

LAS August 2014 Headlines:

Wyoming cave with fossil secrets to be excavated

From Associated Press

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CHEYENNE, Wyo. (AP) — For the first time in three decades, scientists are about to revisit one of North America's most remarkable troves of ancient fossils: the bones of tens of thousands of animals piled at least 30 feet deep at the bottom of a sinkhole-type cave.

Natural Trap Cave in north-central Wyoming is 85 feet deep and almost impossible to see until you're standing right next to it. Over tens of thousands of years, many, many animals — including now-extinct mammoths, short-faced bears, American lions and American cheetahs — shared the misfortune of not noticing the 15-foot-wide opening until they were plunging to their deaths.

Now, the U.S. Bureau of Land Management is preparing to reopen a metal grate over the opening to offer scientists what may be their best look yet at the variety of critters that roamed the foothills of the Bighorn Mountains during the planet's last glacial period around 25,000 years ago.

Des Moines University paleontologist Julie Meachen said she has been getting ready to lead the international team of a dozen researchers and assistants by hitting the climbing gym.

"I'm pretty terrified," Meachen admitted Wednesday.

She hasn't done any real climbing before, she said, and the only way in is to rappel down. The only way out is an eight-story, single-rope climb all the way back up.

The cave is perpetually cold and clammy, with temperatures in the mid-40s and humidity around 98 percent. Even Bureau of Land Management regional paleontologist Brent Breithaupt, who isn't one to get the willies from lots of animal bones, describes it as a tad creepy.

"One can only hope that, as a researcher, you're able to leave," said Breithaupt, who visited the cave as a college student the last time it was open to scientists. "It's an imposing hole in the ground. But one that actually has very important scientific value."

Some mammal remains from the cave could be over 100,000 years old, Breithaupt said.

The remote site is exceptionally well preserved. It's far too challenging and dangerous to have been trampled in by casual spelunkers. The Bureau of Land Management installed the grate to keep people and animals out in the 1970s.

A mound of dirt and rock containing layer upon layer of animal bones rises from the floor of the 120-foot-wide, bell-shaped chamber. Meachen hopes the remains are sufficiently preserved in the cold, sheltered environment to contain snippets of genetic information.



In an image provided by the Bureau of Land Management, date not known, Bureau of Land Management cave specialist Bryan McKenzie rappels into Natural Trap Cave in north-central Wyoming during a cleanup expedition. The cave holds the remains of tens of thousands of animals, including many now-extinct species, from the late Pleistocene period tens of thousands of years ago. Starting July 28, 2014, scientists plan to venture back into the cave and resume digging for the first time in more than 30 years. (AP Photo - Bureau of Land Management)



Loveland Archaeological Society, Inc.

A Colorado Non-Profit Corporation

Alan Cooper with the Australian Centre for Ancient DNA at the University of Adelaide will attempt to retrieve fragments of mitochondrial DNA from the bones, Meachen said.

Such analysis wasn't possible the last time scientists dug in the cave and could shed light on how the animals were related to their modern counterparts and each other.

"It's so cold all year long, that it has got just the perfect conditions for preserving DNA, in multiple species, in large numbers of individuals," Meachen said. "Which is not really found anywhere except Siberia and the Arctic."

Starting Monday, scientists plan to re-explore the cavern, dig and extract as many fossils over a two-week period as possible. The researchers will dig by lights powered by a generator at the surface.

A National Science Foundation grant will enable additional excavations in 2015 and 2016.

One goal is to learn more about the Pleistocene extinction, which wiped out dozens of species. Proposed causes include climate change and hunting by humans, who are thought to have arrived in northern North America sometime after 17,000 years ago.

The scrubby, rocky country surrounding the cave probably looks much like it did back then, though the climate may have been cooler and wetter, Meachen said.

The scientists will camp out nearby and plan to make the arduous climb into and out of the cave no more than once a day. Ropes will haul bones up top in boxes, Meachen said.

"I don't think it's necessarily going to be easy," she said. "But I think we're going to be pretty well prepared."

Stone Age Fair Volunteers Needed

We could really use your help to make this year's Loveland Stone Age Fair a success!

We are seeking members to volunteer to help with the 2014 Loveland Stone Age Fair to be held Friday, Saturday and Sunday, September 26, 27 and 28, 2014. We need help in the following areas:

1. Door prizes. Contact donors, come up with prizes. Organize door prize table schedule (manning table, running ticket cage and ticket sales).
2. Emcee for program Saturday, September 27, 2014. Introduce scholarship recipients and speakers, run program. Set up stage, audio/video, screen, speaker and scholarship recipient photos, etc.
3. Security coordinator. We will need to provide additional security during the day on Saturday and Sunday, and the security coordinator will organize members to walk through, observe, and monitor activity.
4. Hang signs on Friday, September 26, 2014.
5. Displays for Sunday, September 28, 2014 to fill in empty tables as exhibitors leave. This year the Fair will end at 2:00 pm on Sunday, September 28, 2014.
6. Dedicated photographer – all three days, all events. You need to have your own camera and a way to download the photos electronically.
7. Post flyers. We will have flyers at the September meeting for all members to take and hang in local libraries, grocery stores, and any other venue where the Fair will get some good advertising.

If you would like to volunteer for one of these positions please contact Kevin Zeeck at 303-682-0471 after 6:30 PM, MDT, or send me an e-mail (kevin.zeeck@gmail.com).

Thanks in advance!



LAS Find of the Month, August 2014:

Members can bring an artifact to be entered into the competition at the monthly meeting, which will be judged based on the following rules:

1. Must be a member of LAS in good standing.
2. The artifact must be a personal find.
3. It must have been found within the specified time frame, i.e., within the month prior to the meeting.
4. The artifact doesn't have to be a Colorado find—all that matters is that it was found in the last month.

There were two people who were awarded the Find of the Month for August 2014:

Left: Steve Campbell

Type: Clovis

Material: Agatized Petrified Wood

Location: Logan County

Right: Shane Skutvik

Type: Clovis

Material: Translucent Hartville Uplift Chert

Location: Morgan County

Both are beautiful, complete Clovis points.
What are the odds of having even one Clovis found
in a year? Congrats to both Steve and Shane!



LAS News and Upcoming Events:

- Speakers Needed!** We need speakers for our 2014 meetings. If you would like to give a presentation or know of someone who would give a great program please contact Andy Coca, Jean Steinhoff or Kevin Zeeck. No experience is necessary. All that is needed is a passion for our hobby and a willingness to share that passion. Thanks!
- August 30 - Loveland Archaeological Society Labor Day Weekend field trip to the Harris Ranch at
September 1, 2014 Bosler, Wyoming. A map and instructions are included.
- September 2, 2014 September meeting. Program: Recap of the 2014 Temple, Texas Artifact Show. Rick Miller and Andy Coca will give a presentation on the renowned Temple show and the artifacts displayed.
- September 27 & 28, 2014 2014 Loveland Stone Age Fair. If you have any questions you may phone Kevin Zeeck at 303-682-0471 after 6:30 PM, MDT (kevin.zeeck@gmail.com). As a reminder, there is no buying, selling, or trading of authentic artifacts, and no soliciting to buy, sell, or trade. Plan now to attend!
- October 19-22, 2014 *Lindenmeier: Ancient Lives, Ancient Dreams* symposium celebrating the Lindenmeier archeological site at Soapstone Prairie Natural Area, the largest Paleoindian site in North America. This year marks the 80th anniversary of the Smithsonian Institution's visit to the National Historic Landmark. Registration and details are at fcmmod.org.