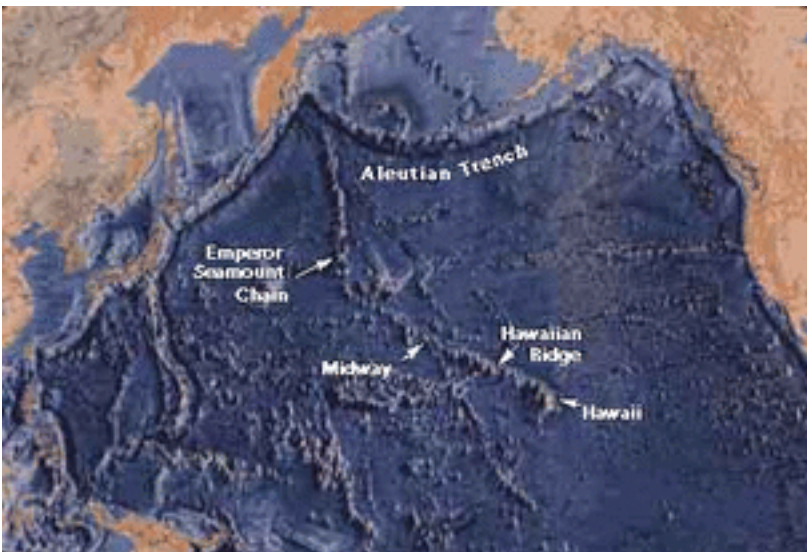


VOLUME 56 / NUMBER 5 / MAY 14, 2010

## Facts About Earthquakes

1. The **largest recorded earthquake in the United States** was a magnitude 9.2 that struck Prince William Sound, Alaska on Good Friday, March 28, 1964 UTC.
2. The **largest recorded earthquake in the world** was a magnitude 9.5 (Mw) in Chile on May 22, 1960.
3. The **earliest reported earthquake in California** was felt in 1769 by the exploring expedition of Gaspar de Portola while the group was camping about 48 kilometers (30 miles) southeast of Los Angeles.
4. Before electronics allowed recordings of large earthquakes, scientists built large **spring-pendulum seismometers** in an attempt to record the long-period motion produced by such quakes. The largest one weighed about 15 tons. There is a medium-sized one three stories high in Mexico City that is still in operation.
5. The **average rate of motion across the San Andreas Fault Zone** during the past 3 million years is 56 mm/yr (2 in/yr). This is about the same rate at which your fingernails grow. Assuming this rate continues, scientists project that Los Angeles and San Francisco will be adjacent to one another in approximately 15 million years.



>> *continued on page 6* >>

The “Ring of Fire” also called the Circum-Pacific belt, is the zone of earthquakes surrounding the Pacific Ocean — about 90% of the world’s earthquakes occur there. The next most seismic region (5-6% of earthquakes) is the Alpine belt (extends from Mediterranean region, eastward through Turkey, Iran, and northern India.

source: <http://earthquake.usgs.gov/learn/facts.php>

### INSIDE THIS ISSUE

- 02 2009-2010 Officer and Directors; Message from the President
- 03 May Rock Swap at the home of Jim and Hasami McNeil including directions
- 04 The Final List of 2010 Show Sponsorships; Turned in Show Information Table; Melba Cole Sale
- 05 Show Grand Prize Prize Winner–The Story Without Words
- 06 Facts About Earthquakes [continued from page 1]
- 07 Over 60 Additional Books in MAGS Library
- 08 March 2010 Board Meeting Minutes; March 2010 Membership Meeting Minutes
- 09 May Displays; Trips and Programs; Directions to Blue Springs
- 10 The 30 Most Recent Earthquakes in the Central United States

---

# 2009-2010

## Officers and Board of Directors

**President**–W.C. McDaniel • 2038 Central Avenue, Memphis, TN 38104 • 901-274-7706 • w.c.mcd@att.net

**1st VP (Field Trips)**–Mike Wheeler • 5764 Heatwood Drive, Bartlett 38135 • 901-383-8225 • Mike.Wheeler@Shelbycountytyn.gov

**2nd VP (Programs)**–Paul Sides • 1062 CR 739, Wynne, AR 72396 • 870-208-9586 • walter.sides@msg gravel.com

**Secretary**–Carol Lybanon • 2019 Littlemore Drive, Cordova, TN 38016 • 901-757-2144 • lybanon@earthlink.net

**Treasurer**–Doris Johnston Jones • 409 Bradford Trail Cove, Collierville, TN 38017 • 901-832-0437 • darjohnston@aol.com

**Director (Asst Field Trips)**–Robert Duncan • 926 Littlemore Drive, Cordova, TN 38016 • 901-251-6719 • agatized50@aol.com

**Director (Asst Programs)**–Matthew Lybanon • 2019 Littlemore Drive, Cordova, TN 38016 • 901-757-2144 • lybanon@earthlink.net

**Director (Youth)**–Alan Schaeffer • 6854 Corsica Drive, Memphis, TN 38120 • 901-753-8496 • dayday91@aol.com

**Director (Asst Youth)**–Kimberly Loveland • 3246 Tea Berry Lane, Bartlett, TN 38134 • 901-380-1886 • amazeyou@yahoo.com

**Director (Librarian)**–Ron Brister • 3059 Old Brownsville Road, Bartlett, TN 38134 • 901-388-1765 • ronald.brister@memphistn.gov

**Director (Membership)**–Neville Mayfield • 7782 Bill Knight Ct, Millington, TN 38053 • 901-872-6761 • emayfiel@localnet.com

**Director (Historian)**–Nannett McDougale Dykes • 106 Maple Street, Stanton, TN 38069 • 901-412-9357 • redchesty@yahoo.com

**Newsletter Editor**–Mike Baldwin • 367 North Main St, Collierville, TN 38017 • 901-853-3603 • mbaldwin05@gmail.com

**Web Coordinator**–Mike Baldwin • 367 North Main St, Collierville, TN 38017 • 901-853-3603 • mbaldwin05@gmail.com

**Show Chairman**–W.C. McDaniel • 2038 Central Avenue, Memphis, TN 38104 • 901-274-7706 • w.c.mcd@att.net

MAGS Rockhound News is published monthly by and for the members of the Memphis Archaeological and Geological Society. Please send your comments and articles to Mike Baldwin, 367 North Main Street, Collierville, TN 38017 or email mbaldwin05@gmail.com. ©2010.

# Message from the President

As the April show passes to May, MAGS has a full calendar of scheduled events. Some quick show and event bullet points;

- James Butchko is the hardest working man in show business.
- The mineral “hail” was for a short time, fortunately, the featured mineral at the show on Saturday morning.
- Ida Jean Jordan can identify just about anything, as evidence by her identifying an uninvited guest to the show, a speckled king snake. The visitor completed its shopping and was escorted to the nearby woods.



- May opens the rock swap season with the McNeil's hosting the swap on May 15th.
- Several field trips are plan over the next several months including: Blue Springs, Frankstown, Turkey Creek and a weekday (May 13th) trip to one of the Granite Mt. quarries near Little Rock.
- I pass over the Mississippi River several times a week. The river has been up, down, back up. I am hopeful that this will make the gravel bars prime collecting grounds.
- In late March my petrified wood collecting season opened with a trip to Mississippi. The water was high and swift but produced a nice medium size specimen and a bucket full of small pieces. One of the sites, collected by MAGS several years ago, has sustained a lot of tree uprooting, making many of the areas of the creek nearly impassable. I am sure the abundant snake population will enjoy their new homes.

---

# May Rock Swap

**Saturday, May 15 / 11:00am to 3:00 pm**  
**9869 Taylor Drive, Olive Branch, MS**  
**(662) 890-4126**

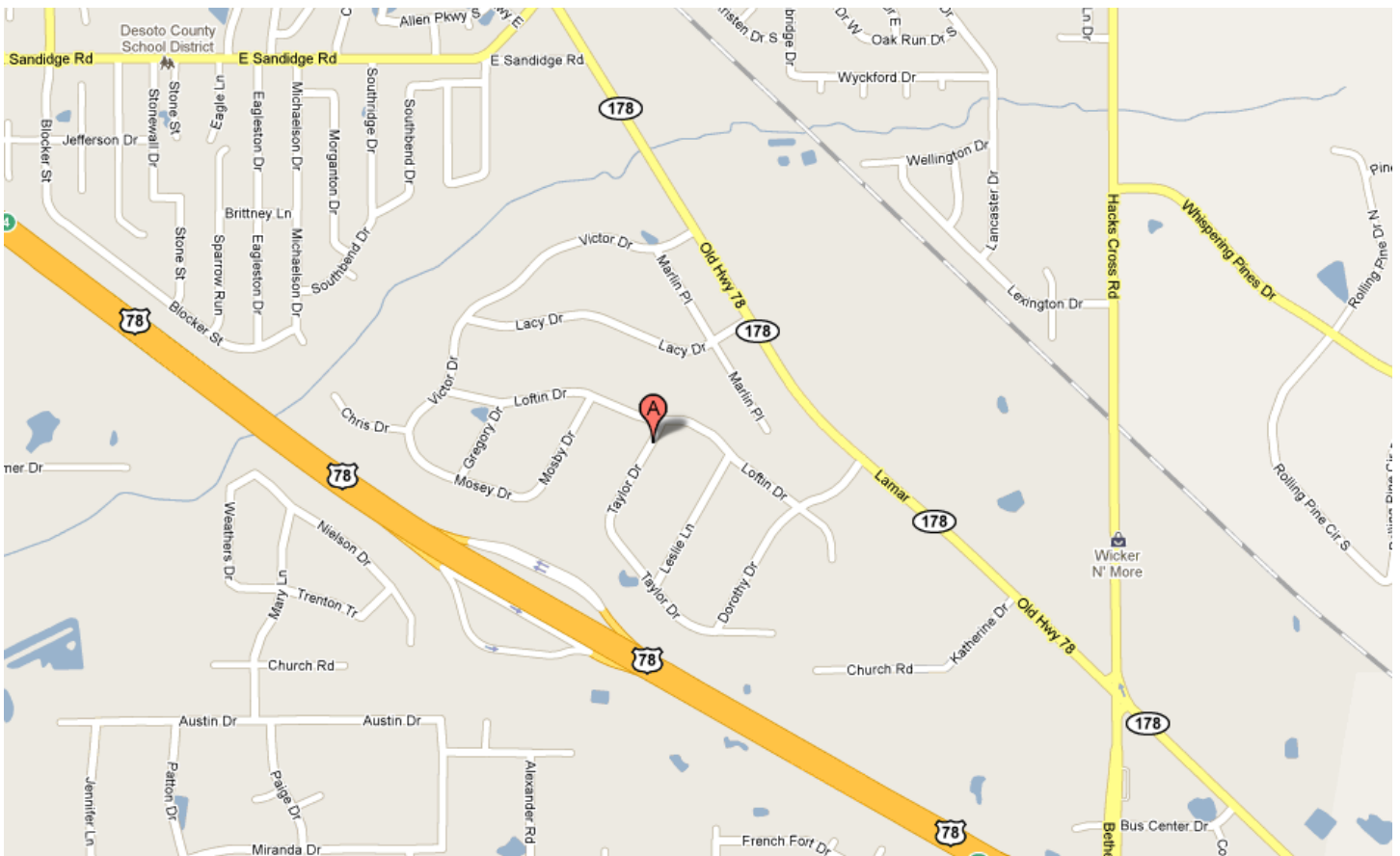
The next rock swap will be Saturday, May 15, at Jim and Hasami McNeil's home. The McNeil's will provide the hamburgers and hot dogs. Everyone else please make a side dish or dessert. The McNeil's will have things to swap. It's more fun if you bring something to sell or trade.

## Directions From Memphis

From I-240 turn south on Lamar (hwy 78) (Exit 21 I believe). Go to Exit 6 in Olive Branch (15-20 miles). Turn on Exit 6 (Bethel Road and Hacks Cross). At stop sign turn Left on to Hacks Cross. Go approximately 0.4 mile to stop light (the cross road is MS-178). Turn left on 178 and go approximately 0.6 mile. Turn left on Dorothy (you should see a brick development sign saying Lees Crossing, Fairfield Estates), go approximately 0.1 mile. Turn right on Loftin and go approximately 0.3 mile. Turn left on to Taylor Drive and go approximately 0.1 mile (second driveway on left)

## From Hwy 385 (Bill Morris Parkway)

Take 385 to the Hacks Cross exit. Turn right onto Hacks Cross travel approximately 5-10 miles. At stop light at Hacks Cross and MS-178. Turn right on 178 and go approximately 0.6 mile. Turn left on Dorothy (you should see a brick development sign saying Lees Crossing, Fairfield Estates), go approximately 0.1 mile. Turn right on Loftin and go approximately 0.3 mile. Turn left on to Taylor Drive and go approximately 0.1 mile (second driveway on left)



---

# The final list of 2010 Show sponsorships

## Sponsors

**Memphis Stone and Gravel** (\$1,000)–Rockzone

**J. Cooper Moving and Storage**–In kind contribution of free storage shed rental and moving show items to and from the Agricenter (priceless)

**Envior-Tek**–In kind contribution of free storage shed rental and moving show items to and from the Agricenter (priceless)

**Gem of the Show** (\$100 donation)

**Melba Cole, Jim's Minerals**

**Alan and Debbie Schaeffer, Desoto Eye Care**

**Herb and Sue Nicholson**

**Susan Thompson [presented for her grandsons: Jim and John Keegan]**

**Friends of the Show** (\$25 donation)

**State Farm Insurance–David Ross, Agent**

**Jeff Tweed–National Restaurant Properties**

**Angela Tillery–Collierville Jazzercise**

**Robert Connolly–CH Nash Museum at Chucalissa**

**Bill and Jean Gilbert**

**Matthew and Carol Lybanon**

**Charles and Emily Hill**

**James Johnson**

**Alan Parks–IceAgeRocks.com**

Turned in  
at **MAGS Show**  
Information Table

If you have lost a bag of  
Show merchandise and can  
identify the items, we would be  
glad to return it to you.

Call (901) 757-2144.

Melba Cole

**Jim's Minerals**

Call Melba about  
rock and mineral  
estate closeout.

(901)382-0344  
jmelcole@yahoo.com





# Show Grand Prize Winner

## The story without words



**GRAND PRIZE REGISTRATION (PLEASE PRINT)**  
Memphis Mineral, Fossil and Jewelry Show

Name: Nicola Tupis  
Address: 3763 Douglass Ave.  
City: Memphis State: TN ZIP: 38111  
Phone: 901, 452-1939  
Email: \_\_\_\_\_

Is this your first time to our Show? (circle Yes or  No)  
Please tell us how you found out about our Show?  
mailer

**THANK YOU!**



---

# Facts About Earthquakes

[continued from page 1]

6. The **East African Rift System** is a 50-60 km (31-37 miles) wide zone of active volcanics and faulting that extends north-south in eastern Africa for more than 3000 km (1864 miles) from Ethiopia in the north to Zambezi in the south. It is a rare example of an active continental rift zone, where a continental plate is attempting to split into two plates which are moving away from one another.
7. The **first “pendulum seismoscope”** to measure the shaking of the ground during an earthquake was developed in 1751, and it wasn’t until 1855 that faults were recognized as the source of earthquakes.
8. **Moonquakes** (“earthquakes” on the moon) do occur, but they happen less frequently and have smaller magnitudes than earthquakes on the Earth. It appears they are related to the tidal stresses associated with the varying distance between the Earth and Moon. They also occur at great depth, about halfway between the surface and the center of the moon.
9. Although both are sea waves, a **tsunami and a tidal wave** are two different unrelated phenomena. A tidal wave is a shallow water wave caused by the gravitational interactions between the Sun, Moon, and Earth. A tsunami is a sea wave caused by an underwater earthquake or landslide (usually triggered by an earthquake) displacing the ocean water.
10. The **hypocenter** of an earthquake is the location beneath the earth’s surface where the rupture of the fault begins. The epicenter of an earthquake is the location directly above the hypocenter on the surface of the earth.
11. The world’s **greatest land mountain range** is the Himalaya-Karakoram. It contains 96 of the world’s 109 peaks of over 7,317m (24,000 ft). The longest range is the Andes of South America which is 7,564km (4700 mi) in length. Both were created by the movement of tectonic plates.
12. It is estimated that there are **500,000 detectable earthquakes** in the world each year. 100,000 of those can be felt, and 100 of them cause damage.
13. It is thought that more damage was done by the resulting fire after the **1906 San Francisco earthquake** than by the earthquake itself.
14. A **seiche** (pronounced SAYSH) is what happens in the swimming pools of Californians during and after an earthquake. It is “an internal wave oscillating in a body of water” or, in other words, it is the sloshing of the water in your swimming pool, or any body of water, caused by the ground shaking in an earthquake. It may continue for a few moments or hours, long after the generating force is gone. A seiche can also be caused by wind or tides.
15. Each year the **southern California area has about 10,000 earthquakes**. Most of them are so small that they are not felt. Only several hundred are greater than magnitude 3.0, and only about 15-20 are greater than magnitude 4.0. If there is a large earthquake, however, the aftershock sequence will produce many more earthquakes of all magnitudes for many months.
16. The **magnitude** of an earthquake is a measured value of the earthquake size. The magnitude is the same no matter where you are, or how strong or weak the shaking was in various locations. The **intensity** of an earthquake is a measure of the shaking created by the earthquake, and this value does vary with location.
17. The **Wasatch Range**, with its outstanding ski areas, runs North-South through Utah, and like all mountain ranges it was produced by a series of earthquakes. The 386 km (240-mile)-long Wasatch Fault is made up of several segments, each capable of producing up to a M7.5 earthquake. During the past 6,000 years, there has been a M6.5+ about once every 350 years, and it has been about 350 years since the last powerful earthquake, which was on the Nephi segment.

source: <http://earthquake.usgs.gov/learn/facts.php>

---

# Over 60 Additional Books in MAGS Labrary

MAGS library books are available for circulation to current members. Library hours are from 6:30 PM to 9:00 PM during membership meetings on the second Thursday of each month. You must submit the library card issued with your membership card to check out books. Books may be checked out for two months. There is a \$5.00 fine per month per book fine for overdue books. Please call or email me if you have questions about our library collection or your status as a user.

Ron Brister  
901-388-1765 • bristerr@bellsouth.net

Over sixty books, primarily on the geology and archaeology of western Tennessee, northern Mississippi, and eastern Arkansas, were added to the Memphis Archaeological and Geological Society library in April. Two new storage cabinets on wheels were donated to MAGS by librarian Ron Brister to house the expanded collection. The cabinets will be assembled and delivered to our storage room at Shady Grove Presbyterian in time for the June meeting. Many of these books are primary references for the rocks, minerals, fossils prehisotric, and histgoric archaeology of our area.

667	Phillips (2003)	Archaeological Survey of the Lower Mississippi Alluvial Valley
668	Milner (2004)	The Mound Builders
669	Welch (2006)	Archaeology at Shiloh Mounds
670	Hudson (1976)	The Southeastern Indians
671	Moore (1974)	Paleoecologic and Systematic of the Coon Creek Fauna
672	Fuller (2003)	1001 Facts about Rocks and Minerals
673	James (1972)	Indian Basketry
674	Dye (1990)	Towns and Temples along the Mississippi
675	Moore (2009)	Archaeological Expeditions of the Peabody Museum in Middle Tenn.
676	Lewin (1982)	The Thread of Life: The Smithsonian Looks at Evolution
677	Schole (1983)	Carbonate Depositional Environments
678	Morse (1983)	Archaeology of the Central Mississippi Valley
679	Lewis (1995)	Prehistory of the Chickamauga Basin, Volume 1
680	Lewis (1995)	Prehistory of the Chickamauga Basin, Volume 2
681	Griffin (1952)	Archaeology of Eastern United States
682	Martin (1947)	Indians Before Columbus
683	Welch (2006)	Archaeology at Shiloh Mounds
684	Phillips (2003)	Archaeological Survey of the Lower Mississippi Alluvial Valley
685	Woodhouse (2002)	Discovering Washington's Historic Mines, Volume 2
686	Lyman (1986)	Simon and Schuster's Guide to Gems and Precious Stones
687	Levin (1991)	Earth Through Time
688	Deeson (1973)	Collector's Encyclopedia of Rocks and Minerals
689	Wade (1998)	Science Times Book of Fossils and Evolution
690	Fenton (1966)	Tales Told by Fossils
691	Horner (1988)	Digging Dinosaurs
692	Case (1973)	Fossil Sharks: A Pictorial Review
693	Dixon (1984)	Time Exposure: A Photographic Record of the Dinosaur Age
694	Stearns (1975)	Field Trips in West Tennessee
695	Stearns (1975)	Field Trips in West Tennessee
696	Dockery (1984)	Lower Oligocene Gastropoda of the Vicksburg Group, Mississippi
697	Bendick (1980)	Big Strawberry Book of the Earth: Our Changing Planet
698	Wade (1926)	Fauna of the Ripley Formation on Coon Creek, Tennessee (copy)
699	Tschudy (1970)	Illustrations of Plant Microfossils from the Yazoo Clay Mississippi
700	Stephenson (1936)	New Upper Cretaceous Ostracoda from the Gulf Region
701	Stephenson (1915)	Cretaceous-Eocene Contact in the Gulf Region
702	Berry (1917)	Geologic History Indicated by Fossiliferous Deposits Meridian, Miss.
703	Sohl (1960)	Archaeogastropoda of the Ripley, Owl Creek and Prairie Bluff
704	Sohl (1964)	Neogastropoda of the Ripley, Owl Creek and Prairie Bluff
705	Sohl (1960)	Archaeogastropoda of the Ripley, Owl Creek and Prairie Bluff
706	Sohl (1964)	Neogastropoda of the Ripley, Owl Creek and Prairie Bluff
707	Moore (1969)	Stratigraphy of the Fort Pillow Test Well
708	Weiner (2006)	Read and Do: Rocks
709	Flanagan (2001)	Simply Science: Rocks
710	Richardson (2002)	Rocks
711	Bloubaum (1999)	Geology Rocks
712	Benton (1992)	Dinosaurs: Living Monsters of the Past
713	Lindsay (1993)	American Museum of Natural History: Corythosaurus
714	Meyer (1973)	Teotihuacan
715	Weaver (1997)	Archaeological Excavations at Magevney House, Memphis, Tenn.
716	Weaver (1997)	Archaeological Excavations at Magevney House, Memphis, Tenn.
717	Lumb (1988)	Chucalissa: Excavations in Units 2 and 6, 1959-1967
718	Jackson (1996)	The Bone Detectives
719	Nash (1972)	Chucalissa: Excavations and Burials through 1963
720	Panamerican (2005)	Limited Inventory of Steamboat Losses on the Lower Mississippi
721	Thomas (2003)	Literature and Records Search in Three Basins, Germantown, Tenn.
722	Hilcourt (1970)	New Field Book of Nature Activities
723	Thomas (1942)	Claiborne (Eocene of Mississippi)
724	Thomas (1942)	Claiborne (Eocene of Mississippi)
725	Wilson (1953)	Annotated Bibliography of Tennessee Geology through 1950
726	Thomas (1942)	Claiborne (Eocene of Mississippi)
727	Morse (1930)	Paleozoic Rocks (Mississippi)
728	Bass (1995)	Human Osteology



---

## March 2010 Board Meeting Minutes

Carol and Matthew Lybanon

The MAGS Board of Directors met March 4 at the St. Clare Room in St. Francis Hospital, 5959 Park Avenue. The meeting was called to order at 6:42 P. M. Present were: Mike Baldwin, Ron Brister, Doris Jones, Carol Lybanon, Matthew Lybanon, Neville Mayfield, W. C. McDaniel, Nannett McDougal-Dykes, Alan Schaeffer, and Paul Sides. Excused: Robert Duncan and Mike Wheeler.

W. C. McDaniel announced that he will not be able to attend the March Membership Meeting. Secretary: The February minutes were approved with minor corrections.

Treasurer: The Treasurer's report was approved subject to audit. Doris Jones presented the 2010 Revised Planning Budget, which was also approved.

Membership: Neville Mayfield reported that there were six renewals and two new memberships (4 members): Jestein L. Lamey and Jonathan Gibson, Nancy and Toney Prussiamerritt. W. C. McDaniel noted that we now have an all-time record number of members.

Field Trips: In the absence of Mike Wheeler and Robert Duncan, W. C. McDaniel reported that March 5-6 we will go to Missouri to collect druse quartz, March 20 we will go to Nameless, TN, for geodes (Davis Watts will donate five buckets to the Show), and April 2-4 there will be a special trip to Kentucky to collect fluorite. W. C. is arranging a May trip, coordinating with Mike Howard, to Granite Mountain, AR. This trip will have to be on a weekday. W. C. asked if we want to continue our membership in the DMC. Alan Schaeffer moved that we renew; the motion was carried. W. C. said he would take care of arranging the date for our next DMC field trip.

Adult Programs: Paul Sides announced that Robert Connolly will finally get to present his program at the March Membership Meeting. The April program will be devoted to the Show. George Phillips will be a Show lecturer, so Paul will look into getting us a different speaker for May. He will contact Gerrit L. Verschuur to see if he is available. Paul asked for suggestions for other speakers. Ron Brister suggested Rachel South, to talk about the volunteer program at the C. H. Nash Museum. Her presentation could result in a field trip for July or August.

Junior Programs: Alan Schaeffer said that Carol Lybanon will present the March program, Gem Trees. Kimberly Loveland will present the April program, focusing on the mineral box borrowed from Ohio State University. In May Alan Schaeffer will present a geology experiment program. W. C. McDaniel brought small rock-filled bottles to show to Alan. W. C. suggested they could be used for Junior programs.

Show: W. C. McDaniel reported that everything is on schedule. The next ShowTeam2010 meeting will be on March 22. The Agricenter would like us to change our show dates to the third weekend in April. They offered to give MAGS a 20% discount and freeze our rate for 5 years. W. C. will meet with the Agricenter people to work out this plan and get a formal contract. This needs to be done before this year's Show, so our dealers can be notified of the change of dates.

Library: Ron Brister reported that all memorials are up to date.

Newsletter: W. C. McDaniel asked Mike Baldwin to hold the April newsletter entirely for Show news. Mike said the March newsletter went out today, and the hard copies will be mailed tomorrow. W. C. would like to invite Dr. Connolly to put Chucalissa announcements in the newsletter.

Webmaster: Mike Baldwin said the website will soon be updated.

Historian/Rock Swap: Nannett McDougal-Dykes reported that the first rock swap of the season will be on May 15 at the home of the McNeils, 11:00-3:00. She has spoken with Robert Duncan, who agreed to do a rock swap, and Lou White, who will host a rock swap one Sunday in September. Alan Parks will again host his fish fry in October or November. Our August program will be an indoor rock swap. Nannett is still looking for June or July rock swaps. W. C. McDaniel said it would be good if we could make the rock swaps more interesting. He asked the Board to think of some ideas.

Old Business: Mike Baldwin brought the laptop to the meeting, and Paul Sides took custody of it. The new projector was used, and it worked well.

New Business:

W. C. McDaniel brought us information on the MAGS-Memphis Botanical Gardens partnership. He handed out a document with details. We will be involved with them in three activities. They will again coordinate the Pet Rock activity at the Show, we will help them construct a rock garden, and we will participate in a Fall field trip event at the Botanical Gardens.

We need to purchase some waterproof storage containers to house the MAGS mineral and fossil collection. W. C. McDaniel will price these boxes and see how much money we will have to spend. We need to do this to protect our collection.

The meeting was adjourned at 7:55 P. M.

## March 2010 Membership Meeting Minutes

Carol and Matthew Lybanon

The MAGS Membership Meeting was held at Shady Grove Presbyterian Church on March 12. The meeting was called to order at 7:40 P. M. by 1st Vice-President Mike Wheeler in the absence of President W. C. McDaniel. 53 Members and 9 visitors were present. The visitors are Ellison Ann Loftis-Jones, Brenda Winstead, Joan and Addison McDonough, Amy and Joshua Jolly, Bob Vickers, Dr. Shawn Tommalapalli, and Bill Cowell.

Mike Wheeler reported that the field trip to Missouri was good. The next field trip will be to the Davis Watts farm in Nameless, TN, next weekend. On April 2-4 MAGS will go to Marion, KY, to collect fluorite. There will be a \$25/person charge for digging, but there will be guides to take us through the mine. Neville Mayfield welcomed the visitors.

He also welcomed a new member, Ellison Loftis-Jones, and reported that several visitors joined tonight: Joan and Addison (son) McDonough, and Amy and Phil Jolly and their sons Joshua and Noah.

Carol Lybanon told the audience about the Show's status. Club tickets are available, and people should take post cards to hand out with the tickets. Members will pay \$2 for each club ticket that is redeemed, but it will cost \$3 per ticket for those Members who pay for them after June. There are sign-up sheets for volunteers. People should also sign up to bring side dishes and drinks (Coke products only) to the Friday night dinner for dealers and MAGS volunteers. She also reminded Members about the new sponsorship opportunities for Gems and Friends of the Show. Lincoln Curios will bring 5,000 pounds of Arizona petrified wood to the Show.

The winning display was presented by Beth and David Day.

Paul Sides introduced Dr. Robert Connolly, who presented a program on Current Developments at the C. H. Nash Museum.

The meeting was adjourned at 9:10 P. M.



---

# May Displays

Matthew Lybanon

May's theme will be Druse Quartz, from the recent trip to Missouri or from any other source. April's winning adult display was a grouping of druse, so you see what people like.

A druse quartz display was the April winner even though that was not the theme for April. Of course you can always bring any displays you would like to share. The theme for any month is just a suggestion.

---

## Trips and Programs

- |         |  |
|---------|--|
| May 14  | MAGS Adult Program: Mississippi River Valley and It's Earthquakes–Dr. Roy Van Ardsdale |
| May 14  | MAGS Youth Program: Rocks and Minerals Experiments–Alan Schaeffer                      |
| May 15  | MAGS Rock Swap at the home of Jimmy and Hisami McNeil                                  |
| May 22  | MAGS Field Trip to Blue Springs, Mississippi to collect fossils                        |
| June 11 | MAGS Adult Program: Minerals in Spain–Bill Gilbert                                     |
| June 19 | MAGS Rock Swap at the home of WC and Cornelia McDaniel                                 |
| June 20 | MAGS Field Trip to Frankstown, Mississippi to collect fossil shark's teeth             |

Stay tuned for upcoming programs, rock swaps and field trips.

### **DIRECTIONS TO BLUE SPRING, MS COLLECTING SITE:**

Take Hwy 78 [Lamar Avenue] South to Hwy 9 [Blue Springs Exit].

Turn left onto Hwy 9 North. Cross Hwy 178. Pass Co. Rd. 209 on the left.

The collecting site will be immediately past Co. Rd. 209 on the left.

The collecting site is approximately 1/2 mile from the intersection of Hwy 78/Hwy 9.

Distance from the TN/MS state line to the collecting site is approximately 75 miles [1.25 hours].



As listed on the CERI [Center for Earthquake Research and Information] website, here are the 30 most recent earthquakes in the Central United States.

<b>MAG</b>	<b>DATE</b> y/m/d	<b>LOCAL-TIME</b> h:m:s	<b>LAT</b> deg	<b>LON</b> deg	<b>DEPTH</b> km	<b>LOCATION</b>
1.4	2010/05/13	01:02:30	35.662N	90.346W	10.0	6 km ( 4 mi) NNW of Lepanto, AR
2.5	2010/05/10	05:29:52	35.871N	89.989W	13.2	6 km ( 3 mi) ENE of Dell, AR
1.4	2010/05/05	20:47:03	36.446N	89.539W	8.0	10 km ( 6 mi) NW of Tiptonville, TN
1.5	2010/05/04	04:22:15	36.242N	89.502W	6.7	3 km ( 2 mi) SSW of Ridgely, TN
2.0	2010/05/04	01:49:34	35.901N	89.957W	9.1	4 km ( 3 mi) SW of Blytheville, AR
1.6	2010/04/28	23:59:27	36.276N	89.501W	8.7	2 km ( 1 mi) NW of Ridgely, TN
1.9	2010/04/28	23:44:30	36.275N	89.501W	9.2	2 km ( 1 mi) NW of Ridgely, TN
2.0	2010/04/27	03:42:33	36.498N	89.543W	8.2	10 km ( 6 mi) S of New Madrid, MO
2.0	2010/04/22	08:03:36	36.507N	89.580W	10.1	10 km ( 6 mi) SSW of New Madrid, MO
1.4	2010/04/17	03:52:49	36.240N	89.511W	8.3	3 km ( 2 mi) SW of Ridgely, TN
1.2	2010/04/16	17:32:05	36.539N	89.643W	7.4	12 km ( 7 mi) WSW of New Madrid, MO
1.6	2010/04/16	17:30:38	36.538N	89.644W	8.7	12 km ( 7 mi) WSW of New Madrid, MO
1.1	2010/04/16	05:57:00	36.246N	89.443W	5.6	4 km ( 3 mi) ESE of Ridgely, TN
1.3	2010/04/13	02:45:05	36.244N	89.445W	5.7	4 km ( 3 mi) ESE of Ridgely, TN
1.8	2010/04/09	21:58:34	36.659N	89.539W	4.8	8 km ( 5 mi) N of New Madrid, MO
1.8	2010/04/04	01:15:31	36.425N	89.527W	7.5	7 km ( 4 mi) NW of Tiptonville, TN
1.3	2010/04/03	19:11:24	36.169N	89.386W	5.7	13 km ( 8 mi) WNW of Newbern, TN
1.2	2010/03/27	11:47:54	36.210N	89.462W	7.1	6 km ( 4 mi) SSE of Ridgely, TN
1.1	2010/03/22	12:04:44	36.259N	89.462W	6.4	2 km ( 1 mi) E of Ridgely, TN
2.0	2010/03/19	05:30:22	36.553N	89.782W	12.1	7 km ( 5 mi) SSE of Parma, MO
1.5	2010/03/13	19:15:23	36.600N	89.564W	13.6	4 km ( 2 mi) WNW of New Madrid, MO
1.5	2010/03/12	16:38:38	36.131N	89.418W	9.7	11 km ( 7 mi) NNW of Dyersburg, TN
1.6	2010/03/10	15:19:30	35.879N	90.136W	10.2	3 km ( 2 mi) E of Manila, AR
2.6	2010/03/09	21:50:18	36.123N	89.735W	8.5	11 km ( 7 mi) SW of Caruthersville, MO
1.2	2010/03/09	18:33:47	36.237N	89.431W	7.4	6 km ( 4 mi) ESE of Ridgely, TN
1.3	2010/03/09	18:31:36	36.235N	89.432W	7.7	6 km ( 4 mi) ESE of Ridgely, TN
1.2	2010/03/09	18:28:03	36.237N	89.428W	8.0	6 km ( 4 mi) ESE of Ridgely, TN
1.6	2010/03/05	22:08:19	36.486N	89.534W	8.0	11 km ( 7 mi) S of New Madrid, MO
1.7	2010/03/05	22:06:43	36.486N	89.534W	8.4	11 km ( 7 mi) S of New Madrid, MO
1.7	2010/03/03	01:42:32	36.783N	89.357W	8.3	3 km ( 2 mi) E of East Prairie, MO
3.7	2010/03/02	13:37:35	36.788N	89.357W	8.2	3 km ( 2 mi) ENE of East Prairie, MO
3.1	2009/12/18	05:38:08	36.451N	89.540W	9.0	11 km ( 7 mi) NW of Tiptonville, TN