalstal glacier [in what is now Italy], was found by accident in 1991, complete with his clothes and equipment, mummified and frozen. This find provides a unique snapshot of a Copper Age man. For several years research teams have been examining the mummy and the articles found with it.¹ The Tyrolean Man has been

kept chilled and displayed at the South Tyrol Museum of Archaeology in Bolzano, Italy since March 1998.²

When Ötzi, the Ice Man, was first discovered, scientists assumed he had died alone while on a hunting trip. But results of computerized x-ray tomography (CT) scans have revealed a 2-centimeter-long flint arrowhead that shattered his scapula. In 2001, Italian pathologist Eduard Egarter-Vigl and radiologist Paul Gostner of the Bolzano Hospital stated that the arrow passed through his left arm, causing nerve damage and possible paralysis. It broke his shoulder blade, but missed vital organs, which means the man probably suffered a long and painful death, the scientists said. An analysis of the path of the wound suggests that the Bowman was standing behind and slightly lower than the Ice Man.²

(see Ötzi The Ice Man on page five)

FEBRUARY EVENTS

Feb 06	6:30p	Board Meeting: Blue Plate Café, 5469 Poplar Avenue
Feb 14	7:30p	General Meeting: Shady Grove Presbyterian Church, 5535 Shady Grove Rd., Memphis [bring displays & refreshments] Adult Program: "Egyptian Artifacts" presented by Dr. Patricia Podzorski, Curator of Egyptian Art, the University of Memphis Institute of Egyptian Art and Archaeology Youth Program: "Making Gem Trees" with Idajean Jordan
Feb 15	10:00a	MAGS Field Trip: Nonconnah Creek, Memphis [see page 3]
Feb 20	7:00p	M ³ Micromounters Meeting @ Roger Van Cleef's home
Feb 22	9:00a	DMC Field Trip: Banded Agate @ Stevenson, AL [see page 6]

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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 or email them to rockclub@earthlink.net .

From the President

I am sure getting itchy to go rock hunting, especially when the Mississippi River at St. Louis was at an all time low of minus 4 feet last week. On the 18th the river stage in Memphis was a plus 6.5 feet. Usually river stages plus 5 feet or below gets you into places like Richardson's Landing. Be sure to schedule February 15 for the trip to Nonconnah Creek. Nonconnah always produces a surprise or two and with the rain last year who knows what is ready to pop into your vision. Trip details and exhibits at the February meeting.

Remember as we celebrate Valentine's Day a good way to keep the heart strong and active, physically and emotionally, is to have a hobby to participate in and share with those who are dear and important to you ... rockhounding certainly fits the bill.

From a dinosaur piñata to geodes larger than a basketball, the January displays provided members an opportunity to view and appreciate our hobby. Thanks to Dennis Sanders, adult winner, for his displays of geodes from Iowa; Roger Van Cleef for his display of fossils from Coon Creek; and Kelly Baldwin, youth winner, for her display of dinosaur bone material and a dinosaur piñata (if you're not sure about this one come to the February meeting and check out the photograph). Bring those displays to the February meeting. A display doesn't have to be a recent discovery. It can be a part of your collection, your favorite rocks, show of your lapidary skills or just seeking help in identifying or preserving your collection.

Special accolades to the 17 folks who traveled to Reelfoot on the 18th. Despite a 30-minute blizzard and cold temperatures the group had a good time. At one stop we observed eight bald eagles either perched or circling in the trees, a red-tail hawk and thousands of ducks and geese. One of our guests, Roxanna Kawas of Guatemala, had a lot of firsts: first eagle, first frozen lake and first hush puppy.

Special recognition goes to Dr. Joe M. and Ruth Young who have achieved lifetime member status as of this year. This means they have been a dues paying MAGS member for 25 consecutive years and now with the achievement of lifetime member status they no longer have to pay dues. Congratulations and look for a feature article in the near future about our life members.

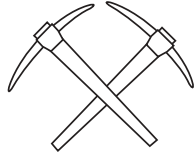
Sadly on January 12, Bill Sipe, a long time member and former officer passed away. Bill's death and the recent deaths of other MAGS members points out the rich history and legacy of the club and its members. Lets make a commitment to remember these folks by preserving and growing our club and hobby.

Remember the show is only a couple of months away and crunch time is approaching. Get ready to work, eat and enjoy the best show in the Midsouth. In March we will start signing up volunteers. Go to your calendar, clear it and write in MAGS rock show April 25-27. With the economy and a lot of uncertainty in the world we will need to work extra hard to make the show successful. Early reports from the shows in Arizona indicate things are rough.

At the February meeting we will once again have a silent auction (bid high and often). We will have some new material such as selenite and gypsum from Arkansas. All auction proceeds go directly to the club.

W.C. McDaniel

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



MAGS FIELD TRIP NONCONNAH CREEK, TN

SATURDAY, FEBRUARY 15, 2003, 10:00am-4:00pm
FIELD TRIP LEADER, W.C. McDaniel 901-274-7706

Collecting Site: Nonconnah Creek [on the south side of Memphis], Shelby Co., TN. We will be collecting banded agate, jasper, petrified wood, and ice age fossil bones. Collecting is free at this site.

Meeting Time/Place: 10:00am, parking lot on the north side of the Mall of Memphis, located on American Way near the old J.C. Penney store. From downtown Memphis take I-240 east toward Nashville. Take Perkins Road south, exit 18. Take American Way west to the first mall entrance and proceed to the north parking lot. Allow approximately 1 hour driving time.

Lunch Break: 12:00noon for approximately one hour.

Tools: Materials will be mostly in the gravel bars along the creek. Collecting containers such as buckets, cloth rock bags, backpack, etc. for carrying specimens. Leather gloves and boots are a good idea too. Above all, please dress warmly.

Difficulty Level: 1 to 3 on a scale of 1 [easy] to 10 [hard]. Please be advised that there is always a possibility for serious injury at this site, so young members must be supervised at all times. No pets please.

Field Trip Chairman: David McIlwain, 901-465-7388, djmcilwain@earthlink.net

Field Trip Leader: W.C. McDaniel, 901-274-7706, cfmcdaniel@worldnet.att.net
If you plan to go on this trip, please sign up at the February meeting. If you sign up and decide not to go, please contact David McIlwain or W.C. McDaniel ASAP.

Please Note: This trip is open only to MAGS members and their guests.

EQUIPMENT FOR SALE

MAGS member, David McAlister, has the following equipment for sale:

- [1] 18" Franton Saw-Complete
- [2] 8" Lortone trim saw
- [3] 5 lb. VibroSonic Tumbler-2 barrels
- [4] 10 lb. VibroSonic Tumbler-2 barrels
- [5] 1 new 10" water blade(water soluble oil provided)
- [6] 1 used 10" water blade (about 70% remaining life) water blade
- [7] 2 new 10" oil blades

David may be reached at 901-382-2735; cell 901-212-8659.

WELCOME NEW MEMBER

Please add the following to your MAGS directory.

[addition] **Michael McGunnigle** • 4346 Ferndale • Memphis, TN 38122
901-685-3470



FEBRUARY BIRTHDAYS

February Birthstone is AMETHYST

- 1-Harrison Horowitz
- 2-Jane Roane
- 2-John Stafford
- 2-Devin Williams
- 4-Zach Graber
- 7-Turner Cole
- 9-Alex Burke
- 10-Dennis Sanders
- 11-Teresa Anderson
- 12-Don Richardson
- 12-Louis White
- 14-Lauren Rodgers
- 17-Darryl Levitch
- 18-Harold Idell
- 20-Juanita Canada
- 21-Allie Van Cleef
- 21-David Vaughn
- 22-Dean Griffin
- 23-Julia Bailey
- 26-Marge Hall
- 28-Maxine Fulghum
- 28-Cynthia Patton



SUNSHINE REPORT

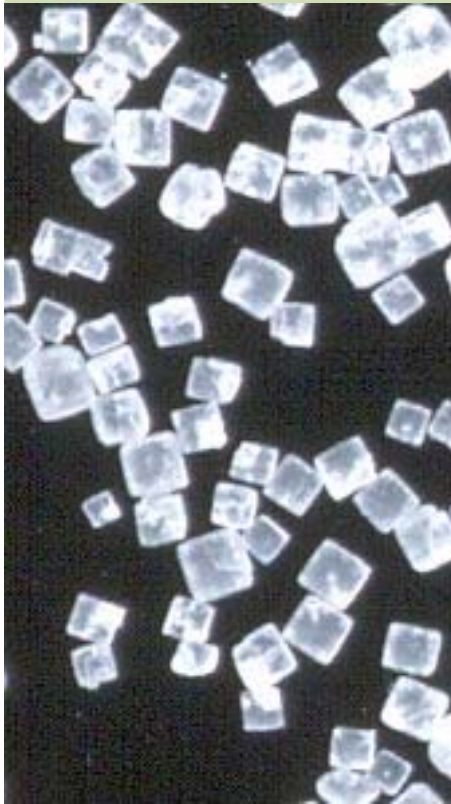
FRANK & FRANCIS WALKER-

It is with great sadness that we must tell you that Bill Sipe, longtime MAGS member and good friend, passed away on January 12, 2003. Bill will be greatly missed.

Allen and Jean Helt have both been battling sickness over the last few weeks. We wish you speedy recoveries. Many of our members have endured winter colds this season. Our thoughts are with you.

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

HALITE ROCK SALT



Halite

© 2000 Andrew Alden
Photo courtesy of About.com, Inc.

Halite is natural rock salt. Whenever seawater evaporates, several different minerals come out of solution, starting with the carbonate mineral calcite, then gypsum, then halite. In places where evaporation happens repeatedly, halite beds can be 1,000 meters thick.

Halite is a soft mineral that flows easily under pressure. At depths of as little as 3 kilometers, it begins to rise through the rocks above it in cylindrical plugs called salt domes. These are of interest to oil prospectors because petroleum collects around them.

From "Halite"; Geology with Andrew Alden; <http://geology.about.com>; 12.23.02. Reprinted for educational purposes under the "fair use" provision of the United States Copyright Act of 1976.

MAGS MICROMOUNTERS [M³]

NEW JERSEY AMBER FIND

ROGER VAN CLEEF—Several years ago eighty pounds of amber was excavated from a vacant lot in Sayerville, New Jersey. The amber had been removed from deep Cretaceous mud. The time period between removal and announcement of the discovery of materials found took several years. This was due to the time required for cutting, polishing and identification. The most important find was that of a juvenile tick. The discovery of the tick provided scientists with possibilities as to what dinosaurs and birds might have eaten 90 million years ago and it also pushed back the order of mites (the order in which ticks are found) some 50 million years. This soft tick was very much like modern ticks except it has a hairy back. It is not known what the hairs were for but one possibility was extrasensory perception. Chief investigator on the project is David Grimaldi, Chairman and Curator, Entomology Department of the American Museum of Natural History. Feathers found in the amber indicated that the ticks were probably feeding on them and that some dinosaurs, as well as birds, also had feathers and that both were being fed upon at an early geological time period. It is theorized that ticks originated in South America and were transported to New Jersey by a South American



primitive bird. It is very possible that dinosaurs carried ticks. Could it be that these ticks carried other parasites which might have lead to the extinction of some dinosaurs? In addition to the ticks, other biting insects were found which could make the extraction of dinosaur DNA a possibility. Also found in the amber was the oldest mushroom and the oldest flower. Oh, by the way the site was discovered by our old fossil friend Gerard Case.

Reference: Rose Palazzolo; [World's First Tick—Oldest Tick Found in New Jersey](#); ABCNEWS.com; April 10, 2001

LEWIS & CLARK REVISITED SATELLITE ARCHAEOLOGY DIGS OUT THE PAST

SUBMITTED BY MICHAEL KINGSLEY—Almost 200 years ago, the U.S. Congress made an Apollo-like decision to dispatch an expedition of explorers into uncharted territory. President Thomas Jefferson asked for a paltry \$2,500 to finance the expedition [a bit lower than the \$25 billion needed to hurl human adventurers to the Moon]. In 1803, Congress approved the money, sending what Jefferson later tagged as the Corps of Discovery into territory west of the Mississippi River—beyond the western border of the United States. The following year Meriwether Lewis and William Clark led the 35-member band of intrepid surveyors on a 19-month journey into strange surroundings—from St. Louis, Missouri to the Pacific Ocean and back. Meticulous journals were kept. Landscape conditions were noted. Plants, animals, native inhabitants, and waterways were all recorded for the history books.

Now thanks to a 21st century merger of remote sensing spacecraft, computer technology and special software, the pioneering Lewis and Clark trail is once again being surveyed. This on-going archaeology from on high offers an enlightening high-tech flashback into America's ecological past.

Reference: Alex Philp; [Lewis & Clark Revisited](#); SPACE.com; January 10, 2002
Visit <http://spatialnews.geocomm.com/features/lewisclark0103/index.html> for more information

ÖTZI THE ICE MAN

(continued from page one)

In 2001, anthropologist Horst Seidler of the University of Vienna, head of the Ice Man research team, stated that the tissue around the wound was relatively dense, which indicated extended heavy bleeding. Seidler noted that back in 1994 he was among a team of scientists who proposed that the Ice Man did not just collapse from exposure or illness, but suffered personal disaster before death.²

In March 2002, pathologist Eduard Egarter-Vigl, who had earlier identified the arrowhead embedded in the Ice Man's shoulder, said that he had found a deep, blood-tinged wound in the mummy's right hand. The cut showed no signs of healing, which indicated that the wound occurred just hours before Ötzi's death, perhaps as he was defending himself against an attacker armed with an axe or knife. Egarter-Vigl believes this to be yet another sign of Ötzi's savage end.³

Further new evidence of violence has been

found by examining DNA from food residues and pollens preserved in Ötzi's digestive system. Physical anthropologist Franco Rollo of the University of Camerino in Italy discovered that Ötzi ate two meals on his last day: one meal of ibex [in the goat family] and cereals as he was climbing upward through a coniferous forest, and the second meal of deer meat and cereals about three hours before his death, high up in the Alps.

According to Rollo, his diet indicates that he was a hunter and the arrow wound in his left shoulder indicates that he may have been shot by a rival hunter. "In this epoch, hunters of deer and wild boar used to shoot their arrows at the left shoulder blade of their prey," he says, as it gave them the best chance of killing their prey with the first shot. "He was murdered, not killed by accident."

For more information about Ötzi, the Ice Man, visit the South Tyrol Museum of Archaeology at <http://www.archaeologiemuseum.it>.

—MIKE BALDWIN, MAGS EDITOR

Works Cited:

1. *The Ice Man*; South Tyrol Museum of Archaeology; <http://www.archaeologiemuseum.it>; January 8, 2003
2. Constance Holden; *Ice Man Was Killed From Behind*; Academic Press; InScight; <http://www.academicpress.com/insight/07262001/grapha.htm>; July 26, 2001
3. Josie Glausiusz; *Ice Man Died Fighting*; Discover; Buena Vista Publishing, New York; January 2003, Vol. 24, No. 1; pg. 51



Ötzi's clothing

Photo courtesy of The South Tyrol Museum of Archaeology, Bolzano, Italy.

Information gathered from <http://www.archaeologiemuseum.it> for educational purposes under the "fair use" provision of the United States Copyright Act of 1976.

The Ice Man mummy, with his equipment and clothing, provides great insight into the everyday life and the general appearance of an inhabitant of the Alps during the Copper Age, over 5000 years ago.

The clothing is composed of a cap, hide coat, grass cloak, leggings, belt, loincloth and a pair of shoes. It is remarkable that no woven materials were used, only tanned leather and a grass coat. The stitching threads were made mainly of animal sinews and a few plant fibers.

The man's outer layers included a loose, sleeveless Alpine-grass cloak worn over a hide coat. Under the coat, the Ice Man wore: [1] a knee-length upper garment made of goat skin; [2] leather leggings; [3] a belt of calf-leather; [4] a sewn-on leather pouch containing a scraper, a drill, a flint flake, a bone awl and touchwood–firestarter; [5] a goat hide loincloth; [6] oval leather shoes; and [7] a bearskin cap complete with leather thongs to tie under the chin.

HOW IS 'LOESS' PRONOUNCED?

You can pronounce "loess" as "LERSS," "LUSS," or even "LOW-ess." However, there's more to it than that, so here's a longer answer: The word "loess" is taken directly from German, because loess was first scientifically studied in Germany. In German the word is written Löß, so even our spelling of "loess" has a shaky history.

In German, Löß is pronounced in a manner requiring that the tongue and lips be curled into a configuration which native English speakers cannot manage without a great deal of practice. Usually English-speaking scientists and teachers aim for the German pronunciation, but basically miss the mark. They often say LERSS, but "lerss" is not understood by native German speakers who know about Löß.

Southern geologists have been heard pronouncing it as "LUSS." That's not as close to the German as LERSS but it's much better and easier to say than LOW-ess.

Many people pronounce loess as LOW-ess, which is like pronouncing the word "island" like "IS-land" or calling Des Moines "DEZ-mo-NEZ." However, so many people say LOW-ess that dictionaries often mention it as an acceptable pronunciation.

"Loess" is one of the most clumsy words that could have happened to us, but we're stuck with it. So call it LERSS, or LUSS, or even LOW-ess [if you must], and if someone else calls it another way, don't bother to correct them. They're probably right too!

From "How is Loess Pronounced?"; <http://www.earthfoot.org>; 12.20.02. Reprinted for educational purposes under the "fair use" provision of the United States Copyright Act of 1976.

SFMS CLUBS SHOWS/EVENTS

FEB 7, 2003 • 1pm-6pm
FEB 8-9, 2003 • 10am-5pm
Annual "Symphony of
Gemstones" • Central Brevard
Rock and Gem Club • Kiwanis
Island Park, 950 Kiwanis Park Rd.,
Merritt Island, FL • Contact Sue
Nickolopoulos-321-453-8024

FEB 7-8, 2003 • 10am-6pm
FEB 9, 2003 • Noon-5pm
27th Annual Gem, Mineral
and Jewelry Show and Sale •
Pinellas Geological Society •
Largo Cultural Center, 105 Center
Park Drive, Largo, FL • Contact
Hugh Sheffield-727-894-2440

FEB 14, 2003 • 10am-7pm
FEB 15, 2003 • 10am-6pm
FEB 16, 2003 • 10am-5pm
Greensboro Gem, Mineral
and Jewelry Show •
Greensboro Gem and Mineral
Club, Inc. • Greensboro Coliseum,
1421 Lee Street, Greensboro, NC

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.gaminer.org/may-show.htm

FEDERATION NEWS



**Dixie Mineral Field Trip: Hosted by the
Huntsville Gem and Mineral Society
9:00am [EST], Saturday, February 22, 2003
Banded Agate, Stevenson, AL**

BANDED AGATE SITE(S): Depending upon conditions and capabilities of participants, we shall go to one or both of two sites; in both cases, there will be hiking involved. At one site, there will be level, easy hiking for about 1.5 miles, followed by searching for agate float in creek beds, or in various draws. Recent heavy rains may increase the material exposure. At the other site, there will be a fairly strenuous climb up the mountain to about the 1200 foot level; there also, we shall do surface collecting. These sites are not particularly suited for children and pets.

MEETING LOCATION: Stevenson, AL, off of U. S. Highway 72, about 20 miles northeast of Scottsboro, AL, or about 24 miles southwest of the intersection of Highway 72 and I-24 (South Pittsburgh, TN). There are motels and restaurants in both Scottsboro and at the I-24 exit; allow about 30 minutes to get to Stevenson. There are also plentiful facilities in Huntsville, AL, about an hour and a half Southwest of Stevenson. Exit Highway 72 at the Stevenson exit, Highway 117, and proceed to the Stevenson Holiness Church parking lot. You can see the steeple from the Highway 72 exit.

MEETING TIME: 9:00 a.m. at the church parking lot. We plan to leave the parking lot at 9:15, and It will take about 15 minutes to drive to the hunting area. We shall stop hunting in time to insure getting back to "civilization" before dark.

EQUIPMENT: One should need only a rock hammer and something to carry the agates in; a light pick might be useful if you plan on going up the mountain. We do not intend to dig holes. Agates may range from a pound up to about 7 pounds, so remember that you have to carry back what you pick up. Boots might be advantageous if searching for stream float. Bring plenty of water and a sack lunch; we shall be in a relatively remote area.

CONTACT: Lowell Zoller, HG&MS Field Trip Chair at lzol@knology.net or phone Lowell at 256-881-4650

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.*

Midwest Federation

FEB 21-23, 2003: Cabin Fever Productions present their Annual Winter Cabin Fever Jewelry, Gem, Mineral and Fossil Show in Kirkwood Community Center, 111 S. Geyer, Kirkwood, MO. For information contact Dan & Susan Whitcomb 636-397-5731.

Wildacres Retreat and William Holland Retreat

If you would like to obtain information about class schedules, fees, and registration for Wildacres or William Holland, please check out the SFMS website by following these links: <http://www.amfed.org/sfms/wildacres-retreat.html> and <http://www.amfed.org/sfms/william-holland-retreat.html> .

MAGS REVIEW

BOARD MEETING JAN 2, 2003; 6:30pm

RAYNEE RANDOLPH: At the January MAGS Board Meeting, we discussed the fact that the MAGS Minutes are published in the *Rockhound News* and on our website before they have actually been reviewed and approved by the board. For that reason, we voted to delay publication of the Board minutes until the month following their approval. Therefore the January Board review will not be printed until March 2003. Look for a new format in March. Only those items of interest to all members of MAGS will be included in the Board Review. For a full copy of the minutes, you should contact Raynee Randolph by phone 901-367-9329, email wrandol1@midsouth.rr.com or mail your request to 6578 Birch Walk Dr, Memphis, TN 38117.

GENERAL MEETING JAN 10, 2003; 7:30pm

RAYNEE RANDOLPH: At the January MAGS Board Meeting, we discussed the fact that the MAGS Minutes are published in the *Rockhound News* and on our website before they have actually been reviewed and approved by the board. For that reason, we voted to delay publication of the General Membership minutes until the month following their approval. Therefore the January Meeting review will not be printed until March 2003. Look for a new format in March. Only those items of interest to all members of MAGS will be included in the Meeting Review. For a full copy of the minutes, you should contact Raynee Randolph by phone 901-367-9329, email wrandol1@midsouth.rr.com or mail your request to 6578 Birch Walk Dr, Memphis, TN 38117.

HOW MUCH DOES THE EARTH WEIGH?

MIKE BALDWIN: I love books ... big books, little books, thick books, thin books, almost any book will do ... I just love books. One of the books I obtained recently is called *How Much Does the Earth Weigh?* edited by Marshall Brain [even the editor has a cool name] and published by Hungry Minds, Inc. It's not a very big book, but it covers a lot of ground, pondering questions like: *How many sheets of paper can be produced from a single tree?*, or *What causes a sonic boom?*

The question that intrigued me as soon as I saw the title was ... How much *does* the earth weigh? Well, here's the answer: 6,000,000,000,000,000,000,000 (6 x 10²⁴) kilograms. According to Marshall Brain [and Sir Isaac Newton], the weight of the Earth can be calculated by determining the gravitational attraction between objects. If your measuring instruments are sensitive enough, you [well, maybe not you or me, but somebody] can figure out how much force an object has on another object. Newton developed a nifty little formula for determining the mass of objects, and I'll just have to take his word for it that it works: $F = G \times M1 \times M2 / R^2$ with R being the distance between two objects [in meters], G is a constant [6.67259 x 10⁻¹¹ m³/s²kg] and $M1$ and $M2$ are the masses of two objects. F is the force of attraction between them. Say Earth is $M1$ [the unknown] and $M2$ is a 1kg ball. To determine F , drop the 1kg ball and measure it's acceleration [as applied by the Earth's gravitational pull]. $F = 9.8\text{kg} \times \text{m/s}^2$. The radius of the Earth is 6,400,000 meters. Key all these figures into the Newton formula and you get 6,000,000,000,000,000,000,000,000 (6 x 10²⁴) kg.

There, I said it. That's a lot of mass. To exercise your brain even more, visit www.HowStuffWorks.com or www.HungryMinds.com ... you'll be glad you did!

Information gathered from "How Much Does the Earth Weigh?"; Editor Marshall Brain; Hungry Minds, Inc.; New York, NY; 2001; pp. 130-131. Used for educational purposes under the "fair use" provision of the United States Copyright Act of 1976.

Written in Stone A MAGS Glossary of Terms

This month's glossary terms were submitted by Don Blalock. Thank you Don. Watch our website for an ever-expanding glossary.

ADULARESCENCE: Bright mobile reflections from within more or less transparent feldspars, e.g., adularia, moonstone, sunstone, etc. The reflective points are not discernible, even under fairly strong magnification.

ASTERISM: (Star gems) A special form of chatoyancy (see below) where the filiform inclusions are oriented so that they are parallel to more than one crystal face, usually producing a 4 or 6 point star. Examples include Star Ruby, Star Sapphire, Star Garnet, and Star Rose Quartz.

AVENTURESCENCE: Bright reflections from easily visible platelets of included minerals, usually mica, hematite, or copper. Most commonly seen in quartz varieties. A similar effect also occurs with discoidal separations around small inclusions.

CHATOYANCY: (Cat's-eye effect) Reflections from a series of parallel inclusions of fibrous minerals, such as asbestos, but can also be due to the existence of parallel infinitesimal channels. It forms a single usually bright line in cabochon gems; also inclusions can be warped or wavy, as in tigereye.

IRIDESCENCE: Colored reflections resembling those observed on soap bubbles or thin films of oil on water. This term is probably best restricted to similar thin films occurring in minerals, e.g., goethite in "fire agate," hematite in quartz, etc.

GSA MEETING

MARCH 12-14, 2003
UNIVERSITY OF MEMPHIS

Located along the Mississippi River and the boundary between the south-central and southeastern sections of the Geological Society of America, Memphis, Tennessee, is the perfect site for a joint South-Central and Southeastern Section meeting. Centered in the Mississippi Embayment, the Memphis area has many field locations pertinent to Quaternary geology, neotectonic processes, geologic hazards, and fluvial geomorphology. Field trip destinations in the Ouachita Mountains, Ozark Plateau, St. Francis Mountains, and central Tennessee are all within a few hours by car. The meeting will be held at the University of Memphis Conference Center, located on the northwest side of the campus area.

If you plan to attend this meeting, you must register online [www.geosociety.org] before February 7, 2003. Fees below are for full meeting [or one day]:

GSA Member	\$120 [\$85]
Nonmember	\$135 [\$85]
Student Member	\$50 [\$35]
Student Associate	\$50 [\$35]
Student Nonmember	\$60 [\$35]
Guest or Spouse	\$35 [—]
K-12 Professional	\$25 [—]

WEB STATISTICS

Here's a brief look at our website (www.memphisgeology.org) from 01.21.02 through 01.20.03:

Visits*	38,749
Hits**	203,354
Average visits per day in Jan	202

* visit=every time someone comes to the site

** hit=every page viewed on the site

SHOW 2003

W.C. McDANIEL: As April 26-27 quickly approaches, your show committee is meeting and planning it's own long list of tasks for the 2003 Show.

GIFT BAGS: You have the opportunity to purchase a show gift bag for only \$15.00. The bag includes \$10.00 worth of gift certificates, four admission tickets, two tickets to the gem dig and two extra door prize registration tickets. That's \$24 worth of show goodies for only \$15. The gift bags are available from W.C. or any member of the Show Committee.

DEALERS: We anticipate having a full complement (30) of dealers. We will have at least one new dealer, as *Inspiration Originals of North Carolina* will be unable to return this year. Look for the list of dealers in coming months.

CLUB TABLES: The club tables will relocate to the west end of the building and the old area will become a curtained hospitality room for dealers and club members. The outside of the walls will be for exhibits and displays and the sliding door by the concession stand will be opened.

EXHIBITS: A display on the "Treasures of the Midsouth" will emphasize earth treasures found within 300 miles of Memphis. Idajean will be contacting members soon for your exhibit contributions and participation. Exhibitors from outside of MAGS will include: [1] Delta State, returning with an exhibit of *Ice Age Fossils*, and [2] University of Tennessee–Martin, returning with exhibits including a small display of meteorites which have been found in Tennessee. Also, the show will be one of the first opportunities to see and purchase a book on Coon Creek [if it is published on time]. This book is a collaborative effort of Dr. Michael Gibson, the Pink Palace and the Black Hills Institute.

CLASSES [a new feature at the show]: A series of classes will be held during the show, including wire wrapping, beading, and building your own necklace by making everything from scratch. Specific class details will come later.

MARK YOUR CALENDARS! As you plan your weeks and months ahead keep the show in mind and leave the weekend of April 25-27 free to work and enjoy the show. We need lots of member participation.

MidSouthCon 21 MARCH 28-30


MICHAEL KINGSLEY: MidSouth Science and Fiction Conventions, Inc. (MSFCI) is proud to announce its first annual seminar on pre-secondary education. Language arts teachers, librarians, and other interested scholars are invited to attend. This seminar will feature panel discussions by professionals in education, science, and science fiction writing. The seminar will be held on Saturday, March 29, 2003, 10:00am – 12:00pm, at the Holiday Inn Select near the Memphis International Airport, 2240 Democrat Road, Memphis, TN. MidSouthCon 21, MSCFI's annual regional science fiction convention, begins on Friday, March 28, 2003 at 3:00 PM, and runs through Sunday afternoon, March 30. For additional information, please call (901) 274-7355 or e-mail programming@midsouthcon.org .


MINI MAGS M&Ms

GEM TREES COMING SOON!

Kids, you will be making gem trees soon. Don't forget to bring a nice base rock [to build your gem tree on] to the next MAGS meeting. Ms. Idajeau will show you everything you need to know about building your tree. Bring your favorite rock or fossil to talk about.

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 . . .	Utahraptor
<p>When the movie "Jurassic Park" was released, dinosaur fans everywhere complained that director Steven Spielberg had made his movie Velociraptors much larger than they were in real life. In the midst of this controversy, Dr. James Kirkland and paleontology student Rob Gaston unearthed the real-life giant raptor that was shown in the movie—only bigger! Utahraptor was huge, and with its big killing claws, strong arms and hands, and sharp teeth, it was one of the most ferocious killers on the planet.</p> <p>One of the most unique aspects that Utahraptor shares with its more famous cousin Velociraptor is that both had a lethal killing claw on each foot.</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="text-align: center;">  </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>Utahraptor oweni</i> Pronounced: U-taw-Rap-tor Diet: Carnivore (Meat-Eater) Name Means: "Utah Robber" Length: 23 feet (7 m) Height: 8 feet (2.7 m) Weight: 1 ton (900 kilos) Time: Cretaceous</p> </div>

Did You Know . . .	Pyrite FeS ₂
<p>Pyrite [from the Greek <i>pyr</i>, "fire"] is the well-known "fool's gold", so called because it is easily mistaken for native gold. In fact, pyrite really can be associated with gold, and thus can be an important gold ore. Pyrite has had commercial importance as a source of sulfur, used in the manufacture of sulfuric acid; iron may also be produced as a by-product. Predominantly found in cubes and pyritohedrons with parallel striations on faces, it is less commonly found in octahedrons; also found in nodules and massive forms; fine to coarse granular, fibrous, mammillary, stalactitic. Striking pyrite with steel will produce a spark.</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="text-align: center;">  </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Composition: FeS₂ Hardness: 6-6.5 Specific Gravity: 4.9-5.2 Crystal system: Isometric Cleavage: none Fracture: conchoidal; brittle Streak: greenish black Color: pale yellow to brass-yellow</p> </div>

WHAT'S UP WITH THE KIDS

A NEW NAME: The MAGS kids have a new name. We are now called Mini MAGS [M&Ms].

AT THE LAST MEETING: There were 16 M&Ms at the January meeting. They were Jennifer Baldwin, Kelly Baldwin, Megan Givens, Don Givens, Jared Rodgers, Lauren Rodgers, Pat Long, Michael Long, Sharon Muir, Mark Devine, Aaron Haywell, Tyler Murphee, Allie Van Cleef, Tess Cannito, Taylor Follis, and Zack Follis.

YOUTH NEWSLETTER:

The editor recently received this letter from George and Rena Everett, Youth Resources Co-chairs, SFMS:

To: MAGS Explorer Co-editors
Subject: Great Newsletter
Date: January 6, 2003

On behalf of the Federation, we would like to congratulate you on your fantastic newsletter. The December issue with the article on the Zuni heritage and the recipe for the sedimentary sandwich is really great! We know that with juniors who work as hard as y'all do, the future of our hobby is in good hands. Keep up the good work.

You will receive your copy of the February MAGS Explorer at the February meeting. If you miss the meeting, you can read it online or download it from our website at <http://www.memphisgeology.org/images/explorer0203.pdf>. Send your articles to rockclub@earthlink.net.
MAGS Rocks!

IN MEMORY OF BILL SIPE

WILLIAM [Bill] E. SIPE, 72, of Memphis, electrical engineer, past away on Sunday, January 12, 2003. Services were held on Wednesday, January 15 at Memphis Funeral Home with burial in Memorial Park. He was a member of Idlewild Presbyterian Church, Sigma Nu, and a member and past officer of the Memphis Archaeological and Geological Society. Mr. Sipe, the widower of Mary Griffin Sipe, leaves a stepson, Larry Michael Johnson, and a brother, Glenn Eden Sipe, both of Memphis.

MICROMOUNT NOTES

JENNIFER BALDWIN-[1] The February Micromount M³ meeting will be on the third Thursday, February 20, 7:00pm at the home of our Micromount Director, Roger Van Cleef. If you have not had an opportunity to come to an M³ meeting, maybe this will be the one. [2] If you have *Archimedes* that you have collected from the site near Florence, AL, and if you are interested in trading some of your *Archimedes*, please contact Roger Van Cleef at 794-1641.

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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

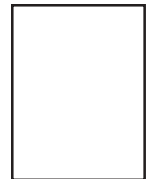
Junior-\$8.00

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 TODAY

Board Meeting
February 6

General Meeting
February 14

MAGS Field Trip
February 15

M³ Meeting
February 20

DMC Field Trip
February 22

