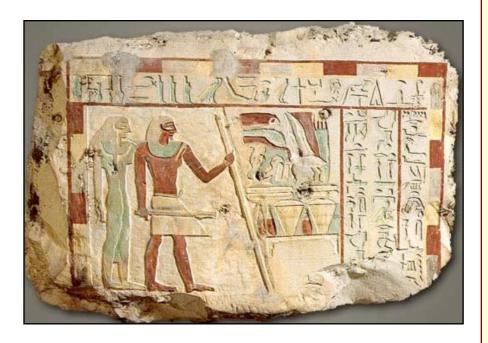
MAGS Rockhound News

Volume 60 ◊ Number 05 ◊ May 2014 ◊ A monthly newsletter for and by the members of MAGS

May Program: Naga-el-Der

Archaeology and analysis of bodies from an ancient cemetery



The May program will be presented by Dr. Pat Podzorski. She is Curator for the ancient Egyptian collection of the Institute of Egyptian Art and Archaeology at the University of Memphis. Dr. Podzorski also teaches graduate and undergraduate courses on an-

cient Egyptian art and language, as well as museum studies.

Dr. Podzorski will provide a fascinating and intimate glimpse into the lives of ancient Egyptians prior to the dawn of their civilization. Careful analy-

sis of the remains of *Continued*, P. 7

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MAY 10 ROCK SWAP

Reminder: The first rock swap of 2014 will be Saturday, May 10, at Jim and Hisami McNeil's home, 9869 Taylor Drive, Olive Branch, Mississippi ((662) 890-4126).

MAGS will provide hamburgers and hot dogs, so please bring a side dish or dessert. The McNeils will have things to swap. You can do the same. There will be a drawing for door prizes. Come and look at their magnificent Japanese garden.

Directions From Memphis

From I-240 turn south on Lamar (Hwy 78, Exit 21 I believe). Take Exit 6 in Olive Branch (15-20 miles, Bethel Road and Hacks Cross). At stop sign

turn left onto Hacks Cross. Go Continued, P. 8

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MAGS AND FEDERATION NOTES

Opportunity For New Members ...

... or old ones. It's more fun to be involved, and there's no better way to get involved in MAGS than to serve on the Board. You'll have a chance to make a difference. There are some vacancies through the end of 2014, and later this year MAGS will elect a new Board for two-year terms. If you are interested contact any Board Member.

MAGS General Membership Meetings and MAGS Youth Meetings are held at 7:30 P. M. on the second Friday of every month, year round. The meetings are held in the Fellowship Hall of Shady Grove Presbyterian Church, 5530 Shady Grove Road, Memphis, TN.

MAGS Website: memphisgeology.org

Please contribute articles or pictures (everybody likes pictures) on any subject of interest to rockhounds. If it interests you it probably interests others. The 15th of the month is the deadline for next month's issue. Send material to lybanon@earthlink.net.

May DMC Field Trip

WHERE: Steven C. Minkin Paleozoic Footprint Site (Union Chapel Mine), Walker County, Alabama.

WHEN: Saturday, May 17, 9:00 A. M.

COLLECTING: Pennsylvanian fossils, e.g. lepidodendron and calamites plus vertebrate and invertebrate tracks.

INFORMATION: Charles Carter, GMS Field Trip Chair, (770) 998-7949 or (770) 891-594, fieldtrips@gamineral.org.

The combined American Federation/Rocky Mountain Federation Show & Convention will be in Tulsa, Oklahoma, from July 9 to 13, 2014. The actual show is from July 11 to 13 with various meetings beginning on July 9. For more information, contact Finis Riggs at (918) 587-4400 or Lriggs1331@cox.net, or Ben Thomas at (918) 486-3788 or BThomas630@cox.net

Links to Federation News

- → AFMS: www.amfed.org/afms_news.htm
- → SFMS: www.amfed.org/sfms/
- → DMC: www.amfed.org/sfms/ dmc/dmc.htm

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Food For Thought About Geotagging

Nancy Roberts

Editor's Note: This article first appeared in the April 2014 issue of <u>The Nugget</u>, the newsletter of the North Mississippi Gem and Mineral Society. It is reprinted here with permission.

The key point of Nancy's article can be summarized in four words: Don't be a victim. It's worth the effort to take the precautions the article recommends.

I'll be the first to admit, that when it comes to electronic gadgets, I leave that area to Jim. So, the term "geotagging" was new to me, when I first heard about it last weekend. Modern technology can be a wonderful thing when you need it, like in an emergency when rescue teams need to know exactly where you are, but if you're not careful, it can do more than you may want it to. I always thought that it was so marvelous that my phone or tablet automatically changed to the proper time zone when I traveled, or gave the weather stats for whatever location I happened to be in at that moment. So, "how do it know?"

Well, even I have heard of GPS or global satellite positioning and it appears that all of the latest smart phones and tablets come equipped with this capability. Digital cameras, unless very expensive and specialized, usually do not have this feature. However, people are, more often than not these days, taking pictures with the cameras built into their phones. So, that brings us back to geotagging. This is when the internal GPS feature on a smart phone, tablet, or other similar de-

vice has been activated and allowed to imprint the coordinates of the location at which the photo was taken.

Here's some information that I gleaned from Wikipedia: "In order to capture GPS data at the time the photograph is captured, the user must have a camera with built in GPS. Most smart phones already use a GPS chip along with built-in cameras to allow users to automatically geotag photos. Others may have the GPS chip and camera but do not have internal software needed to embed the GPS information within the picture. With photos stored in JPEG file format, the geotag information is typically embedded in the metadata (stored in Exchangeable image file format [EXIF] or Extensible Metadata Platform [XMP] format). These data are not visible in the picture itself but are read and written by special programs and most digital cameras and modern scanners. Latitude and longitude are stored in units of degrees with decimals and this geotag information can be read by many programs, such as the crossplatform open source ExifTool."

So what does all of this mean? It means that you could be telling people a lot more than just what you meant to, when you posted a picture online. Data attached to your photos allows someone to determine, with great accuracy, the whereabouts of your home, your place of work or school, and where you have been. Being unaware of this feature on your smartphone and posting personal photos online poses the potential for security risks. These dangers

can be avoided by removing geotags with a metadata removal tool for photos before publishing them on the Internet, or better yet, turning off the geotagging feature on your smartphone altogether! Thankfully, turning off your smartphone's geotagging feature is fairly simple. You should be able to go into your settings and then into location services, which may be under "general". If you turn all location services off, then that will turn off your maps too, so you can just go down to "camera" and turn that off. Then, all future photos taken will not have the geotag data on them. Because each smartphone is different however, check out your phone's manufacturer's website to get exact instructions on how to do this. So, be informed, be safe and as always, use discretion whenever posting anything onto a social media site on the Internet. For more information on the topic:

en.wikipedia.org/wiki/Geotagging www.icanstalku.com/how.php www.thoughtshots.com/2010/07/ how-to-turn-off-geotagging-on-yo ur-photos/

voices.yahoo.com/how-disable-g eotagging-iphone-android-phone -7656690.html

Commercialization of Fossils—Benefit or Threat

A recent post on the Dallas Paleontological Society's Facebook page called attention to two articles in *Palaeontologia Electronica* that discuss both sides of the question: do com-

Continued, P. 4

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Commercialization of Fossils mercial Continued from P. 3 fossil sales

benefit or threaten paleontology? Here are links to the two articles:

palaeo-electronica.org/content/2 014/691-great-threat-in-21st-cent ury

<u>palaeo-electronica.org/content/2</u> <u>014/739-commentary-benefits-of</u> -fossil-sales



Nannett McDougal-Dykes represented MAGS on Dino Day, April 5, at the DeSoto County Museum in Hernando. She handed out flyers and gave details about the club.

Upcoming Shows

The 2014 Memphis Mineral, Fossil, and Jewelry Show is now history. But there are other SFMS club shows to attend:

May 3 and 4: Lowcountry Gem and Mineral Society's annual Gem, Mineral & Fossil Show & Sale, 10 A. M. to 5 P. M. both days. The show is connected with the North Charleston Arts Festival at the Charleston Area Convention Center, North Charleston, SC. For more information contact Mark Easterbrook at MEasterbrook@versar.com.

May 9-11: Georgia Mineral Society's 46th Annual Mother's Day Weekend Gem & Mineral Show, Cobb County Civic Center, Marietta, GA. For more information contact Shelley Stubbs at mayshow@gamineral.org.

March Board Minutes

Carol Lybanon

The MAGS Board of Directors met March 6 at St. Francis Hospital, 5959 Park Avenue. The meeting was called to order at 6:40 P. M. Present were: Mike Baldwin, Ron Brister, James Butchko, Bonnie Cooper, Bill Gilbert, Charles Hill, Carol Lybanon, Matthew Lybanon, Neville Mayfield, Nannett McDougal-Dykes, Paul Sides, Bob Cooper, and Marc Mueller.

Secretary: The minutes were accepted as presented.

Treasurer: The Treasurer's Report was accepted, subject to audit. W. C. McDaniel will try to take care of the IRS problem.

Membership: Neville sent out the new roster. In the next few days he will send out the 2014 roster, with all who have not paid their 2014 dues removed.

Field Trips: Charles reported on the DMC Sugar Creek trip, which will be on March 29. The Board approved a motion that the Field Trip Director can buy drinks and snacks for the DMC trip, up to \$250. Jim reported that on March 15 there will be a grab bag packing party at Cooper Moving, at 9 am. Jim will set out a signup sheet at the Membership Meeting. Bob and Bonnie will bring tables, and banana boxes to store the filled grab bags. W. C. sent a message to notify us that we will need hard hats and steel toe shoes for the April Crider Quarry trip. He may have to change the date of the June concrete day.

Adult Programs: Robert Connolly will be our speaker at the March

meeting. The Chucalissa archaeology group will meet March 15 at 10 am.

Junior Programs: Jim will conduct an Egyptology program. He plans to make mummies. The April program will be on the Show.

Show: Jim said the Show is coming along fine. Everything is in order. Matthew alerted us to the possibility of a cash flow problem in June.

Library: Ron is in the process of purchasing new books. He encourages us all to look at the library's holdings. He is also purchasing books to replace those that have been lost from the library's inventory.

Newsletter: Matthew says send articles and pictures. He again asked for the committee chairs to send information for several months in advance.

Webmaster: Mike said the newsletter is posted on the web, and the snail mail newsletters have been printed.

Historian/Rock Swap: The first rock swap of 2014 is scheduled for May 10, 11:00-2:30, at the home of the McNeils.

Old Business:

- Non needs help with programs. Paul will contact Idajean and see if she is interested. If not he will look for someone else.
- The Board approved Amber Dunn to take over as Assistant Program Director.
- Nannett talked about a program that she is giving for Shelby Farm, on April 10, and asked for help. Shelby Farm asked for someone else to talk on rocks and minerals on May 6; she is unable to give a presentation on that date.

New Business:

Mike reported that he will give a talk at Bailey Station Elementary School. He also reported on the science fair. Three judges are needed. Matthew, Mike, and Nannett volunteered. Judging will be April 15, 8:00-4:00, at the Continued, P. 5

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March Board Minutes Great Hall.

Continued from P. 4 The Board approved three monetary prizes from MAGS: \$100, \$50, and \$25. We may be able to set up a table at the science fair to distribute information about MAGS and the Show.

- Neville informed the club that he can get 10-cent color laser printer copies.
- Bill reported that he is a South Central Region newsletter judge, and asked if we had sent in any entries.
 Matthew said yes, both a newsletter issue and several articles.
- W. C. sent in one Standing Rules proposal and two additional Standing Rules ideas. In the discussion it was pointed out that the first additional idea is already covered in the Bylaws (Article V, Section XVI, g). The other two items were tabled. Meeting adjourned at 8:15 P. M.

March Meeting Minutes

Carol Lybanon

The MAGS Membership Meeting was held at Shady Grove Presbyterian Church on March 14. The meeting was called to order at 7:40 P. M. BUSINESS: Paul Sides took a moment to remember Life Member Carlene Bell, who passed away recently. She was a MAGS Member for 31 years. Several people spoke about their memories of Carlene. W. C. McDaniel reminded everybody that the grab bag packing party will be tomorrow starting at 9:00 am, at Cooper Moving. On March 29 MAGS will host the DMC Field Trip, to Sugar Creek. April 4 is the start of the Missouri field trip weekend. You will need to bring hard hats, steel toed shoes, and safety glasses. There are signup sheets and trip information

about all of these trips on the table. Carol Lybanon spoke about volunteering for the Show, and the Friday night dinner. Matthew Lybanon talked about how to be a Show sponsor. Ron Brister told everyone to come look at the new books in the library. He needs an assistant librarian. Nannett McDougal-Dykes spoke about the May 10 rock swap at the McNeils. She also talked about the Shelby Farms events on April 10 and May 6. She will give a program at the Hernando Museum and W. C. will do the May 6 Shelby Farms presentation. Bill Gilbert reported that the rent is paid through April.

PROGRAM: The meeting was adjourned at 8:00 pm and the program was turned over to Ron Brister, in place of Robert Connolly who is ill. Ron talked about "What is Archaeology?".

Upcoming Field Trips

Dates	Location	Trip status
May 24/25	Hot Springs	working plans
Memorial Day	Quartz Crystal	 Saturday, May 24, Miller Mountain Mine (Jim Coleman) Sunday May 25, Ron Coleman Mine
		note- several good reports from Miller Mountain over the past couple of months
May 31	Vulcan Quarry, Black Rock, Arkansas	
June 21	Aggregate to Yardifacts Making objects from concrete	trip bulletin to be published start saving containers
July 12	A/C Appreciation Day-Part I Discovery Park, Union City, TN	trip bulletin to be published
August-9	A/C Appreciation Day-Part II Belz Museum, Memphis	trip bulletin to be published

See next page for a preview of Black Rock.

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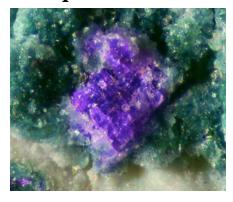
Black Rock

On the road to dolomite and calcite May 31, 2014

Most of these photos are from the last MAGS field trip to Black Rock, about 4 years ago.



Unique New Mineral



A recent article in *Mineralogical Magazine* reports the discovery of a new mineral, found in Australia, with a very unusual composition

The mineral, named putnisite (after mineralogists Andrew and Christine Putnis), was discovered during prospecting for a mine at Lake Cowan in southwestern Australia. Putnisite appears purple and translucent, and contains strontium, calcium, chromium,

sulfur, carbon, oxygen, and hydrogen—a very unusual combination.

While dozens of new minerals are discovered each year, it is rare to find one that is unrelated to already-known substances. "... putnisite is completely unique and unrelated to anything," said Peter Elliott, a study co-author.

Ref: P. Elliott et al, doi: 10.1180/minmag.2014.078.1.10 v. 78 no. 1 p. 131-144.

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MAGS Science Fair Awards



Nannett presenting the 1st Place award to Diana Burns. Ariel Thompson, 3rd Place winner, is standing next to Ms. Burns.



Nannett and members of the Science Council and S. T. E. M.

MAGS gave the best awards at the 2014 Shelby County Schools Elementary Science/Engineering Fair: checks. The fair, sponsored by the Shelby County Schools Science, Technology, Engineering, Mathematics (S. T. E. M.) Program, featured the best projects from each school. On April 15, instead of rushing to finish their tax returns, MAGS judges Mike Baldwin, Matthew Lybanon, and Nannett McDougal-Dykes went through the science projects on display at the Great Hall in Germantown, looking for the best Earth Science-related projects.

The winners of Roger Van Cleef Earth Science Awards: 1st Place (\$100)—"Clean Energy" (solar energy plant model), Diana Burns's 4th grade class, Riverwood Elementary. 2nd Place (\$50)—"Good Old Rock & Roll" (erosion), Jean Sells's 2nd grade class, Riverwood Elementary. 3rd Place (\$25)—"Wind Energy" (design of an efficient windmill to run a generator), Ariel Thompson, 2nd grade, Germanshire Elementary.

Nannett returned that evening to make the presentations. The pictures show some of the ceremony.

Naga-el-Der Predynastic

Continued from P. 1 Egyptians from the cemetery of Naga-el-Der, near ancient Abydos, has produced a wealth of information about this ancient population and its various pathological conditions including disease, trauma, and genetic variation.

Jewelry Bench Tips by Brad Smith

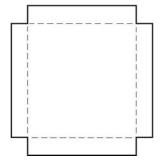
REVOLVING SOLDER PAD

Often when we're soldering we have multiple pieces on the pad or a single piece and would like to work on several sides of it during the same heat.



One way to deal with this is to put your solder pad onto a turntable. That way you can rotate each piece into position when you need to, or rotate the pad to reach another side of a larger piece.

All you need to make one of these is a piece of aluminum sheet and an inexpensive turntable assembly. A good hardware store will have both, or you can usually find the aluminum in the scrap pile of a local sheet metal shop.



In building a turntable for my 6 inch solder pad, I used a seven inch square piece of aluminum and cut out 1/2 inch notches from each corner. Then I used *Continued, P. 8*

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Jewelry Bench Tips a bench vise to Continued from P. 7 bend the sides along the dot-

ted lines to form a tray that cradles the solder pad. I attached the tray to the turntable assembly with a couple small machine screws and nuts.

QUENCHING

Some jewelers drop the hot piece from soldering directly into the pickle. Do you hear that little hiss? The hot

May 10 Rock Swap about 0.4 mile

Continued from P. 1 to stop light

(the cross road have

is MS-178). Turn left on 178 and go about 0.6 mile. Turn left on Dorothy (you should see a brick development sign saying Lees Crossing, Fairfield Estates), go about 0.1 mile. Turn right on Loftin and go about 0.3 mile. Turn left onto Taylor Drive and go about 0.1 mile (second driveway on left).

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



piece sends small droplets of acid into the air. This can rust nearby tools and can't be all that good to breathe either. To avoid this I quench in water. A coffee cup of water at the solder station lets me cool a soldered piece before dumping it into the pickle. It's also useful for annealing metals and for cooling off tweezers.

Get all 101 of Brad's bench tips in "Bench Tips for Jewelry Making" on <u>Amazon</u>.

Extinct Animal Skin Color

For the first time, scientists have recovered original skin pigments from three ancient marine reptile fossils, lending new insight into the adaptive coloration and lifestyle of these extinct animals. An international team of researchers report using the fossilized skin of three distantly related, multimillion-year-old marine reptiles to determine their skin color.

The research, published in *Nature*, demonstrates that the fossilized skin samples all contained highly concentrated levels of molecularly preserved eumelanin—a dark pigment that suggests the sea animals' skin was very dark or even black. The reptiles' shared dark pigmentation may have evolved to meet common needs such as thermoregulation, camouflage, and even UV protection.

The rare fossils—a 55-Myr-old leatherback turtle, an 86-Myr-old Mosasaur, and a 196-190-Myr-old ichthyosaur—provide a key insight into ancient anatomy and evolutionary patterns of secondary aquatic animals that once existed on land, but reentered the sea mil-

Hospitality Hosts

Still needed for May, July, and September. If you can help call Carol at (901) 757-2144, or email sgcarol@earthlink.net.



lions of years ago. One author says part of his teams' work was inspired by paleontologist Mary Schweitzer's discovery of soft tissue from a 68 million-year-old Tyrannosaurus rex fossil specimen.

For their analysis, researchers at SP Technical Research Institute of Sweden and MAX IV Laboratory, Lund University, Sweden, used Scanning Electron Microscopy (SEM) and Energy-dispersive X-ray spectroscopy (EDX) to determine what structures to sample.

Then, using a high-resolution technique called Time-of-Flight Secondary Ion Mass Spectrometry (ToF-SIMS), the team examined the topmost layers of their samples by bombarding their surfaces with primary ions, ejecting secondary ions of the elements present.

The analysis datasets from these elements ultimately revealed that those specific sample regions closely matched a spectrum obtained from natural eumelanin.

Ref: Lindgren J, et al. Skin pigmentation provides evidence of convergent melanism in extinct marine reptiles. Nature. 2014 Jan 8.

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Getting Ready For The Show



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2014 Show Sponsors



Another successful Show! And some of the credit goes to the sponsors who helped us pay for putting it on. Of course we appreciate our major sponsors:

- **★** Memphis Stone & Gravel Co.
- ★ Cooper Moving
- **★** Enviro-Tek

Just as important are the MAGS Members who dipped into their wallets (or checkbooks) to help us continue to make this the

best show of its kind in the area:

- **★** Billie Jane Brandon
- **★** Sherry Bright
- ★ David & Beth Day (Another Day Studio)
- * Amber Dunn
- **★** James Johnson
- **★** Thomas & Susan Jones
- **★** Ray & Marilyn Lovelady
- **★** Carol Lybanon
- **★** Matthew Lybanon
- **★** Cornelia McDaniel
- **★** Mike & Kathy Nagel
- **★** Danielle Schaeffer
- **★** Karen Schaeffer
- **★** Lauren Schaeffer
- ★ (Ms.) Jerry Seamans

Calendar

May 1, 2014

Board Meeting, St. Francis Hospital, 6:30 P. M.

May 9, 2014

Membership Meeting, Shady Grove Presbyterian Church, 7:30 P. M.

May 17, 2014

DMC Field Trip, Steven C. Minkin Paleozoic Footprint Site

May 24 & 25, 2014

MAGS Field Trip, Hot Springs, AR

May 31, 2014

MAGS Field Trip, Vulcan Quarry, Black Rock, AR

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