



M A G S

NEWSLETTER

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Memphis Archaeological and Geological Society

January, 2002

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MAGS Newsletter is published monthly by and for the members of the Memphis Archaeological and Geological Society. Please send your comments to Bill Scheffer, 2959 Sky Way Drive, Memphis, TN 38127

What's Happening In January



MEETING: January 11, 2002

Shady Grove Presbyterian Church

5530 Shady Grove Road, Memphis, TN

Doors open at 7:00pm. Party starts at 7:30pm

PROGRAM: TBA

JUNIORS PROGRAM: "Who Wants To Be A Rockhound?"

FIELD TRIP: DMC field Trip to Louisville, MS to collect fossils (see article)

HAPPY NEW YEAR!

It's a new year and lets make a New Year's resolution to try to attend all the meetings this coming year. We have a good meeting place and we need to use it to its fullest. I don't know what program Paul Sides has in store for us for this coming meeting, but I am sure it will be interesting.

Bill tells me that many of our members have not paid their dues for the year. on page two of this newsletter is a reminder of DUES ARE DUE and also a note that if you have ('01) behind your name on the mailing label you have not paid your dues for 2002. Send in your dues by check to Bill soon.

See you at the meeting.

Lou

Phosphorescent Selenite Crystals at Levesque, AR

(REPRINT: Rocks & Minerals) Sept.-Oct. 1961 & Nov. 1974

On April 30, 1961, a group of rockhounds from the Mid-South Earth Science Club was on a scouting trip trying to find new collecting areas. The group consisted of Mr. Syd Jordan and wife Idajean Jordan and daughter Gale, W.C. Riddle, Ken Reppert and daughter Brenda, and Taylor Becroft.

(see Phosphorescent Selenite on page three)

2000-2001 MAGS OFFICERS

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Sunshine Report

FRANK & FRANCIS WALKER--
No one was reported ill at the time of
this printing.

*If one of you, our members, becomes
ill or knows of one of our members
that is ill, please call Frances and
Frank Walker at 372-6206 and let
them know.*

A little boy wrote this
letter to his grandmother,
"I'm very sorry that I
forgot your birthday last
week. It would serve me
right if you forgot mine
next Tuesday."

Reaching For The Stars

MIKE BALDWIN--On January 25,
step out into your backyard and face
south around 9pm. Bright Jupiter will
be just to the left of the moon,
yellowish Saturn to the right, just
above the dimmer star Aldebaran--a
red "giant" that marks the eye of the
bull in Taurus. The constellation
Orion, with his belt of three stars,
will be below. Reddish Mars will be
glowing in the southwest.



January Birthdays

January Birthstone is GARNET

04--Veronica Swink
06--Nancy Boucher
06--Lauren Holliday
07--Rosie Walther
09--Daniel Huber
12--Sam Norris
12--Thomas Worrell
21--Richard Gunter
22--Sherry Smith
22--Shane Spears
23--Susan Clark
25--Randa Spears
29--Doris Currington
29--Herbert Horowitz
30--Bill Smith
31--Johnny Holliday
31--Teresa Noyes

Dues Are Due

BILL SCHEFFER--Beginning
October 1, dues for 2002 were due
and should be paid by January 1,
2002. Please help by paying your
dues as soon as possible by check.
Your check should be made out to
MAGS and mailed to me at: Bill
Scheffer, 2959 Sky Way Drive,
Memphis, TN 38127.

Single Membership: \$16.00

Family Membership: \$20.00

Junior Membership: \$8.00

Assoc. Membership: \$13.00

If you still have ('01) behind your
name on the mailing label for this
newsletter, that means Bill has not
received your dues for 2002.

Phosphorescent Selenite *(continued from page one)*

The group went to Copperus Creek, which is a mile west of the community of Levesque, (Cross County) Arkansas, which is about 6 miles east of Wynne and 47 miles from Memphis, TN. We had heard vague rumors of selenite crystals being in the area but did not know where or what shape they were in. Most of the day was a fairly routine rock hunting trip with an occasional piece of wood being picked up or a piece of agate or jasper being procured which was of indeterminate quality. Several of the members picked up quite a few of the iron concretions that had eroded out of a bluff and tumbled downstream. These concretions are unusual in that they are perfectly round and range in size from a golf ball to a softball and the bigger ones look like old Civil War cannon balls.

Suddenly the serene Sunday afternoon in the creek was interrupted with a very loud and clear shout of SELENITE! Idajeon Jordan was scanning some of the clay in the left bank and sure enough there were small crystals of selenite in sunbursts. They appeared to be in abundance. The rockhounds forgot how tired their feet were or the temperature and went vigorously to work collecting the crystals. Syd Jordan went on up the creek scouting the deposit and about 150 yards up from the original discovery, Syd called and was excitedly motioning for us to come on up there and when we saw that he was a little excited, we hastened onward, as Syd is one of those people that are hard to excite and has the composure of granite. The Jordans are also rockhounds with 10 years of experience behind them. What Syd was motioning about was the xls (crystals) there were much larger and some of the sunbursts were 4 inches in diameter and were also single xls to be found that were up to 4 inches long and 1 inch in thickness. The xls are of a bluish transparency or translucency. Some of the xls were picked up at the base of the bluff where they had weathered out. The bluff is steep with about a 70 to 80 degree slope and members began working up to see how high the xls were and it seemed that they were in the clay for about 20 to 30 feet up the bank where they finally thinned out.

As the afternoon was drawing to a close, the group came back to Memphis and began cleaning their specimens. The next step was too good to be true. When applying the short wave ultraviolet the xls fluoresced a pale green and phosphoresced a bright pale blue. The xls were displayed at our meeting on Tuesday, May 2nd, and a field trip was hastily organized for the following Sunday, May 7th. Members joining the group were Mrs. Margaret Hall, Ms. Martha Schakett, Ms. Ruth Griggin, Howard Lutz, Bill Barnett and wife Marie and son Mike, and Dr. E.B. Wittlake, curator of the museum at Arkansas State College at Jonesboro, and son Velby.

It was a beautiful, sunny Sunday but the elements had not cooperated the day before. It had RAINED and RAINED. Harrison, AR was all but destroyed and flash floods were on the White River area to the north and upon arrival at the site the clay banks were mud banks. It was right amusing at times to see one of the members trying to get to the upper part of the bank where the big ones were, almost attain his/her goal and then start sliding to the base again. One sideline to the trek upstream was when Idajeon Jordan and Martha Shacklett were bringing up the rear and some of the advance members had scared a fairly large water snake from his abode and the snake glided through the water right between Idajeon and Martha. The girls were wading in about 8 inches of water and, if one had been standing in the right position, he could have seen a good rainbow as they treated the rest of the members to some dance that could not have been a water ballet as the tempo was more of the Charleston or Jitterbug nature. The poor befuddled snake has not been seen since.

After about two hours of hunting, sliding, climbing and digging, several of the members looked like mud daubers than rockhounds. It was amazing to see a 100-pound woman with 120 pounds of mud on her after she had slid or fell several times. One of the young ladies slipped and fell in the creek which was a blessing as she came out of it several pounds lighter and cleaner. "If

(see Phosphorescent Selenite on page four)



DMC Field Trip: Louisville, MS

AN OFFICIAL FIELD TRIP OF THE MISSISSIPPI GEM AND MINERAL SOCIETY (HOST)
LOUISVILLE, MISSISSIPPI -- 9:00am, Saturday, January 26, 2002

The Mississippi Gem and Mineral Society (Jackson, MS) will host the January DMC/FIELD TRIP fossil field trip to collecting locations near Louisville, MS. The Jackson club was kind enough to reschedule their rain canceled October DMC trip to this current date in January. For those DMC members who missed or were rained out on the October trip, here is a second chance for some Mississippi fossil collecting! You can expect to find cretaceous invertebrate fossils (gastropods, clams, corals, and ammonites) and possibly some vertebrates such as sharks teeth, etc. There is also pyrite reported in the area, and we may make a visit to Starkville, MS for pyrite if we have time. We will meet at McDonald's, 401 North Church St., Louisville, MS at 9 a.m.(CT)

Equipment: Bring tools for shallow scraping or digging and

collecting bags, paper or something to wrap fragile specimens. Be sure to remember to bring something to eat and drink.

Directions: We will meet at 9:00 a.m.(CT) at McDonald's, 401 North Church St. in Louisville, MS. The restaurant is located on north Church Street just north of the Intersection of SR 14|SR 25 Bus/W Main St and SR 397/South Church St.

Accommodations: There is a Best Western (662-773-9090/1-800-528-1234) in Louisville at 201 Hwy 15 N. There are also a couple of smaller motels; Louisville Motel, 724 S Church Ave, (662-773-6271), Village Inn, 417 N Church Ave, (662-773-8031) and the St Charles Place Bed & Breakfast, 415 E Main St.,(601-773-5786)

Contact: Janie Hand 601-825-3989;
fossilfinder2@aol.com

Phosphorescent Selenite *(continued from page three)*

mud is truly a beauty aid then the Mid-South Earth Science Club should have some of the most beautiful women in the world for member." About 2 hours of collecting and the group had all the xls they wanted (or could carry) and then they spread out and began looking over the area. Several nice pieces of petrified wood were found and in the right bank several pieces of fossil bone and one shark tooth were found. Ruth Griffin found a huge bone that appeared to be a neck vertebrae of some kind of that was about 10 inches in diameter and about 1-1/2 inch thick. The puzzling thing about it was that it did not have the appearance of a fossil bone but of the recent variety. She presented it to Dr. Wittlake and we have not heard its classification yet.

At noon time the group came out and went in different directions, some coming on back to Memphis, one group going to Crow Creek, east of Forrest City to dig for sharks teeth and the other group going to Little Crow Creek to

scout out and look at a huge deposit of oyster shells there. Some of the oyster shells have been measured to be 20 inches long but they are very difficult to get out as they are so fragile. Shark teeth were also found at Little Crow Creek. Howard Lutz also picked up a nice Indian mortar in the creek and several more pieces of petrified wood were found. Several nice specimens of venericardia, gastropods and various pelecypods were secured at Little Crow Creek. The marine fossils that can be obtained from the area are from the Jackson formation of the Eocene epoch. The wood found in the area is classified as lignitized, silicified wood and of course is usually brown and black with no loud or brilliant colors predominating. It will cut and polish beautifully if you like brown and black wood. About 4:00pm the trips were terminated and a group of tired and weary rockhounds started wending their way home to Memphis with selenite crystals to spare.

December Board Meeting Minutes

RAYNEE RANDOLPH--The December board meeting of MAGS was held 12.06.01 at the home of Lou White and was called to order at 7:00 by President Lou White. The following were present: Mike Baldwin, Dr. and Mrs. Cole, Nancy Folden, Darryl Levitch, WC and Connie McDaniel, David and Diane McIlwain, Dick McKitrick, Alan Parks, Raynee Randolph, Paul Sides, and Lou White. The minutes from the November Board and General meetings were accepted and approved as written.

THE FOLLOWING REPORTS WERE GIVEN:

1ST VP RPT: No field trips for this month. Suggestions for 2002 field trip locations are welcome.

LIBRARIAN RPT: Library will be closed until January. Step shelving is needed for the library to display the videos better. A volunteer to make this shelf would be appreciated.

WEB RPT: Check out the new articles. DMC trip December 15 to Graves Mt., Georgia. Bring pictures from field trips, Mike will put them on the web. Newsletters will be on the web from now on and archived as well. A yearly redesign of the website is coming up, so if you have any

new ideas as well as a new name for the site then please tell Mike.

SHOW RPT: Dealers have been slow to respond but we do have 9 contracts at the present time. January 2002 will resume committee meetings

SPECIAL COMMITTEE RPT: Christmas party details are as follows. Party to start at regular meeting time. Dr. Cole will purchase poinsettias. Lou will buy the Christmas tree. Idajean will decorate and bring ingredients for her delicious punch. WC to bring tablecloths, turkey and ham. Alan will purchase gifts for display winner. Raynee to bring CD player and Nancy to bring music.

NEW BUSINESS: Motion made to move the location of the board meeting to McAlister's at Poplar Plaza for the next board meeting. Motion seconded and the vote carried the motion. Alan to call McAlister's and Lou to call the Audobon Café.

ANNOUNCEMENTS: Wireless microphone not working at all. Darryl will check Radio Shack to price new ones. Meeting adjourned at 8:30pm

December General Membership Meeting Minutes

RAYNEE RANDOLPH--The December meeting of MAGS was called to order by President Lou White at 7:26pm on Friday, December 14, 2001 at the Shady Grove Presbyterian Church. Only a few details to take care of then the festivities will begin. Junior of the Year program has come to a close the end of December. All forms must be filled out and mailed by December 31,

2001. poinsettias can be purchased for \$3.00, see Raynee Randolph, she will collect your money. The Christmas tree will be auctioned off later. Board members we will meet at McAlister's in Poplar Plaza next month at 6:00pm if you wish to eat first. merry Christmas Everyone.

The meeting adjourned at 7:35pm followed by refreshments.



WHAT IS A HERKIMER DIAMOND?

DECEMBER 17, 2001--submitted by Mike Baldwin--

Herkimer Diamonds are beautiful double-terminated quartz crystals found in Herkimer, New York. Incredibly, these phenomenal gemstones are close to five hundred million years old. The crystals are magnificent works of nature, found in the rock, having a diamond-like geometrical shape. Thus, the name recognition of "Herkimer Diamonds". Herkimers rival true diamonds. A true diamond found in the rough is exactly that, a rough appearing glass-like stone. The true diamond must be painstakingly cut by man to give it smooth faces and a geometrical shape. On a hardness scale, a true diamond scores a ten. Herkimer Diamonds fall at a seven on the scale, giving the real diamond a close race. They are naturally faceted, each having eighteen faces and 2 points.

The bedrock in which the crystals are found began forming approximately half a billion years ago in a shallow Cambrian Sea that lapped against the southern shores of the ancestral Adirondack Mountains (near the town of Herkimer, New York). The limy sediments (calcium magnesium carbonate) which slowly accumulated beneath the sea's salty waters were gradually compacted under the weight of thousands of feet of additional sediments, forming the rock strata Little Falls Dolostone. While still beneath the sea, water seeped through the pores of the rock often creating "vugs" by dissolving part of the rock.

The collecting methods range from casually looking along the prospecting area, digging through the rubble energetically, using crowbars, sledgehammers and heavy chisels. The most popular tools are a 2 or 3 lb. crack hammer and a bull point chisel. The most popular method of prospecting for loose Herkimer Diamonds is by breaking them out of a single rock.

Domed pocket mining in the table-layer of the rock is usually very rich with diamonds. Some pockets are known to contain thousands of diamonds. Pockets or cups can be up to six feet in diameter and usually no less than one foot. The dome-like tops of the pockets are often lined with small, white cubic-shaped dolomite crystal. Occasionally, the top will be beautiful black drusy quartz.



Pockets containing diamond crystals are never the same either in size or in quality. Most pockets, as a rule, will contain diamond crystals of various sizes. Some pockets may contain large crystals ranging in size from four to eight inches long and three to four inches wide. Other pockets with medium sized crystals range in size from an inch and a half to three to four inches long and a half inch to two inches wide. Micro crystals are always found. As the crystals move up in size they tend to become less clear or more translucent than transparent.

Some crystals contain anthraxolite or decayed plant life. The anthraxolite resembles bits of black coal within the crystals. A special discovery would be an enhydro crystal. These special specimen are crystals that contain a water bubble within it. An extremely lucky find is an enhydro which contains species of anthraxolite floating in the water bubble. Twins, doubles, clusters, tabulars, smokies, skeletal and phantom crystals are all valuable specimen found in pockets.

The most perfect crystals are usually those less than 1/2" long, but occasionally much larger crystals are found. Crystals commonly occur intertwined or clustered and often tiny, perfect crystals are attached to the backs of larger ones. An avid business of trading has developed among the multitudes of collectors, many of whom possess literally thousands of specimens. The most perfect crystals are often used as display pieces in unusually attractive necklaces, earrings, and bracelets.

For more information about Herkimer Diamonds, visit www.herkimerdiamond.com

INTERNET GEOLOGY

AFTER CHRISTMAS SPECIAL ON ZIRCON

DECEMBER 17, 2001--www.geology.about.com--What is it about zircon that makes people crack jokes? Yeah, it's those lowbrow infomercials for cheap cubic zirconia jewelry. The zirconium minerals are a serious bunch, but being linked with cubic zirconia in the public mind is like having Robin Williams in the family—his antics upstage even Cinderella in the annual Christmas picture.

Zircon makes a beautiful gem but it's out of favor these days. It's a very hard stone, ranking 7-1/2 on the Mohs scale, but other stones are harder, and its colors aren't unique. Even tradition doesn't have a big dossier on zircon; one website says that it was reputed to "aid sleep, bring prosperity, and promote honor and wisdom," but hey, just having the money to own jewels is good for that. Another source lists it in a recipe for a plague cure. It does have some minor mineralogical distinctions. It's the hardest of the simple silicates ($ZrSiO_4$), though lots of other silicates are harder. It's the only gem in the tetragonal crystal class, which means nothing whatsoever. And it's the densest of the major gemstones, which only means that a zircon of a given carat weight is smaller than any other gem of equal weight.

"Cubic zirconia" or CZ is known as a fake diamond, although it should instead be considered a superior zircon, and if the marketers can't just start calling it "zircon" instead of the other stone, they ought to be working on a new name altogether. CZ is an oxide compound, ZrO_2 , not a silicate. There is a naturally occurring form of ZrO_2 , so boring that the whole Web has almost no pictures of it. It's called baddeleyite. The difference between baddeleyite and CZ is the way the atoms are packed: the natural mineral is a monoclinic crystal and the gem is cubic (isometric), the same as diamond. That makes CZ extremely hard. Of all the world's substances, only diamond, sapphire, and chrysoberyl can scratch it.

Maybe zircon, real zircon, can gain more respect if we look at its value to geologists. Zircon grains occur almost everywhere there are sediments, because the mineral is so tough. It rises through the crust in plutonic granites and is eroded into the stream system, washed out to sea, and laid down in the sediment beds where it becomes part of the next cycle of sandstone and shale—almost totally unaffected!



Zircon is the ultimate geological recyclable; it can even endure metamorphism. That makes it a great indicator mineral . . . if you find it in a granite in one place, and in a sandstone somewhere else, you have learned something about the geologic history and geographic setting that brought the

zircons from the first to the second place.

The other thing about zircon is its impurities, especially uranium. The uranium-lead (U-Pb) system of dating rocks has been refined to great accuracy, and U-Pb dating is now a robust tool for all ages of rocks from about 100,000 years to the ultimate 4.6-billion-year age of the solar system. Recent researchers have used separated zircon (and baddeleyite) grains from a gigantic set of dikes in Canada's ancient central shield to derive U-Pb age for the dike, putting the dikes in the earliest Proterozoic Age.

This is big-scale stuff at the heart of early-Earth studies these days, and a lot to get out of a tiny bit of zircon . . . and baddeleyite. Don't forget about baddeleyite, because there is a third realm (outside jewelry and geology) where the real money is—industrial zirconium, both the metal and its related products. The United States stockpiles over 14,000 metric tons of baddeleyite for its strategic zirconium content.

By the way, the oldest object on Earth has been found, and it's a tiny grain of zircon that's 4.3 billion years old. Actually, they found two of them. They're the only things we have from deep in the Hadean Eon, and they provide evidence that even at that time, Earth had liquid water on it.

For more information about zircon and other minerals, visit <http://about.geology.com>

**MAGS PRESENTS THE 23RD ANNUAL
MID-AMERICA MINERAL, FOSSIL, JEWELRY SHOW**

Pipkin Building, Fairgrounds
Saturday, April 27 9:00am - 6:00pm
Sunday, April 28 10:00am - 5:00pm

SHOW COMMITMENTS AS OF 12.21.01

Dealers: Stones and Bones; Treasure Chest; Criss, Inc.; Marble Gems; Exquisite Stones; McNeil Minerals; Terra Firma; C&N Rocks and Gifts; Austin Gem and Beads; Javeds; Mineral House; Gems and Crystals Unlimited; Janda Gems; Quest Crystals; B&J Mo' Rocks; G.P. Rock Company; Palmetto Designs; High Point Stone (19 dealers as of 12.26.01)

Exhibits: "Diamond, The Amazing Mineral" includes a display of over 50 uncut diamonds, representing every imond mine in the world.

FOR MAGS MEMBERS:

- Free admission to show
- Friday night dinner (please BRING LOTS OF FOOD/DRINKS)
- A great time and opportunity to DONATE MATERIAL for the grab bags and ROCKZONE gem dig and sandbags (need lots of small tumbled material)
- A great time and opportunity to support the show, your club and our hobby by VOLUNTEERING to help during the show
- An opportunity to exhibit part of your collection or demonstrate a lapidary skill--if interested check with Darryl or W.C.
- An opportunity to possibly rent a club table to sell your material.--lots of preliminary interest, so let WC know by February if you are interested in a table

BE A WINNER BY ANSWERING A FEW QUESTIONS!!!!

Each newsletter leading up to the show (four) will contain a question. Answer each question and bring your answers to the Friday night dinner. Those who correctly answer the most (hopefully all four) questions will be entered into a drawing for show gift certificates (\$\$\$) to spend during the show.

January's Question: In 1841 anatomist Sir Richard Owen coined what is now a very familiar and widely used term?



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 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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