

Re: Possible 15000yo site in MN

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- *From:* "Jack Linthicum" <jacklinthicum@xxxxxxxxxxxxxx>
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Horace LaBadie wrote:

Archaeological site in Walker is significant find
<http://www.walkermn.com/placed/index.php?sect_rank=1&story_id=229282>

Town of Walker gets a report from the Leech Lake Heritage Sites February 8th and a subsequent report to Minnesota state archaeologists was made on February 9-10.

"Findings will be studied, reviewed
The weekend of Feb. 9-10, the LLHS team presented its report on the Walker archaeological dig to a state conference of archaeologists. Olmanson said LLHS plans to halt "the press aspect" of the find and now will turn to research. The initial findings will be distributed to national and international experts in the field through professional channels and will include peer review."

http://www.walkermn.com/placed/index.php?sect_rank=1&story_id=230142

Community learns more about Walker archaeological finds
Will artifacts rewrite North America, Minnesota history
by Gail DeBoer, Staff writer
The Pilot-Independent
Last Updated: Wednesday, February 14th, 2007 05:17:57 PM

Community members got answers Feb. 8 to some of their questions about the recently-discovered archaeological site near the Walker Area Community Center (WACC).
But answers to other questions – like what comes next and how to protect the site, will have to wait, at least for now.
As will the major question in everyone's mind: Do the artifacts actually date back to 13,000 to 15,000 before present (BP)?
The first Walker Hill Informational Forum was presented by Leech Lake

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Heritage Sites (LLHS) staff, who made the discovery.

Back in 2004, the for-profit archaeological consulting firm, owned by the Leech Lake Band of Ojibwe, was hired by the city to study the WACC site prior to construction. Any project with federal funding requires a site study.

The site is located on a hill east of Walker, just west of Highway 371 and overlooking Leech Lake.

Recap and review

With LLHS Program Director Thor Olmanson handling visuals, LLHS Field Director Colleen Wells and volunteer Matt Mattson (an experimental archaeologist with fur trade expertise) reviewed the discovery, gave a brief geological history of the area, a short course in Archaeology 101, and fielded questions from the audience of 80 or more at WHA Auditorium.

"This started so innocently; we were digging up a kid's fort," Mattson recalled, referring to the depression in the earth on the site that first caught their eye.

After finding the now-famous Daisy Bulls-Eye Cap Gun (vintage 1960-62) and other mid-20th century debris, the team decided they were not looking at the remains of a fur trade era "house pit." But just to be sure, they dug deeper into undisturbed soil, where Olmanson found the first artifact while sifting excavated soil.

The item was a tiny 1 centimeter square "retouch flake;" a stone that had been re-sharpened for use as a cutting tool. To the trained eye, the flake could not have been made accidentally by glaciers but by a human hand.

Throughout 2005 and 2006, LLHS archaeologists and technicians dug at 40 different spots or "formal units" over the two acre site, moving and sifting an estimated 85 tons of material with shovels and trowels.

"Most of what we find at archaeological sites is trash; it's just really old trash," Wells remarked.

Of the 40 sites, only one produced nothing and 10 marginal. But the others did produce stone artifacts: tools like pebble scrapers; cutters, choppers, knives, and a hammerstone, all made from available rocks, and all made by human hands.

A stone tool or just another rock?

To the untrained eye, the artifacts are just rocks, Mattson admitted. But to the LLHS team and outside archaeologists and geologists who have already examined the site and tools, they show traits that reveal the hand of man.

"We tried to convince ourselves otherwise. But there was too much evidence."

Using slides of various stone tools, Wells and Mattson showed what archaeologists look for when identifying tools: shatter marks, scarring, abrasion marks, flakes removed in the same direction to create a sharp edge, etc. One or two flakes could be glacial activity, Mattson said. "But at this site, we had so many like this. It's not random; it was a deliberate action."

The artifacts were found 70 to 80 centimeters or more down, beneath an

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undisturbed layer of washed and sorted gravel deposited by the glacier. Above was a protective layer of wind-driven soil deposited after the glacier receded but before forests had grown to halt the wind action.

Central Minnesota was a "collision point of glacial activity," as Mattson described. Around Walker, glaciers advanced and retreated several times. But not everything was covered with ice; Walker apparently was an oasis, surrounded by glaciers, capable of sustaining life.

How old is the site?

The Walker site represents something undocumented and not understood in the Midwest and possibly all of North America, Mattson summarized. Dates for the Paleolindian Period are 8,500 to 12,000 before present (BP). Human presence in this part of Minnesota was thought to be no earlier than 10,000 BP.

But if these artifacts can be dated by using existing knowledge of glacial activity in this area (including glacial deposits that covered them), they might date to 13,000 to 15,000 BP.

Who were these people?

Through this oasis came family groups of 10 to 20 Cro-Magnon humans – modern men not Neandertals, Wells noted.

"People came here, they were here, they stayed and they made it," she summarized

They were after the mega-fauna of the time: mastodons, mammoths, camels, horses and giant beavers. Cutting and chopping tools would have been used to make kills and process the carcass.

When the group stopped for a day or two, they made the tools they needed onsite from whatever stones they could find, instead of carrying them with. When they moved on, they left the tools behind. Since so many artifacts were found at the Walker site, the LLHS team suspects there were a series of low-density occupations of this site over a period of time.

Mattson also noted that while the site now is on a hill about 150 feet above Leech Lake, back then the water level would have been much higher and the shoreline closer to the site, due to melting glaciers.

Are there more artifacts to be found? Most likely, Wells and Mattson responded. Some likely were lost to preliminary site work, but others undoubtedly lie beneath strata at the lower and upper terrace sites.

More investigation needed

Despite LLHS' initial findings and age estimates, more investigation and study are needed to confirm or possibly dispute their findings. Mattson and Wells said several researchers from Minnesota and elsewhere are interested in studying the site. A verification process could take years or even decades.

Dating techniques

Carbon 14 dating (radioactive half-life) cannot be used, since stone tools do not contain organic material. One technique that could is

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Optically Stimulated Luminescence.

OSL measures the length of time soil (in this case, the soil around the artifacts) has been buried away from sunlight. A sample would be exposed to ultraviolet radiation, and scientists would then determine how long it's been since the soil last saw the light of day.

Who protects? Who's responsible?

Audience questions dealt with how to protect the site, what it will cost, and who owns the site.

The 2 acres have three owners: WACC, the city of Walker, and Living Water Church. Future digs would require permission of the respective owner.

Until now, the city has had no out-of-pocket costs for the dig. Future studies probably would be independently funded by whatever groups want to do the investigating.

How to protect the site in the future is beyond their expertise, Wells and Mattson admitted. They noted the city has halted the road project but suggested that if the road path was altered a bit, roadwork could proceed.

It's very important that the site be secured for future study, they stressed. Thirty or 40 years from now, science will have developed better techniques for finding, studying and dating artifacts.

Where are the stone tools? someone asked. LLHS currently has the artifacts under lock and key at a secure but unidentified location.

Findings will be studied, reviewed

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