MAGE BERCKHOUND KEWE

Volume 70 ◊ Number 10 ◊ October 2024 ◊ A monthly newsletter for and by the members of MAGS

October Program

Rocks and ancient humans of the Atacama Desert, Chile
Dr. Ryan M. Parish University of Memphis and MAGS Member

Whew! I really should have listened to César and Luca's advice. Despite the little white pills, coca leaves, daily exercise, and rucking all over the Midsouth, I was worn out at 16,000 ft asl. The Atacama Desert Altiplano altitude was taking its toll and my friends were little specks against the rust colored landscape. Now I understood why they were not taking a beeline approach to the extinct volcanic crater I had just reached traversing over a few ridgelines. Sometimes taking the long slow way is best.

It was Day 3 of our weeklong field work session in the Parinacota Region, Chile, and we were looking for outcrops of rock that people used for tool stone. Evidence for human occupation of the region dates from when glaciers extended down from the Andes 10,000 years ago until Inca trading caravans crisscrossed the

desert to the Bolivian highlands. The land was a beautiful mosaic of red, yellow, and white volcanic deposits that provided a backdrop to the salt lakes, blue sky, and snow-capped distant peaks. My archaeology friends and I had used satellite imagery to identify areas in the region where rocks with high silica content covered the surface. We drove a 4x4 pickup truck over old mining routes and used handheld GPS units to record our hiking tracks in each area of interest.

Despite all the tech, there's no substitute for boots and eyes on the ground so each day found us hiking multiple kilometers. There was no shortage of rocks but so far, we had only collected from splays of dark basalt and white chunks of welded tuff. From the arrowheads, dartpoints, and knives we fournd, prehistoric people were definitely using the basalt and tuff for tools but the

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GROUPME

MAGS could benefit from an app called GroupMe. It's a free application that lets members of a closed group communicate easily. This could be a great way for likeminded rock hunters to arrange meetups, either last minute or in advance. Alerts can be turned on or off to suit your needs.

It's easy to use. Simply log in to a free

DEBBIE CRAWFORD MCCOWN

account and join the group. Anyone in the private group can make posts, ask questions, schedule events, post videos etc. ...

Here's a link to the GroupMe website:

https://groupme.com/

Check it out and see what you think.



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Memphis Archaeological and Geological Society, Memphis, Tennessee

The objectives of this society shall be as set out in the Charter of Incorporation issued by the State of Tennessee on September 29, 1958, as follows: for the purpose of promoting an active interest in the geological finds and data by scientific methods; to offer possible assistance to any archaeologist or geologist in the general area covered by the work and purposes of this society; to discourage commercialization of archaeology and work to its elimination and to assist in the younger members of the society; to publicize and create further public interest in the archaeological and geological field in the general area of the Mid-South and conduct means of displaying, publishing and conducting public forums for scientific and educational purposes.

MAGS Membership Meetings are at 7:00 P. M. on the second Friday of each month May-October, and 10:00 A.M. on Saturday after the second Friday November-April. The meetings are held in the Fellowship Hall of Shady Grove Presbyterian Church, 5530 Shady Grove Road, Memphis, Tennessee.

MAGS Website: memphisgeology.com

MAGS Show Website: https://earthwideopen.wixsite.com/

rocks



Memphis Archaeological And Geological Society Page is where you will see accurate information about MAGS events and about the Memphis Mineral, Fossil, Jewelry Show.

Please contribute articles or pictures on any subject of interest to rockhounds. The 20th of the month is the deadline for next month's issue. Send material to mlybanon@yahoo.com.

Go to https://www.southeastfed.org/sfms-field-trips/dmc-field-trip-program for the DMC field trip schedule and other information.

Links to Federation News

- AFMS: www.amfed.org/afms news.htm
- → SFMS: https://www.southeastfed.org/

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sedimentary October Program flint/chert Continued from P. 1 sources had eluded us. However, the days spent living in the Atacama Desert had given me a much better perspective on the resources available to people. The melting permafrost and upland ice to this day provides small streamlets of water creating wetlands (bofadales) which in turn support a wide range of animals. Suris (rhea/emu), viscachas (rabbit/ chinchilla), vicunas (small llama), alpacas, fox, pumas, and flamingoes were all a pretty common sight to see each day, with the exception of the puma. Vegetation included puna grassland, llareta (large woody round green moss clumps), chandelier cactus, and tamarugo trees (like mesquite).



Figure I. Atacama Desert, Chile

title of "driest place on Earth", the Atacama Desert amazingly contains a diverse amount of life.

Each night we bounced over the washed out 'roads' back to the small Andean village of Parcohaylla where we enjoyed a home cooked meal of soup, salad, and bread prepared over a cast iron wood fired stove that would have

fit right into a scene from Little House on the Prairie. The whining of the diesel generator from 7 to 10 P.M. supplied us with electricity and rocked us to sleep under quilts and sleeping bags that kept us warm in the 32-degree nights. The clear night air and absence of light pollution al-Continued, P. 4 lowed for a spec-



Therefore, despite the region's

source of small streamlets which fadale. created wetlands (bofadales).



Figure 2. Permafrost melting. A Figure 3. Vicunas grazing on a bo-



Figure 4. Rhyolite boulder with my trusted Chilean rock hammer.



Figure 5. Chert used by prehistoric hunters to make stone tools.



Figure 6. Green chert outcrop.



Figure 7. Arrowhead, one of many found during the survey.

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October Program tacular view of Continued from P. 3 stellar constellations foreign to my northern hemisphere eyes.

The next day was paydirt for those of us who enjoy finding high quality tool stone. We investigated one of the only areas containing sedimentary rock, a small island of carbonate in a sea of igneous. We collected and mapped an array of red and yellow jaspers, brown, black and white chalcedonies, purple fine-grained rhyolite, and green cherts. By lunch we were burdened under 50 lbs of rock, out of water, miles from the truck and smiling from ear to ear. The rolling hills of folded sedimentary rock exposed blocks and nodules of silica rich stone wherever erosion had eaten away the parent rock along the slopes and high spots. A cornucopia of tool stone and oasis

for a vicuna hunting party needing to replenish their tools.

We came back to the sedimentary island the last day of the trip and were able to collect and identify more deposits which will provide us with a good sample of material that may have been the sources exploited by prehistoric hunter-gatherers. The samples collected on the trip will hopefully match some of the nearly 2,000 artifacts from excavated archaeological sites located at the bofadales. Luca, César, and I can use the source information from the artifacts to understand how people moved around the landscape and organized their stone technology. The rocks were beautiful in their own right but what they can tell us about people who visited and lived in the region thousands of years ago is just as appealing to me and

all of us who share an interest in the human experience.

Book Review

Nannett McDougal-Dykes, Librarian

A First Look at Dinosaurs

By Millicent E. Selsam

This book was part of the Weekly Reader Book program and has amazing illustrations. From an author who has written 168 books, it is well laid out and processed. The drawing and content work well together and give you an idea of how amazing the dinosaurs the book describes really were. There are some unexpected illustrations that show bone size, to plates, spikes, horned and bird-footed Dinosaurs. This book is a great introduction to dinosaur differences. Look for it in the MAGS Library.

Labor Day Hike To Nonconnah (Lakeview)

Bill McManus

We had a very good turnout on our recent outing, I believe close to 20 people attending. I saw some nice finds while there and have pictures from four people/groups. I even got to try out my new sieve! I wasn't provided captions so forgive my (perhaps erroneous) attempts to identify.

W.C. McDaniel sent the two pictures (right) that show what the gravel bar looked like.

Debbie McCown sent the following. Picture 1 is a group of mostly fossils though there are some intriguing unidentified



items, several of which are blown up in pictures 4-6. On a personal note, can anyone help us identify the round fossil (near center right) with striations surrounding a center depression? (Pictures continue on P. 5.) Picture 2 is a nice collection of agates. Picture 3 is a blowup of an item from Pic 1, and appears to be a Gastropod. All-in-all I hope she's pleased, as this is better than I've done on any particular outing.

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Labor Day Hike ... Continued from P. 4



Gloria Klauser sent in three pictures: The first is a Peppervine, with berries (toxic to humans). This was found on the trail between the parking lot and the site. The second is her collection of rocks, maybe coral and an agate or three? Taking the picture while the rocks were wet was a nice touch. The third is a Partridge Pea (not for human or animal consumption according to the app).

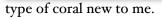


Lastly are the finds Laura and I made. Some sea glass, crinoids, and a heart-shape near the top. At bottom of note are 2 pieces of petrified wood, a small geode, and a









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Labor Day Hike ... Continued from P. 5



Exploring The Moon
Matthew Lybanon, Editor



A scene from Artemis II field geology training in Iceland.

Black and gray sediment stretches as far as the eye can see. Boulders sit on top of ground devoid of vegetation. The rocks are basalts and breccias.

The moon? Could be. But this is a description of Iceland.

A year from now NASA's Artemis program will send a manned mission to the moon. The crew will travel to the moon, swing around it, and slingshot back to Earth. This mission is the second phase of NASA's broader

Artemis program: the first sent the Orion space capsule along this path uncrewed in 2022. The goal of Artemis II will be to test out the Orion capsule and all the other equipment, so that by 2026, Artemis III can put astronauts back on the moon.

"The goal is not just to go back to the moon," NASA Administrator Bill Nelson told National Public Radio in May. "The goal is to go to the moon to learn so we can go farther to Mars and beyond. Now it so happens that we're going to go to a different part of the moon. We'll go into the South Pole, and that is attractive because we know there's ice there in the crevices of the rocks in the constant shadow or darkness. And if in fact there is water, then we [can create hydrogen] rocket fuel."

Iceland has served as a lunar stand-in for training NASA astronauts since the days of the Apollo missions, and this summer the Artemis II crew took its place in that history. NASA astronauts, along with their backups, joined geology experts for field training in Iceland.

"Apollo astronauts said Iceland was one of the most lunar-like training locations that they went to in their training," said Cindy Evans, Artemis geology training lead at NASA's Johnson Space Center in Houston. "It has lunar-like planetary processes—in this case, volcanism. It has the land-scape; it looks like the Moon. And it has the scale of features astronauts will both be observing and exploring on the Moon."

Iceland's geology, like the moon's, includes basalts and brec-

cias. Basalts are dark, fine-grained, iron-rich rocks that form when volcanic magma cools and crystalizes quickly. In Iceland, basalt lavas form from volcanoes and deep fissures. On the moon, basalts can form from both volcanoes and lava pooling in impact basins. Breccias are angular fragments of rock that are fused together to create new rocks. In Iceland, volcanic breccias are formed from explosive volcanic eruptions and on the moon, impact breccias are formed from meteoroids impacting the lunar surface.

Iceland's geology is driven by the fact that it sits on the boundary between two tectonic plates: the North American and Eurasian plates. It is the only place where the Mid-Atlantic Ridge is exposed on land. The two plates are separating. The North American plate is moving west and the Eurasian plate is moving east, each at about 9.1 mm/year. This leads to the volcanic activity that produces the geology that NASA astronauts are learning about in preparation for their next step into space.



MAGS Members on basalt columns at a black sand beach in Iceland.

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Fabulous Tennessee Fossils

Dr. Michael A. Gibson, University of Tennessee at Martin

FTF 115

Halloween Edition—The Evil Dead Sandstone

It's that time again—Halloween! My favorite time of year and my favorite holiday! What does Halloween have to do with Tennessee geology? Well, I have a "did you know" essay for this question and this month. First, I must confess, I am a "monster kid". Yes, that is a real thing (Google it). I means that I am part of the Baby Boomer generation that grew-up during that time period when Forrest J. Ackerman's magazine Famous Monsters of Filmland was every kid's go-to for anything involving monsters, comic books were our most common reading material, we lived to watch Shock Theater movies on television, and we spent many hours sniffing Testor's glue as we assembled the Universal Monsters models from Aurora. I never grew out of that stuff and, in my retirement, I am proudly reliving my youth! For most of teaching career, my geology Power-Points were loaded with references to pop horror culture (e.g., Dracula actor Bela Lugosi would routinely ride with his father through the countryside and his father would give him geology and history lessons along the rides, part of one of the Kong movies was filmed at Fall Creek Falls State Park, etc.).

For years I ended my introductory geology course lesson on sedimentary rocks with a slide that showed a cabin in a remote section of woods a few miles out-



Figure 1. Photo of the Evil Dead cabin site as it appeared in 2009. My Evil Dead sandstone is one of the chimney blocks collected by high school student Eric Seavers (Photo by Seavers).

side of Morristown, Tennessee (Figure 1), some miles east of Cherokee Lake and not far from Panther Creek State Park. The slide had a chain-saw wielding actor Bruce "Ash" Campbell being tormented by demons. I had learned that this cabin had been used in the horror movie trilogy of Evil Dead movies not long after moving to Tennessee in 1984. The original trilogy was Evil Dead (1981, but filmed in 1979), Evil Dead II (1987), and Army of Darkness (1992). According to Bruce Campbell in his autobiography If Chins Could Kill: Confessions of a B Movie Actor, who incidentally is Dr. Lionel Crews' (UT Martin astronomer) favorite actor and who loaned me his copy of the book as a "must read", the original movie was not only filmed near Morristown but used Campbell's own iconic car in the filming. My favorite of the trilogy is Evil Dead II



(filmed near Wadesboro, North Carolina), which was a horror comedy released while I was in the stressful "blitz" time of finishing up my Ph.D. at UT Knoxville in 1987, and my wife worked in Morristown at this time. The coincidence of movie location was too serendipitous. So, I developed my closing slide on sandstones in sedimentary rocks as a bit of trivia for the students, who I figured were aware of the movie series and would find it interesting that there was a local Tennessee connection.

As if that wasn't enough serendipity, a second dose of serendipity would strike in 2009. For much of my time at UT Martin, I also taught a dual enrollment geology course at the local high school, Westview High School, during their first period before driving to UT Martin for my regular college classes. As this was a college course for advanced high school students, I used my same lectures as I used at UT Martin. I was also a "band parent" as both of my kids were in the band at Westview. During a lunch break at a Saturday band competition in Dyersburg in 2009, one band student, Eric Seavers, who I did not know well and did not have as a geology student, approached me and asked if he could join me and my wife for our lunch break picnic, to which I said yes. An awkward small-talk conversation ensued until he suddenly said, "so you

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Fabulous Tennessee Fossils read Fan-Continued from P. 7 goria and like horror

movies, huh?" I was surprised by this knowledge, which he had learned from my son evidently, but confessed that, I did indeed enjoyed the monsters (actually, I also said that I owned every issue of Fangoria and was an avid collector of all "monster magazines"). Full disclosure, my collection is now into the thousands of magazines and comics. Seavers shared his personal interest in monsters, Fangoria, and said he thought that my interest was "cool", which made me feel like I had made a connection. A few weeks later, Seavers showed-up in my Westview classroom before class began that day with several other band kids saying he had a present for me. He produced a large, slightly rounded, block of weathered sandstone. It was not unusual for students to bring me rocks, usually to identify for them; however, this rock was different. Seavers said he brought the rock for me to keep and that he and his buddies had gone on a camping trip to Panther Creek State Park that past weekend, where they tracked down the site of the cabin for Evil Dead, which was by that time in ruins, having suffered a fire and vandalism. Seavers collected a surviving sandstone block (he claimed he had permission from the landowner), which had been used to build the chimney of the cabin, and thought that I would be interested, which of course I was. The property that the cabin remains are on has since changed property owners and is now restricted. Figure 2 is an edge of the sandstone block that I cut



Figure 2. My Evil Dead sandstone paperweight, made from a cut end of a chimney stone (Photo by MAG).

and had mounted as a paperweight—the "Evil Dead Sandstone", as I call it.

According to the "Book of the Dead" website about the Evil Dead movies, the cabin was essentially destroyed during filming by fledgling director (and special effects wizard) Sam Raimi, at that time a young unknown in movies; however, the same site contains other information about the history of the cabin's history. One reason the site was used is that there was lore that the cabin was "hand built" in the early 1900s by Emmett Talbot, presumably using local materials, but, according to the website, it was really built in 1960 as a hunting cabin. Regardless, the materials were presumably mostly local, including the sandstone used to construct the chimney, although I have no real evidence for this. Figure 2 is the paperweight that I made by cutting that rock that Seavers gave me. The sandstone is a typical quartz-cemented, quartz sandstone, fine to medium grained with a slight light red-orange tint. There are no sedimentary structures (e.g., cross-laminations or graded bedding). No fossils. Very non-descript. As a geologist, I

have always wanted to see if I could determine the most likely geologic formation from which the sandstone would have been derived. What follows is my supposition without any real provenance evidence, as of yet. I am hypothesizing.

Morristown, and the Evil Dead cabin, are within the Valley and Ridge Province of East Tennessee. Thrust faulting has uplifted a repeating series of Paleozoic formations in an imbricated fashion in which each ridge consists of the more resistant rocks (chert, sandstone, and some limestones) and adjacent valleys are underlain by less resistant rocks (usually shale or weak limestone). The most prevalent geologic formations in the region include: the Chattanooga shale (Devonian); Hancock limestone, Rockwood formation, Clinch sandstone (Silurian); Bays sandstone, Sevier shale, Athens shale, Moccasin limestone, Chickamauga limestone, Holston marble, Knox dolomite (Ordovician); and the Cambrian-age Knox dolomite, Nolichucky shale, Maryville limestone, Rogersville shale, Rutledge limestone, and Rome formation, among others. Some nearby ridgetops to the west contain Carboniferous-age Pennington shale, Grainger shale and sandstone, and Newman limestone. Assuming that the material was obtained locally and not transported in (again, I don't know this, but it is a reasonable supposition), then the nearest sandstone source to the cabin location would be the Ordovician Bays Sandstone, exposed to the east of Morristown on Bays Mountain, which is a prom-Continued, P. 8

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Fabulous Tennessee Fossils inent ridge Continued from P. 8 in the area traceable

almost to Virginia. The Bays Sandstone predominantly is a redweathering, usually calcareous and argillaceous sandstone, so it isn't an exact match, but not all of the Bays Sandstone is calcareous or argillaceous. I compared my Evil Dead sandstone sample with my single Bays sandstone sample in my Geology of Tennessee course rock collection, and it is indeed similar. The Mississippian-age Grainger Formation also has sandstone in it and the Grainger crops out just north of the cabin area near Short Mountain ridge, so it remains another possibility for a local source. A third possibility is that the Evil Dead sandstone was transported into the area from further away. As the Cumberland Plateau is not too many miles to the west (perhaps 100 miles or so), and many of the closer ridges that top Tennessee's northeastern Valley and Ridge region are capped by Carboniferous sandstones, there remains a distinct likelihood that the Evil Dead sandstone was typical Carboniferous-age sandstone dimension stone quarried in the Cumberland Plateau region to the west (and there are many sandstone units there), and sold for construction material in the Morristown region. Not strictly local, but still a Tennessee source, so I am happy and am sticking to my Evil Dead sandstone story, for now —I am still holding onto the notion that the sandstone source was local. I have not visited the site personally for my own mapping, but it is my hope to do so during my retirement. I plan on talking to

the family of the original landowner for more information. Fall is a good time of year to visit the area, perhaps Halloween, and perhaps I will camp in the spooky woods. A monster kid's dream come true. Enjoy your Halloween!



Adult Programs

October 11: Dr. Ryan Parish, "Rocks and ancient humans of the Atacama Desert, Chile"

November 9: W.C. McDaniel, "MAGS Theobald Collection undergoes a workout"

December 14: Holiday Party

∏Junior Programs

October 11: TBD

November 9: TBD

December 14: Holiday Party

Field Trips

October12: DMC field trip, Memphis Stone & Gravel Co.

November 2, Arkansas quartz dig, location to be announced

December: No field trip

☐ October Birthdays

- 1 Gail Karr
- 2 Bill McManus
- 5 Matthew Lybanon
- 6 Owen Hall

- Alan Jacobs
- 9 Charles Hill
- Mary Katherine Stout
- 13 Wayne Fewell Michael Baldwin
- 14 Kates Parish Patty Herman
- 18 Sarah Hunter Simanson
- 24 Keith Riding Ann Austin

🎵 New Members

Robin and Shane Ownby & children

Jewelry Bench Tips by

Brad Smith

TAPERED REAMERS



A tool you don't see often these days is a tapered reamer. It's not a tool you'll use every day, but they're particularly useful for making an irregular hole round or for enlarging a hole to an exact diameter. For example, the small set in the yellow pouch is for holes in the range of 0.3mm to 2.5mm. They are great for sizing a tube to fit a hinge pin. Other times when I'm drilling a hole for riveting and can't find the exact size drill, I simply drill the holes with a slightly smaller bit and enlarge them with a reamer until the wire just fits.

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Meeting Photos

August











September



Photo Credits: Christine Anderson and Matthew Lybanon

Jewelry Bench Tips For larger hole Continued from P. 9 sizes in sheet metal up to 14

ga, I really like the reamer with the black handle. It makes quick work of sizing holes from about 3mm to 12mm. You can find them in well-equipped hardware stores.

You may never use the large diameter reamers, but when sawing out a ring from 4mm thick sheet, I found they worked well for rounding and sizing the hole.

TESTING FOR SILVER

Often you need to identify some of those unknown "silvery"

pieces of metal in the bottom of the toolbox or some piece of old jewelry that is not hallmarked. Is it silver or is it something else?

Of course, if you need to know exactly what you have, it's best to send your metals off for refining. But inexpensive silver testing solutions can be used to help distinguish higher silver content alloys from alloys that have the same appearance but with little to no silver content, like German Silver or Nickel.

I purchased a half-ounce bottle of JSP Silver Testing Solution #GT41. It's not a rigorous analytic test, but it lets you know if you're on the right track. And it's inexpensive. Mine was only \$3.

With a fresh solution you have an instant reaction after applying it to the metal being tested. The procedure is simple—apply a small drop and watch for a color change. Note that the acid will leave a slight mark, so choose a spot that is out of the way or will be easy to polish.

If you suspect the object is silver plated, you should file a little notch somewhere inconspicuous to expose what metal is below the *Continued, P. 11*

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Jewelry Bench Tips surface. Otherwise, all you test Continued from P. 10 will be the surface plating.

Here's the reaction I got when testing various materials (right):

Caution—If you do any of this testing, know that you are handling a reasonably strong acid. The GT41 label says it includes nitric acid and potassium dichromate.

- Wear safety glasses.
- Do not get any testing solution on your skin.
- Use a solution of baking soda and water to neutralize acid.
- Wash and clean up well when you're done.

Fine Silver	Red/Orange
Sterling Silver	Brick red
80% Silver 20% Copper	Dark red changing to gray
Brass	Yellow changing to blue
Nickel	Gray-green
Copper	Yellow changing to blue
Steel	Black
Stainless Steel	No color change

See More of my Smart Solutions for Jewelry Making Series

http://amazon.com/dp/B0BQ8YVLTJ

August Board Minutes Josh Anderson

Zoom meeting called to order 6:30 P.M. Present: W.C. McDaniel, Christine Anderson, Joshua Anderson, Nannett McDougal-Dykes, Bonnie

Secretary: Reviewed July minutes. Board approved.

Cooper, Matthew Lybanon.

Treasurer: Email report. Liability insurance cost nearly double since 2023. Meeting venue—Rent has been same for 10 years. Family Membership—how many members (in house). Member dues were discussed. Rates for other clubs compared. Lifetime membership discussed analyzing costs to cashflow. Report approved.

Membership: I new Member, I renewal.

Website: Club Website—adding Mike Baldwin as Youth Program Coordinator.• Show Website—will update as schedule evolves.

Field Trips: September, Labor Day trip to Nonconnah Creek. October, DMC trip to Memphis Stone and Gravel. November, Crystal dig in Arkansas.

Youth Programs: Mike Baldwin is helping the program restart activities.

Adult Programs: August, Rock swap. September, Kent Moran, CERI. October, Dr. Ryan Parish, U. of Memphis Archaeology. November, Exploring the Theobald Collection, W.C. McDaniel.. 2025 mostly booked.

Library: Six new books from the NOVA series "Teacher at Sea" will be presented over the next six months. Adjourned 7:08 P.M.

The Perfect Candidate

Matthew Lybanon, Editor

The year was 1891. The candidate applying for admission to a Ph.D. program had three bachelor's degrees and a master's degree in geology from the University of Wisconsin. While pursuing a master's, the applicant had been introduced to microscopic petrography, then an emerging field of geological study, where thin slivers of rock are examined under a microscope. Accessing Johns Hopkins' advanced facilities for such research is what drove this person to apply. And, if academic bona fides weren't enough, there were letters of support from multiple professors at Wisconsin as well as from Edward Griffin, a Hopkins dean and professor.

There was just one problem. Her name was Florence Bascom, and she was a woman. Johns Hopkins was the nation's first research university—all largely the work of visionary founding President Daniel Coit Gilman. It was bold, modern, and focused on productive research. But it wasn't coeducational. The doors were shut to half the population.

Spoiler alert: Bascom successfully crashed the boy's club. In 1893, she became the first woman to receive a Ph.D. (or any degree, for that matter) from Johns Hopkins University. It propelled her on to a brilliant geological career: first woman to work for the U.S. Geological Survey, first woman officer with the Geological Society of America, first woman editor of The American Geologist. Bascom founded Bryn Mawr College's Geology Department in 1895 and taught there for more than 30 years, publishing 40-odd papers.

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MAGS At A Glance October 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
29	30	1	2	Zoom Board Meeting, 6:30 P.M.	4	5
6	7	8	9	10	Membership Meeting, 7:00 P.M., "Rocks and ancient humans of the Atacama Desert, Chile"	12 MAGS/DMC Field Trip
13	COLUMBUS 14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

Memphis Archaeological and Geological Society	
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·	