

Join Raynee Randolph
and Sherida Helms
and explore the
world of fossils.



A NEWSLETTER FOR AND BY MAGS YOUTH

My rock trip with Rhena South to see fossils

By Jaden Lingerfelt

I really liked the Giant Sloth fossil. The Giant Sloth lived during the Ice Age. He looked very mean and deadly. The claw I saw was about 5 to 6 inches long and about 4 to 5 inches wide. The fossil claw was found on a gravel bar in the Mississippi River. The sloth fossil was part of many fossils on display as part of the Looper Collection at Delta State University in Cleveland, Mississippi. On the way home we ate lunch at Great River Road State Park in Rosedale, Mississippi.

My joke for Rhena:

- Q.** Why is the rock happy?
A. Because you found it!

MAGS Explorer is published monthly by and for the youth members of the Memphis Archaeological and Geological Society. Please send your comments and articles to Editor Mike Baldwin, 367 N. Main St., Collierville, TN 38017 or rockclub@earthlink.net. Youth can give articles, artwork, poems, puzzles, experiments, or stories to Raynee Randolph or Sherida Helms.

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Karen Schaeffer wins award at the Memphis/Shelby County Science Fair

Removing Iron Oxide from Quartz Crystals

by Mike Baldwin

Congratulations to MAGS youth, Karen Schaeffer, and her classmate, Ofir, who recently won the “Outstanding Achievement in Earth Sciences” award at the 2005 Memphis/Shelby County Elementary Science Fair. Her science fair



project, called “Removing Iron Oxide from Quartz Crystals”, compared different methods for attempting to remove those red, iron stains from quartz crystals. We still have crystals in our backyard with red stains on them..

As “Earth Science” judges at the science fair, WC McDaniel and I were charged with finding the best Earth Science projects. The projects do not have the student’s names on the front, so we didn’t know who won the awards until after selecting the winners and checking the

project numbers to get student information. WC and I were both very pleased to see that one Karen had won the “Outstanding Achievement” award.

Karen’s conclusion for her project stated “our results show that oxalic acid removed iron oxide the best followed by lemon juice. Both of these substances are acidic, meaning they release hydrogen atoms. The hydrogen combines with the oxygen in the iron oxide to form water. The iron binds to the oxalate or the acetate and is separated from the quartz. The iron is deposited on the bottom of the bucket. The reason using a toothbrush to clean the quartz did not work is because the iron oxide is chemically connected to the quartz. Scrubbing with toothpaste and baking soda was not enough to break the chemical bonds.”

Well done, Karen!

Ice Age Fossils: Looper Collection

By Rhena South

FEBRUARY 19, 2005 [from my journal]: My Mom got us up very early to leave to go to Cleveland, Mississippi. We stopped at the Blue & White Café to eat breakfast. My Papa went with us. My Dad had to work so I had room to take a friend, Jaden Lingerfelt. [He has an article on the first page of this newsletter.]

My favorite fossil was the mammoth molar. It was really mammoth-sized. It was big and flat, with black ridges. The reason the molar was so flat was that mammoths ate leaves and grass. The teeth were used to grind their food down.

Mr. Looper found all these fossils on Mississippi River gravel bars. Some of the fossils belonged to bears, white tail deer, sloths, birds, horses and bison. Bison are known today as buffalo. There was a Dire Wolf bone in the collection. A lady told us that this bone had to be sent away to be identified. Some of the fossils were claws, parts of leg bones, ribs and hip joints. My Mom bought a replica sloth claw.

We stopped by the Great River Road State Park for lunch in Rosedale. The Park Ranger told us that people can get down to a large gravel and sand bar in the summer. You could see just part of it from the big windows at the office.

We stopped at a small museum in Friars Point, Mississippi. There was a sign on the highway, but the museum was closed. We met the mayor of Friars Point. His name is Herb Thomas. He told use that we could go inside and look at the old Blacksmith Shop. Mr. Thomas wanted us to could back to see the museum when it is open. Friars Point is a very small river town. I had a lot of fun.

My trip to Jackson, Mississippi

By Rhena South

FEBRUARY 26-27, 2005 [from my journal]: We got up very early and left Memphis at 5:30 in morning. We had a lot of things that we wanted to do in Jackson, MS on Saturday. When we got to Jackson, the first thing we did was go collect some gypsum from the Yazoo clay deposits on Highway 25. The clay was so sticky that it was like glue. We brought some of the clay back to see what it looks like when it was dry. The gypsum was not very pretty, but you could see it sticking out in places in the ground.

We went to the Mississippi Gem & Mineral Show at the fairgrounds. I got to meet Dr. Terry Pandhorst from the University of Mississippi at Oxford. He was very tall and a nice man. I thanked him for sending me some rocks. He told me that he read my article on Biotite. He gave us a big map of Mississippi for my room. The people from Delta State University were there too. I said hi to them. They remembered me.

At the Girl Scout booth, Karen and I picked up the forms to work on our Girl Scout Patch for the Gem show. They have a Girl Scout patch that you can only earn at the show.

We all made a gem tree. My base was a fossil shell. Kris and Karen used petrified wood. I also got a free bag of rocks. There were a lot of displays. The one I liked the best was of the sharks teeth. We saw some other members from our rock club. A lady invited my Mom to could back down in March to maybe learn how to weave beads. I want to do that.

After we finished at the gem show, we went to the Mississippi Agriculture Museum. They have a huge exhibit both inside and out. Inside, they had farming stuff, some old cars and even some old crop duster planes. Outside there were lots of little buildings set up so you could look in. There was a school house, a church, gas station, barn, and many others. In the barn there were some animals: a pig, goats, a cow, chickens and a peacock.

The next day we went to the Mississippi Museum of Natural Science. It is very big. They have fossils on display. We saw the new exhibit on endangered species. I also got to touch a salamander, an Indigo snake, and a corn snake. The indigo snake is endangered. The museum has two big aquariums. We got to see a diver in the water feeding the fish. The other aquarium had alligators in it. We took one of the nature hikes.

We did a lot of things. I had a good time. I want to go back again.