

LAS February 2016 Headlines:

ARCHAEOLOGIST: REE HEIGHTS BONE SITE MARKS ANCIENT HUNTERS' BISON KILL

Capital Journal Oct 26, 2015

REE HEIGHTS, S.D. – After half an hour on the ground, archaeologist Michael Fosha of the South Dakota

State Historical Society told ranchers Dean and Candice Lockner what they most wanted to know: Those bones jutting from a rib of exposed earth in their pasture really are bison bones.

And some of those broken bones? Those show the work of ancient hunters.

“That break in the bone is not one that occurred naturally,” said Fosha, pointing to a bison femur jutting out of the soil. “That’s a green spiral fracture. A human did that. Somebody broke that when the bone was still fresh.”

How those hunters killed the bison in order to process those animals to get the meat and marrow and hides, that’s more than Fosha can tell right now. But one thing is certain: The ridge that runs east and west, from about Ree Heights east for some miles toward the town of Miller, was one of the tools in their kit.

“There are several ways they could

have used that location to procure bison,” Fosha said. “There’s a number of ways they could have used that landscape.”

Two other bison kill sites near Ree Heights have been discovered in past decades, one of them not much more than a quarter-mile away, the other perhaps three miles away. One of the sites was excavated by archaeologists.

Rancher Dean Lockner discovered the latest site about four years ago while checking his cattle. The Lockners run cattle on land that belongs to Candice Lockner’s mother, Kay Fawcett. The bones came to light near the west end of the ridge for which Ree Heights is named, and near the face of the ridge where occasionally some earth peels away and slides downhill.

Fosha said it’s possible that ancient hunters drove bison off the edge of the ridge – high enough to kill or cripple bison – provided the animals were moving fast enough that they couldn’t avoid the drop. But since the bones are not located at the immediate base of the ridge, there are other possibilities to consider. Ancient hunters also drove animals uphill, and they might have done that in this case to use snowdrifts to trap animals.

“There could have been a depression there that would have held a lot more snow,” Fosha said.

However those hunters did it, Fosha said, there are enough bison bones to suggest their take was a large one, meaning weeks of preparation went into what proved to be a very successful bison hunt.

“Clearly they had it well planned, well thought-out,” he said.



Mike Fosha examines the bison bones that have come to light in exposed earth near a ridge south of Ree Heights.
(Joshua Penrod/Capital Herald)



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No stone tools of any kind were visible at the site, but Fosha didn't do any excavating, only gingerly examined the exposed earth where the bones were sticking out. But stone tools wouldn't tell exactly who the hunters were anyway, he said.

"At that point in time we wouldn't be able to say who these people became known as historically," he said.

Nor can he say the time. But Fosha said archaeologists know that South Dakota was dry and inhospitable from about 9,000 years ago to about 5,000 years ago. That makes it unlikely that there were many bison to kill or many hunters to kill them in that period. Fosha said the archaeological record suggests that many people who had been using the area now known as South Dakota probably migrated to other places during those harsh times – to the Ohio Valley or other river valleys, to Texas, to Canada.

About 5,000 years ago, he said – and after an interlude, again at about 3,000 years ago – there were cooler, moist conditions that allowed cool-season grasses to flourish.

"We see a change in climate and vegetation. We see a climate beneficial to bison. When they come back, people come back very quickly."

Fosha said his initial guess is the site may have been used no earlier than 2,500 to 3,000 years ago, going by soils he sees at the site and what he knows of similar sites in eastern South Dakota. But Fosha would be delighted if the site proved to be older.

"I want to be wrong – very badly," he said.

As he examined inch by inch the exposed bones, Fosha noted that the one bone that would provide the most information would be a jawbone with teeth. The collagen inside the teeth can be used to help date the bone very precisely, he said, while the height of the teeth can be measured to help estimate the time of the year, since new teeth in bison erupt on a fairly consistent monthly pattern (2). The teeth might even tell what kind of grass the animals were eating, which could give an indication of climate.

Shortly after noting that a mandible is what would give him the most information, he found one, with several teeth in it. With the permission of Dean and Candice Lockner and landowner Kay Fawcett – all three of whom were looking over his shoulder – Fosha carefully dug out the jawbone with a small trowel, placed it in a plastic bag and labeled it. He'll take it away for testing.

Even once he knows the time, though, Fosha said he won't know how the bison were killed, and he won't understand some of the other mysteries of the site. For example, there is a layer of black soil in the exposed earth that suggests plants or organic material in the soil. That could be an indication that there was ponding on the site at some period.

"I can't explain it yet," Fosha said. "That's why archaeology is so much fun."

And, Fosha said, it's rare to find a family such as Kay Fawcett and her daughter, Candice Lockner, and son-in-law, Dean Lockner, who are so keenly interested in preserving the history.

Candice Lockner, on her part, said it's tantalizing to know that ancient hunters carried out a major hunt only a short distance from their farmhouse.

"It so exciting to know that, yes, they are bison bones. We haven't been telling people wrong," she said.

The Lockners and Kay Fawcett have been eager to see the site explored by trained archaeologists who can interpret what they find there for everyone.

You can own the land, but you can't own the history," Candice Lockner told the Capital Journal.



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Fort Collins Rockhounds Club Annual Show April 1, 2, and 3, 2016

The Fort Collins Rockhounds Club presents the 55th Annual Gem and Mineral Show on April 1, 2016 (Friday, 4-8 p.m.), April 2, 2016 (Saturday, 9 a.m. - 6 p.m.), and April 3, 2016 (Sunday, 10 a.m. - 5 p.m.) at The Ranch/Larimer County Fairgrounds in the Thomas M. McKee Building, Loveland, Colorado. Parking is free for this event.

This year's exhibits feature Jade and Jasper. Door prizes, mineral specimen grab bag sales, children's activity table, demonstrations and the silent auction are ongoing. Gem and mineral dealers sell everything from rockhounding equipment and ore-grade specimens to fine jewelry and stone beads.

Adult admission is \$4.00 for one day or \$7.00 for a 3-day pass. Student (12-18 years old - WITH ID) admission is \$1.00. Children under 12 free when accompanied by adult.

For more information, check their Facebook page, email fcrockhounds@yahoo.com, or call the show chairman at 970-493-6168.

**55th Annual 2016 Fort Collins Rockhounds
Gem & Mineral Show**

Thomas M. McKee 4-H, Youth
& Community Building,
Larimer County Fairgrounds

Friday April 1 4pm-8pm
Saturday April 2 9am-6pm
Sunday April 3 10am-5pm

The Ranch

**Featuring
Jade and Jasper**

Show Chairman:
970.493.6168
(No dealer space available)
[showchairman@
fortcollinsrockhounds.org](mailto:showchairman@fortcollinsrockhounds.org)

Details at www.fortcollinsrockhounds.org



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LAS News and Upcoming Events:

- Ongoing: Univ of Colorado Museum of Natural History. "Unearthed: Ancient Life in the Boulder Valley" exhibit featuring the Clovis artifacts from the Mahaffy Cache found in Boulder, Colorado in 2008. The exhibit will run through September 2016. Cost is free.
- March 1, 2016 March meeting. Program: 2015 LAS/Walts Scholarship recipient Leslie Brown will discuss her research for her PhD. Title: Isotopic examination of human remains associated with the Korell-Bordeaux site (48GO54) from bone apatite and dental enamel.
- April 1-3, 2016 Fort Collins Rockhounds Club annual Gem and Mineral Show at the Ranch (McKee 4-H, Youth and Community Bldg) in Loveland, Colorado. See the website for more information: www.fortcollinsrockhounds.org.
- April 2, 2016 2016 Spring Into Archaeology Fair. We will be joining with the Fort Collins Rockhounds Club and having our 2016 Spring Into Archaeology Fair at the McKee 4-H, Youth and Community Building at the Ranch in Loveland on April 2, 2016. If you plan to exhibit please call Andy Coca at (303) 286-7711 for table space. A map with directions to the McKee Building is attached. See you there!
- April 5, 2016 April meeting. Program: Rich Savino will give a presentation on "Rock Art of the Bighorn Mountains, Wyoming."
- May 3, 2015 May meeting. Program: Tom Westfall will give a presentation on Lithic Casting of artifacts and how casts help students and collectors learn about point types and lithic technology. Tom will also demonstrate how a point is cast once the mold is made.

