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Memphis Archaeological and Geological Society • Memphis, Tennessee

INSIDE THIS ISSUE

In Memory of Dr. James Cole 2

MEMBER PAGES

Dould Mellibers	٠
MAGS Field Trip: Millington, TN 3	,
Welcome New Members 3	
October Birthdays 3	
Sunshine Report 3	
Campus School Visit 4	ŀ
Key Show Decisions4	ŀ
Sept Board Meeting Notes 7	,
Sept General Meeting Notes 7	,
October Rock Swap 7	,
Web Statistics 7	,
Check It Out 10)
MAGS 40 Years Ago 10)
MICROMOUNTER NEWS	
Micro Space Debris 4	ļ
YOUTH PAGES	
Earth Science Week 8	
Parts of a Projectile Point 8	5
Youth Notes 8	,
Welcome New Youth Members 9	,
Whirl and Catch9)
Dino Card: Spinosaurus 9)
Specimen Card: Rainbow Opal 9)

FEATURE ARTICLES

FEDERATION NEWS

Projectile Points of West TN	1
Clavis Paints	5



PROJECTILE POINTS

OF WEST TENNESSEE



Arlington PointLate Woodland Period, 450 BC Image is actual size²

When the last great Ice Age still held the world in its frozen grasp, human beings first gazed upon the green valley of the Tennessee River. Fifteen thousand years ago or more small bands of nomadic hunters ventured into the untrodden wilderness that had never known the sound of a human voice, leaving behind little evidence of their existence.1

Since there are so few archaeologists currently available to explore areas of the South, amateur artifact collectors can be invaluable partners in preserving and interpreting the prehistoric record of our region. But, amateurs need to know what they have found and they need to have some way of recording that information. Store your found points in small plastic bags labeled with the date collected, the collector's name, the location and conditions of the find. Collectors need to be especially familiar with

some of the terminology associated with projectile points, which are the most abundant form of paleo-indian artifact. Paleo, from the Greek word *paleo*, means ancient, therefore, paleo-indians would be ancient Native Americans.²

Although some projectile points [arrowheads and spear points] were made of bone or horn, most were made of stone which had been chipped and shaped to be an effective hunting tool. The stone itself is usually referred to as "flint,"

(see Projectile Points on page five)

OCTOBER EVENTS

Oct 3	6:30p	Board Meeting: Perkins @ Eastgate Shopping Center
Oct 11	7:30p	General Meeting: Shady Grove Presbyterian Church, 5535 Shady Grove Rd., Memphis (bring displays and snacks) Adult Program: "Ice Age Animals of the Mid-South [including Richardson's Landing]" presented by Ron Brister, Pink Palace Youth Program: presented by Idajean Jordan
Oct 12	10:00a	MAGS Rock Swap at the home of Alan Parks (see page 7)
Oct 17	7:00p	M³ Micromounters Meeting at the home of Roger Van Cleef
Oct 26	8:00a	MAGS Field Trip: Richardson's Landing, TN (see page 3)
Oct 26	8:00a	DMC Field Trip: Harleyville, SC (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.

In Memory of Dr. James R. Cole



At 9:40am on Friday, September 6, 2002 we lost a great friend and devoted club member. For several months, Dr. Cole had been battling health problems, but that did not deter him from enjoying one of his passions, gem and mineral collecting. I, as well as many of you, have learned a tremendous amount about collecting, cleaning, displaying, storing, and sharing rocks and minerals over the years that we have known Dr. Cole. We will miss him *very* much. His passing leaves a void that cannot be filled.

Dr James R. Cole was born in 1924 in Kerrville, TN and graduated from High School in Munford, TN, in 1943. The country was in the middle of World War II and upon graduation he joined the Army Air Corps. James Cole received his wings and flew both B-17's and B-29's. After the war he remained in the reserves and was recalled to combat in the Korean conflict.

In 1957 James Cole graduated from Palmer College of Chiropractic, and entered private practice in Memphis. In the course of his 45-year career he had offices in Memphis on Broad Avenue, Summer Avenue, and in Cordova.

The Governor appointed Dr. Cole to the Board of Chiropractic Examiners in 1961, where he served as president for 24 years. He was selected as "Tennessee Chiropractor of the Year" in 1964 and again in 1979. He received numerous other awards for his professional work. He also served as a medical missionary in Central and South America.

Dr. Cole was known worldwide for his involvement in archaeological and geological activities. He was a member of MAGS for more than 25 years, holding many positions on the MAGS Board, including President [more than once], Field Trip Vice President, and Director [many times]. At one time he was the Tennessee Representative to the Southeast Federation of Mineralogical Societies [SFMS]. Dr. Cole collected gems and minerals from all over the United States and many parts of the world. He loved his travels and shared his journeys with MAGS members through photographs and displays. His collection of gems and minerals is one of the most extensive collections in the United States.

Dr. Cole leaves his wife of 49 years, Melba Forbess, 4 sons (Dr. Richard Cole, Dr. Don Cole, Charlie Forbess Cole, and William Jesse [Bill] Cole II, and 10 Grandchildren). The Coles are an incredible family.

We will miss Dr. Cole. From your MAGS family, Melba, we offer you our prayers, our support, our friendship, and our love. God bless you.

Lou White, President, MAGS



bucket, clothe rock bag or backpack etc.

MAGS FIELD TRIP RICHARDSON'S LANDING

SATURDAY, OCTOBER 26, 2002, 8:00am FIELD TRIP LEADER DAVID McILWAIN (901) 465-7388

COLLECTING SITE: Richardson's landing on the Mississippi River, Shelby County, southwest of Millington, Tennessee. Collecting is free at this site.

SPECIMENS: Banded agate, Lake Superior agate, red jasper, petrified wood and ice age fossils. These specimens may be found on Mississippi River gravel bars, on or just below the surface.

MEETING TIME/PLACE: 8:00am, The east end of the parking lot of the Millington Wal-Mart Supercenter. Located at 8445 US Highway 51 North, near Chick-Fillet Restaurant. Please sign the MAGS attendance sheet when you arrive. We will convoy to the Richardson's landing promptly at 8:30 a.m. Follow AFMS Field Trip Convoy Guidelines [on our website]. At approximately 5:00pm field trip will conclude. TOOLS: Bring rock pick, screwdriver, small garden tools and leather gloves, etc. Newspapers for wrapping specimens are optional. Collecting containers such as

SPECIAL NOTE: Please wear hiking boots or other comfortable walking shoes. Walking sticks are optional. This trip will require walking approximately 4 miles round trip while carrying equipment and the specimens that you've collected. Don't go on this trip if you have walking, heart, or breathing difficulties.

SAFETY NOTE: While at this site, all safety rules must be followed. All children and junior members must be supervised by an adult member at all times. Please be advised that there is always a possibility for injury. Be aware of the possible of poisonous plants and snakes, ticks and chiggers at these sites. Sorry, no pets please. Follow AFMS safety rules, code of ethics and collecting courtesy code.

LUNCH BREAK: Around noon, we will break for lunch so please bring a small sack lunch. Also, please bring plenty to drink such as soft drinks, fruit juices, water, etc. DIFFICULTY LEVEL: 4 to 6 on a scale of 1 (easy) to 10 (hard).

DRIVING DIRECTIONS: In Memphis take I-240 to exit 2A onto US-51 North towards Millington/Covington. Continue on US-51 through downtown Millington to North Millington. Turn left into Wal-Mart parking lot just before the traffic signal at Wilkinsville Road.

FIELD TRIP LEADER: David McIlwain (901) 465-7388; cell (901) 266-1446; email djmcilwain@earthlink.net. If you want to go, please sign the list. If you sign up and decide not to go, please contact David McIlwain ASAP.

PLEASE NOTE: This trip is open only to MAGS members and their guests.

WELCOME NEW MEMBERS

Please add the following new members to your MAGS directory.

Tim, Celeste, Patrick and Michael Long • email: L112163@aol.com 6903 Great Oaks Road, Germantown, TN 38138 • 901-753-3891

Allie Van Cleef

576 Shotwell, Memphis, TN 38111 • 901-324-5451



October Birthstone is OPAL

- 1 Susan Hailey
- 6 Dick McKitrick
- 7 Alan Jacob
- 7 Chris Vaughn
- 10 Charles Hill
- 11 George Everett
- 12 Michael Devine
- 13 Mike Baldwin
- 13 Don Blalock
- 13 Doll Blaiock
- 16 Carol Devine
- 16 Dr. Joe Young
- 18 Parker Ehrlich
- 18 Emily Randolph
- 21 Walter Mewborn
- 21 David Sanders
- 24 Raynee Randolph
- 26 Andrew Idell
- 27 Christian Williams
- 29 Ken Burke
- 30 Pamela Aycock



FRANK & FRANCIS WALKER—
Dr. James Cole passed away at
Baptist Memorial Hospital on
Friday, September 6. He was such a
vital part of our club, it is hard to
imagine MAGS without him.
Melba, our thoughts and prayers
are with you and your family.

To Charlie McPherson, Wayne Williams, Breezy Levitch, and Roger Van Cleef [who broke his ankle in mid-September], your friends at MAGS wish you well. We hope to see you very soon.

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

CAMPUS SCHOOL CLASSROOM VISIT

WC McDANIEL-On September 3, I made a presentation to the 6th grade glass at the University of Memphis Campus School. A variety of fossils and minerals were presented and discussed. Two things that consistently generate a lot of interest with the kids are shark's teeth and pyrite [or the preferred name, fools gold]. During these classroom visits a couple of points always come up. First, not very many people know about our club or show and second, there are more rockhounds and people with a general interest in rocks than we realize. As a club and as rockhounds we should look for more ways to actively merge these interests.

MICRO SPACE DEBRIS

ROGER VAN CLEEF—At first glance, our solar system appears to be rather empty. If our solar system were enclosed in a sphere large enough to contain the orbit of Neptune, then the volume occupied by the sun, the planets, their moons, and all the asteroids would only take up about one-trillionth of the space of the sphere. If you take a closer look at our solar system, the space between the planets is far from empty. It contains all sorts of pebbles, rocks, ice balls, dust, streams of charged particles and tons of man-made earth-launched space debris.

During its eighteen-mile-per-second journey around the sun, the Earth crashes through hundreds of tons of interplanetary debris every single day. Most of this debris is no larger than a grain of sand, and nearly all of it burns up as its enters the Earth's upper atmosphere, vaporizing on contact. The larger, golf-ball sized pieces often shatter into smaller pieces before vaporizing. Many larger pieces make it all the way to the Earth's surface intact. You'd think that by now Earth would have blasted through all of the orbital debris in its path.

Things were once much worse. For half a billion years after the sun and planets were formed, space junk rained down on the Earth with such intensity that our atmosphere was hot and the Earth's surface was molten.

One piece of space debris was so huge that it caused the formation of the Moon. The scarcity of iron and other high-mass elements in the Moon [as seen in lunar samples returned by Apollo astronauts] indicates that the Moon most likely burst forth from Earth's iron-poor crust and mantle.

from "Between the Planets" by Neil deGrasse Tyson, Natural History Magazine, October, 2001

KEY SHOW DECISIONS

W.C.McDANIEL-As MAGS approaches its 24th annual show the Board of Directors has approved several key decisions concerning the management of the show's financial accounts. They include:

- 1. Establishment of specific financial standards and guidelines to insure the stability and viability of future shows.
- 2. Establishment of written guidelines for the dissemination of show income to the club, special projects/events or community organizations.

In keeping with those approved guidelines the board has voted to:

- 1. Continue to provide a donation to the Memphis Ronald McDonald House equal to 25% of the show's admission income. The show presented \$1,000 in 2001 and \$1,000 in 2002 to this facility which provides a home away from home for the families of patients of St. Jude.
- 2. Fund a requested grant in the amount of \$1,000 to Delta State University. This grant is targeted toward providing earth science educational activities for kids in the Mississippi Delta and toward the purchase of an Ice Fossil collection.
- 3. Provide a \$1,000 donation to the Friends of Chucalissa. With this donation, MAGS and each member receives special privileges including free admission to the museum and special events. Just show them your membership card. Additional club benefits will be published in future additions of MAGS Rockhound.
- 4. Establish a \$2,000 revolving fund specifically designated for special projects, needs, and activities outside the regular budget of the club and/or show. If you have any specific ideas or projects that you would like the club to pursue please tell a board member. Remember this is for the members' benefit. Be creative and imaginative.

In addition to these listed activities the show will continue to pay for the club's insurance, fund the junior program through the ROCKZONE proceeds, pay for storage, and distribute grab bag income and certificate of deposits interest income to the clubs general fund.

PROJECTILE POINTS

(continued from page one)

although it may be agate, basalt, chalcedony, chert, jasper, obsidian, petrified wood, or quartz. Whatever stone was used, pieces would break off in conchoidal fractures when struck with a hammerstone or antler hammer. Conchoidal, from the word *conch*, means that the flakes would come off in smooth, shell-like pieces.²

The same flaking process was also used to make scrappers, knives and drills. These artifacts are often found in

surface collections and were a vital part of a Native American tool kit.

PERIODS OF NATIVE TENNESSEE				
Paleo-indian	12,000BC-7,000BC			
Early Archaic	7,000BC-5,000BC			
Middle Archaic	5,000BC-3,000BC			
Early Woodland	400BC-200AD			
Middle Woodland	200AD-400AD			
Late Woodland	400AD-1,000AD			
Mississippian	1.000AD-1.550AD			

EXAMPLES OF POINTS FOUND IN WESTERN TENNESSEE

- **1 ARLINGTON POINT** [pictured on page one] This is a medium-sized dart point with recurved blade edges, straight to slightly contrasting stem. LATE WOODLAND 400-1000AD³
- **2 BARTLETT POINT** [shown half size] Large dart point with convex blade edge, rudimentary straight stem, and strong shoulder barb. Found mainly along the Mississippi River bluffs of west Tennessee. LATE ARCHAIC 3500-1500BC³
- **3 HAYWOOD POINT** [shown half size] Medium to large dart point with convex blade edges, small shallow side notches placed close to the base and a straight to slightly convex base. EARLY ARCHAIC 5000BC³
- **4 MADISON POINT** [shown half size] Small, equilateral triangular arrow point with straight to slightly concave base and blade edges. LATE MISSISSIPPIAN 1400AD³
- **5 NONCONNAH POINT** [shown half size] Large dart point with expanding stem which is so wide relative to the blade as to give the appearance of a point with wide, shallow side notches. LATE ARCHAIC 3500-1500BC³
- **6 WHITLOCK POINT** [shown half size] Medium-sized dart point with convex blade edges, well defined straight shoulder, and a narrow expanding stem. Found in northwest

 Tennessee and along the Tennessee River. EARLY WOODLAND 400BC³

Works Cited:

- 1. Thomas M.N. Lewis and Madeline Kneberg; <u>Tribes That Slumber: Indian Times in the Tennessee Region</u>; University of Tennessee Press; Knoxville, TN; 1958
- 2. Linda Crawford Culberson; <u>Arrowheads and Spear Points in the Prehistoric Southeast;</u> University Press of Mississippi; 1993
- 3. Gerald P. Smith; <u>Archaeological Surveys in the Obion-Forked Deer and Reelfoot-Indian Creek Drainages: 1966 Through Early 1975</u>; Chucalissa Museum; Dept. of Anthropology; Memphis State University; 1979 [points pictured on pages one and five are also from this source]

CLOVIS POINTS

The earliest paleo-indian projectile points found in the Americas are those produced by the "Clovis culture." Named for a point first discovered in the 1930s near Clovis, New Mexico, these peoples are believed to have been the first immigrants to the New World, arriving here 12,000 to 14,000 years ago across Beringia [present day Bering Strait between Russia and Alaska].

Some of the earliest Clovis-type points have been found in the Eastern United States. Clovis spear points are very widespread, having been found throughout the Americas. The beautiful fluted points, which are thinly worked with unstemmed concave bases, would seem to represent a stone-working technique that was already full-blown by about 12,000 years ago.

In the East, Clovis points are primarily surface finds. The frequency of finds in plateau areas and upper river terraces would seem to indicate a hunting/gathering culture, based upon the hunting of very large mammals, such as the Mastodon. Direct associations of the Clovistype points with the larger game animals in the Southeast are rare.

It is likely that smaller game animals and wild food stuffs contributed greatly to the diets of Southeastern paleo-indians. There seems to be a gradual change in the spear points made during this period, which might indicate a shift in emphasis from hunting larger animals to smaller herd animals such as deer, elk and horses.

Linda Crawford Culberson; <u>Arrowheads and Spear Points in the Prehistoric Southeast</u>; University Press of Mississippi; 1993

SFMS CLUBS SHOWS/EVENTS

OCT 5, 2002 • 10am-6pm

and Jewelry Show • Rock-hounds of Central Kentucky and The Capital City Gem & Mineral Club • Kentucky National Guard Armory, Airport Road, Lexington, KY • Contact Don/Karen Lindeman

OCT 5, 2002 • 10am-7pm OCT 6, 2002 • 10am-5pm

Jacksonville Gem & Mineral

Society • Morocco Temple, St. John's Bluff, Jacksonville, FL • contact: Mary Chamblis, 2452 Holly Point Rd. East, Orange Park, FL 32073 • 904-269-4046

OCT 11-12 • 9am-7pm OCT 13 • noon-5pm

35th Annual Gem & Mineral

Show • Huntsville Gem and Mineral Society • Von Braun Center • Huntsville, AL

OCT 18-19, 2002 • 10am-6pm OCT 20, 2002 • noon-5pm

13th Annual Leaf Lookers

Gemboree • Franklin NC Chamber of Commerce/Franklin Gem & Mineral Society • Macon County Community Building, Rt. 441 S. • 800-336-7829

OCT 18-20, 2002

12th Knoxville Gem & Mineral Society Show •

Kerbela Temple, 3800 St. Johns Bluff Road, Knoxville, TN • contact: Eileen Price, 736 Sedgley Dr., Knoxville, TN 3792

FEDERATION NEWS



Dixie Mineral Field Trip: Hosted by the Lowcountry Gem and Mineral Society Saturday, October 19, 2002 • 7:30 am EDT LaFarge Cement Quarry, Harleyville, SC

WHAT: Fossil Collecting Trip. This mine is primarily noted for its Eocene marine fossils including scallops, oysters, brachiopods, echinoids, shark teeth, ray teeth, etc. **WHERE:** LaFarge Cement Quarry in the Harleyville/Holly Hill area, South Carolina **COLLECTING HOURS:** Check-in at 7:30am. Everyone must sign a release form prior to going into the mine. We will meet at the LaFarge Cement Quarry host "work trailer" to sign forms and get a safety briefing. The dig will be from 8am to 1pm.

FEES: There is no fee for this dig.

CHILDREN: If children come to the dig, they MUST be in CLOSE proximity to their parent(s) at all times. No young children are permitted in the mine. All young people under 18 must be with an adult/parent at all times. This is a working mine. No pets. **SPECIAL CONDITIONS:** Hard hats and safety glasses are required and will be supplied by the Lafarge mine. It is recommended that you wear sturdy shoes, gloves, and appropriate outer clothing.

WHAT TO BRING: Bring something to collect into, picks, hammers, small shovels, a bag lunch, and plenty of liquids. If the weather is nice, we may be able to drive into the mine, otherwise we will walk approximately a quarter mile (or more).

TRIP CONDITIONS: We may be limited to the first 40 to 50 for this field trip. We will not be able to determine this for sure until the last week before the trip. Because of this condition, club vice president Mark Easterbrook will be your contact. Contact Mark at asgardsgc@cs.com or (843) 552-1049. If you would like to attend this trip, please contact Mark by no later than October 14. If you send an email, please put "DMC October Trip" in the subject line, so he can expedite completion of the list of participants. If you need directions or accommodation information, email or call Mike Baldwin at rockclub@earthlink.net or 901-853-3603.

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.

2002 WORLD CHAMPIONSHIP CRYSTAL DIG THURSDAY-SATURDAY, OCTOBER 10-12, 2002

Attention all Rockhounds!!! Come and dig in actual working quartz crystal mines in the heart of the Ouachita Mountains. Meet other miners, learn more about crystals and improve your digging skills. And, who knows, maybe you'll find that crystal you always dreamed about! Register early for the 2002 World Championship Quartz Crystal Dig. The winners will share in \$1500 prize money and crystal trophies, and keep all the crystal they dig. The preregistration fee is \$60. The fee after October 1 will be \$75. Drawings will be held every day for T-shirts, caps, special mugs, crystals and other neat prizes. Participating mines this year are Sonny Stanley's Fisher Mountain Mine, Sweet Surrender Crystal Mine, Gee & Dee Crystals Brewster Mountain Mine.

Sponsored by the Mount Ida Arkansas Area Chamber of Commerce. For more information go to the Chamber web site www.mtidachamber.com .

MAGS REVIEW

BOARD MEETING SEPT 5, 2002; 6:30pm

RAYNEE RANDOLPH: The September board meeting of MAGS was held 09/05/02 at Perkin's at Eastgate. The following were present: Mike Baldwin, Nancy Folden, Idajean Jordan, W.C. McDaniel, David McIlwain, Dick McKitrick, Park and Terri Noyes, Raynee Randolph, Bill Scheffer, Paul Sides, and Lou White. Minutes for the August board and general meetings were approved with one correction: Charlie McPherson donated Barite roses for the Junior specimen of the month.

1ST VP: DMC field trip for September will be Vulcan Quarry for fossils Saturday 21st 8am-2pm then on to Dr. Cole's for selenite. Danish will be provided for breakfast. Please bring your own lunch and plenty of water. October 26th trip will be at Richardson's Landing.

2ND VP: Dr. Michael Gibson, Professor of Geology, UT Martin, will present the adult program "Fossils and Ancient Environments of Vulcan Quarry in Parsons Tennessee." **TREASURER:** Financial report presented, motion made, seconded, and carried to approve report, subject to audit. Committee to audit club treasurers report for 2002. **LIBRARY:** Will be open Friday. A motion was made to name the library "The Lucile Henry Cox Library" in her memory. She was the first librarian of MAGS. The motion was seconded and the vote carried the motion. The library will also purchase a book of Archaeology in memory of Lucile."

WEB: Specimen of the month for the juniors will be obsidian. Earth science week will be Oct 13-19, 2002. Scouting organizations will be notified that we are available to help with earth science projects.

JUNIORS: October and November programs will be given by Idajean Jordan. SHOW: Next meeting is September 30th at the McDaniel's home, 7:00pm. ANNOUNCEMENTS: The annual fish fry and rock swap will be at the home of Alan Parks Saturday, October 12, 2002. Come one come all! Bring material for the gem show! Parts of the proceeds from the gem show have been donated to Chucalissa and to Delta State. Idajean Jordan has volunteered to coordinate the Christmas party. Park Noyes will head the nominating committee for election of officers in December. SUGGESTIONS: Geology games be purchased for the juniors. Micromounters need to be represented on the board, beginning in January 2003. Meeting adjourned at 8:00pm.

MAGS FISH FRY/ROCK SWAP SATURDAY, OCTOBER 12, 10-3

Bring your favorite dessert. Bring chairs. Bring a table if you plan to swap.

The October Rock Swap will be at the home of Alishia and Alan Parks, 3405 Joffre Avenue, Memphis, TN. From Poplar Avenue, turn south on S. Reese St., then left on Joffre. The menu includes southern fried catfish, hushpuppies, white beans, cole slaw and drinks. You're welcome to bring your favorite dessert. Activities will include tumbling and cleaning clinics; lots of rocks, minerals, and fossils to sell or trade; bobbing for apples; and door prizes. Admission will be a shoebox full of "high graded" material for the gem dig. This swap is dedicated to the memory of Dr. Jim Cole.

GENERAL MEETING SEPT 13, 2002; 7:30pm

RAYNEE RANDOLPH: The September meeting of MAGS was called to order by First Vice President David McIlwain at 7:35pm on Friday, September 13th, 2002 at the Shady Grove Presbyterian Church. There were 45 members present and 7 visitors. They were: Tanner Cable, Amber Smallwood, Kathy Hemingway, Sara Mitchell, Tracy Motter, James Butchko, and Hunter Hill. **1ST VP:** September field trip–Vulcan Quarry. October trip will be the 26th at Richardson's Landing. PROGRAM: Dr. Mike Gibson, UT-Martin, tonight will give our adult/ youth program. The topic will be "Fossils and Ancient Environments of Vulcan Quarry at Parsons, TN." **ANNOUNCEMENTS:** Rock swap Sept 14 at the home of Marilyn Free. Rock swap and fish fry Oct 12 at the Parks'. Bring a dessert. There will be apple bobbing, tumbling demo, cleaning demo, and more. Bring a shoe box full of material for the gem dig. **DISPLAYS:** "Illinois treasures"—the Parsons Gals. Doris Parsons won. **SUGGESTIONS:** To clean Vulcan Quarry material-bring Cascade dishwashing detergent, water, and your specimens to a boil. Allow to cool to room temp and brush under running water with a toothbrush. Air dry. The meeting adjourned at 9:00pm, followed by refreshments.

WEB STATISTICS

Here's a brief look at our website (www.memphisgeology.org) from 01.21.02 through 09.24.02:

Average visits per day in Sept .. 151

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

SCIENCE WEEK

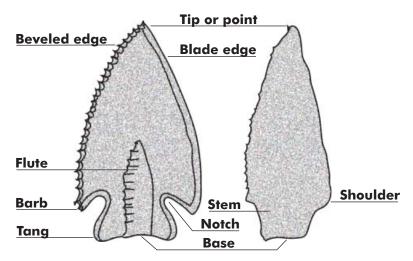
OCTOBER 13-19, 2002

Each year, Earth Science Week focuses on a different facet of earth science to help all people gain a better understanding and appreciation of the natural world. This year, the theme is 'Water is All Around You,' emphasizing the importance of the earth's greatest natural resource.

Earth science affects everyone in some manner. Because it affects us all, an understanding of the importance of earth sciences is very important.

Earth Science Week is sponsored by the American Geological Institute [ASI]. Visit ASI at www.earthsciweek.org for more information about Earth Science Week and ASI.

PARTS OF A **PROJECTILE POINT**



Some beginning collectors tend to call any worked stone object an "arrowhead," when in fact, many of the items had purposes other than tipping an arrow. Projectile points are the most common paleo-indian and Native American artifacts but, in addition to projectile points, [which include arrowheads and spear points], there are also gravers, scrapers, grinding stones, hammerstones, and numerous other artifacts, each with its own significance to the cultural record.

Linda Crawford Culberson; Arrowheads and Spear Points in the Prehistoric Southeast; University Press of Mississippi; 1993

YOUTH NOTES

HOW MANY SPECIES OF DINOSAURS ARE CURRENTLY KNOWN?

Currently, approximately 700 species of dinosaurs have been named. Only about half of these specimens are complete skeletons, and usually only complete [or nearly-complete] skeletons allow scientists to confidently say the bones represent unique and separate species. All of the species are listed in approximately 300 verified dinosaur genera-which are groups [such as Tyrannosaurus or "tyrant lizard"] of species [such as Tyrannosaurus rex, or "king of the tyrant lizards"] linked by common characteristics. Amazingly, many scientists speculate there may be 700 to 900 more dinosaur genera that have yet to be discovered. Thomas E. Svarney and Patricia Barnes-Svarney; The Handy Dinosaur Answer Book; Visible Ink Press; Farmington Hills, MI; 1999.



OOPS! Last month's article on Birdsong Shale needs a little bit of revision. The specimen card example on page five should actually say Vulcan Quarry [not North Vulcan Quarry] and the County is Decatur [not Benton]. Also on page five, Agerostrea is NOT commonly found at the Vulcan Quarry near Parsons. Sorry for the mix-up. Kids, tell your parents, so they can change their specimen cards too.

PAGE WELCOME NEW YOUTH MEMBERS

Patrick Long, Michael Long, and Allie Van Cleef became new youth members this month. Welcome to the club and we hope you have a great time with MAGS!

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

Did You Know . . .

The star of "Jurassic Park III," the Spinosaurus is one of the strangest of the large meat-eaters. What makes it so different is the large sail on its back, formed by spines that grew as tall as six feet. No one knows exactly why it had these on its back, but it is possible that they helped to regulate body temperature, or maybe they were used as a display during courtship. The other really interesting thing about this huge dinosaur was its diet - it seems to be designed to eat mostly fish! The teeth of Spinosaurus are designed differently from any of the large carnivores. They are long and conical-shaped, the kind found on reptiles that eat mostly fish. It probably lived along the shore.

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Spinosaurus

MAGS DINOSAUR CARD



Spinosaurus aegyptiacus
Pronounced: Spy-no-Saw-rus
Diet: Carnivore (Meat-Eater)
Name Means: "spine lizard"
Length: 45 feet (15 m)
Height: 16 feet (5 m)
Weight: 6 tons (6,000 kilos)
Time: Middle Cretaceous–100mya

Did You Know . . .

Dense opal resembles quartz, but is softer and has a lustrous conchoidal fracture. Opal is a low-temperature mineral and usually develops in a wide variety of rocks as cavity and fracture fillings. It frequently develops in basalt and rhyolite of volcanic rock and replaces the cells in wood and the shells of clams.

Common opal is widespread and can be obtained at many places, but localities for precious opal are rare and seem to be localized in western United States and Mexico. Rainbow Opal is a type of precious opal with curved bands of color.

This month's Rainbow Opal specimen is from Milford Mining District, Mineral Mountains, Beaver County, Utah.

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Rainbow Opal

MAGS SPECIMEN CARD



Composition: SiO₂•nH₂O Hardness: 5.5-6.5 Specific Gravity: 1.98-2.50 Fracture: conchoidal, brittle Color: white, all colors, opalescent

Streak: White

Lustre: vitreous, greasy Crystal system: trigonal

WHIRL AND CATCH

Boys and girls of the Woodland Indians frequently played this little game, since little preparation or equipment was needed. All that was needed were six to twelve sticks about 3 or 4 inches long and from 1/8 to 1/4 inch in diameter, and 2 to 6 players.

Here's the way it's played. The sticks, from four to twelve, are placed on the back of the hand with the hand held a little above waist level and are then tossed straight up into the air, at least a little higher than the top of the head of the player who tosses them. The falling sticks are then caught on the open palm of the hand which tossed them upward. The fingers and hand must be kept flat or the catch doesn't score. A more difficult way to play is to toss the sticks up with the palm or back of the hand and catch them on the back of the open hand when they fall.

Older boys and girls would go on to the most difficult way of playing. They would toss the sticks up as before, but they would whirl around, once, rapidly before catching the falling sticks on the back of the hand.

If you decide to try this game, you should probably start out with the easiest version and only a few sticks. See if you can work your way up to a dozen sticks!

Allan and Paulette Macfalan; <u>Handbook</u> of <u>American Indian Games</u>; Dover Publications; New York, New York; 1985

CHECK IT OUT

NANCY FOLDEN—At the September MAGS Board meeting, the board members voted unanimously to dedicate the MAGS Library in memory of Lucile Cox, who passed away last month. The MAGS Library will be known as the "Lucile Henry Cox Library." Lucile was the first MAGS Librarian. Two of her passions were geneology and archaeology, making the naming of our library quite appropriate to honor her. An archaeology book will be purchased and placed in the library in her honor.

MAGS 40 YEARS AGO

OCTOBER 1962—A small but enthusiastic group of rockhounds made the trip to Mt. Ida to dig and collect crystals on the club's mineral claim in September. Those making the trip were the Don Greens, Mary and Van Winton, Mary's folks (Mr. and Mrs. J.R. Barnett of Madisonville, Kentucky), the Al Bowmans, Mr. Neville, Mark Neville, and Tommy Conn. The weather was perfect for camping and we all came home with lots of crystals. Don and Al successfully dug a good pocket on Sunday morning which shows there are good crystals to be had by hard work.

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SFMS: AFMS: New Editor 1st Place–86 New Editor 2nd Place–88, 97 Jr. Article 3. 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

AFMS: New Editor 7th Place–95 Jr. Article 3rd Place–98 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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