

Digging dinosaurs

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Regional teachers, students spend week working with UM paleontology project

When Mallory Eberle starts seventh grade this fall, the Plentywood student will have a lot to say about what she did this summer.

Last week, she studied the sediment in a dry creek bed to determine — by using the grains of dirt — whether it was home to an ocean, a river or a lush forest of palm trees 70 million years ago.

"Finding the T. rex was awesome too," she said. "Everyone was like, 'Oh my gosh!' and 'Oh, cool!'"

Two dozen middle school students and 11 teachers from across the Hi-Line and Eastern Montana spent last week digging for dinosaurs east of Fort Peck Lake.

The University of Montana paleontology project is funded by the National Science Foundation. The idea is to provide teachers with real-life applications for using technology such as Global Positioning Systems that they can take back to their classrooms.

"Our project is focused on using technologies in authentic scientific research," project director Heather Almquist said. "The paleontology is more or less the hook that kids of all ages are interested in."

Students paid nothing for the project; they simply submitted essays and a teacher's recommendation letter. Teachers began their work in the fall, attending regular weekend sessions put on by UM professors who traveled to Glasgow.

Fort Peck Paleontology Inc. board President John Rabenberg invited the teachers and students to dig on his Circle-area ranch.

For years, he's known that his "backyard" had fossils to be discovered, but he wanted what was unearthed to benefit science and educate people.

"We have a natural resource here," he said. "This is what I wanted to happen on this place forever — that it could be used as an outdoor classroom."

Rabenberg spent days with the teachers and students, seeing their amazement when they discovered a Tyrannosaurus rex rib bone and tooth, the frill and horn of a Triceratops, a bison fossil and fossilized plants.

Naturally students were most excited about the giant dinosaur discoveries, but Almquist said the most scientifically significant fossil could be what appears to be a flowering plant that was not known to exist in the same time period.

"It needs to be verified, but it could be huge," she said.

Led by UM Paleontology Center Director George Stanley, UM geologist and sediment specialist Marc Hendrix and other university researchers, the student-teacher teams found, unearthed, photographed and recorded their discoveries.

When a day's digging was done, they returned to camp to gather around their computers, analyze the data, prepare maps and interpret their findings.

Eberle said she signed up having listened to her 15-year-old uncle talk about his interest in dinosaur hunting. Let's just say her uncle's pretty jealous now.

"I thought we were just going to see what other people had found, but it was awesome because we got to dig around in the dirt and help," she said.

The teachers and students broke into four teams, each tackling different topics.

One wanted to see how the size of the creek bed changed over time. To figure this out, they made maps and measurements using the GPS equipment and compared it with historic maps.

Harry Beauchamp, 12, said his preliminary finding was that the creek bed was getting bigger. He and his fellow students gave a presentation at the end of the session to share what they learned.

"From the sediment you could determine what kind of environment it was," he said. "We learned how you can tell a fossil from other rocks and how the arroyo has been changing."

Beauchamp, who will be starting seventh grade this fall in Frazer, said it was his dad's interest in discovering and preserving Native American artifacts and historical sites that made him want to dig even further back into the state's history.

During the dig, another team studied the T. rex, trying to determine if he was part of a full skeleton. Another group studied the fossilized plants and the fourth group studied what the environment would have been at the time.

"It's truly a wonderful education," Rabenberg said. "I can't believe that those kids learned that much in three days time."

Next week, 31 students from across Northern and Eastern Montana and 13 teachers from North Star, Harlem, Richey, Frazer, Plentywood, Scobey Brockton, Nashua, Poplar, Hinsdale, Rocky Boy, Terry, Glendive, Sidney, Froid and Whitewater will head to the creek bed.

Almquist said the new group may continue the research of the first team or they may forge their own questions to answer.

"Other bones were sticking out of the ground that we haven't investigated yet," she said. "We want them to pursue things that they're interested in."