Results of Radiocarbon Partnership Just In

In 2009, MAS became a partner in a cooperative venture intended to increase the number of radiocarbon dates available for Minnesota sites. In cooperation with the Minnesota Historical Society and the Council for Minnesota Archaeology, MAS requested and received $10,000 from the Arts & Cultural Heritage Fund, which was established by the State Legislature after voters approved the Clean Water, Land, and Legacy amendment last November. The amendment dedicates a portion of the state sales tax to outdoor heritage; clean water; parks and trails; and arts, history, and cultural heritage.

Results continued on page 5
Possible Hidatsa Pottery Fire Site Unearthed

By Lauren Donovan - Reprinted from the Bismarck Tribune -

A hole in the ground was a window into time, and researchers found what may be the only pottery firing pit ever discovered on the Missouri River.

Tests must confirm what archaeologists suspect after probing the remains of a 500-year-old fire pit that was revealed by 2009 flooding on the Knife River. The blackened remains were found in the bank after the flood waters receded.

Last week, a team of archaeologists and students from the University of North Dakota and the Midwest Archaeological Center in Nebraska unearthed the layer and found more than they expected.

“It’s an awesome find,” said Brian McCutchen, superintendent of Knife River Indian Villages National Historic Site, where the river is digging into an old earth lodge village site identified in previous archaeological digs.

It appears that rather than a simple ancient fire hearth, the blackened layer could be where Hidatsa women dug out a concave area to build a hot fire, piling pottery to harden the clay on the glowing coals.

The find was made just in the nick of time. The weakened river bank continues to slough off into the water. The scientific excavation is part of an emergency mitigation so that archaeological information can be retrieved before future flooding takes it away forever.

Kacy Hollenback, a doctorate degree student from the University of Arizona, is at Knife River as part of doctoral work on Hidatsa pottery. Hollenback said the concave shape of the pit and the condition of the pottery found in the ash layer are reasonably strong clues. Her educated guess will be confirmed by analyzing the pottery, a core sample of the fire remains and the temperature of the fire. Pottery continued on page 5

Kensington Stone

Minnesota’s Kensington Runestone is in the news again. Last fall the History Channel aired a two-hour film produced in Minneapolis under the title “Holy Grail in America”. It theorizes that an expedition of Knights Templars carried the sacred chalice across the Atlantic in the 14th century and that its hiding place in North America is encoded in the Kensington inscription. In response a lengthy review in the May/June 2010 issue of Archaeology, the journal of the Archaeological Institute of America, takes the History Channel to task for “elevating a dense web of improbable theories to the level of accepted science.”

Written by Eric A. Powell, deputy editor of the magazine, the piece recounts the most recent claims and evidence brought forward on both sides of the century-long controversy. The author quotes both Alice Kehoe, a Wisconsin archaeologist, and Larry Zimmerman, former chief archaeologist of the Minnesota Historical Society, who is now in Indiana.

These shards of Hidatsa pottery from the Knife River Indian Village National Historic Site collection show that the style of making them changed over time.
Oldest Leather Shoe a “Dream” Find For Armenian Scientist

For a young Armenian archaeologist who stumbled on what scientists think is the world’s oldest leather shoe, it was a dream come true which she still finds hard to believe.

“It was my dream,” Diana Zardarian said Friday of her historic find on September 16, 2008 in a cave in Armenia’s southeastern Vayots Dzor region, which has made headlines around the world. The 27-year-old post-graduate student conducted excavations there in a team of fellow employees of Armenia’s Institute of Archaeology and Ethnography and visiting archaeologists from Ireland and the United States.

“I knew that organic artifacts are very rarely found during excavations, especially from the Copper Age layers that are 6,000 years old,” she told RFE/RL in an interview on Friday. “At first I couldn’t believe it’s that old. “I stood still for a couple of minutes in the excavation site. Everyone asked, ‘Diana, what happened?’ I said, ‘People, my dream has come true, I’ve found a shoe.’ Nobody believed me.”

With Armenia lacking modern radiocarbon test facilities, four samples of the shoe’s cow-hide leather were sent to specialized laboratories in California and Oxford, England for examination. Scientists there took more than 18 months to confirm that the item dates back to around 3,500 BC, an era known as the Chalcolithic period, or Copper Age.

“We were cleaning up the clay floor dating back to 3600-3300 B.C., and all of sudden a large cluster of dry reeds came up,” recalled Zardarian. “I asked laborers to go out so I could take a closer look at them. As I removed more soil from the reeds, I got deeper and deeper into them and then exposed a very beautiful and special pit. It was plastered with very high-quality yellow clay.”

At the bottom of the pit Zardarian found a pair of sheep’s horns lying on a clay bowl turned upside down. “When I raised it a little I felt that there is something underneath,” she said. “Because the pit was deep, about 50 centimeters, and dark, I couldn’t see what lay on its floor. In fact, I was digging it with my right hand without seeing anything. When my hand reached the floor I felt some organic stuff, which I at first thought is a cow ear. I took it out and got absolutely transfixed. It was a shoe turned upside down. Everyone was stunned by how well preserved that 6,000-year-old shoe was,” she added with a smile. “Even the shoe-laces were preserved.”

Armenian and foreign scientists attribute that to the stable, cool and dry conditions that have existed in the cave for several millennia. They say preservation was also helped by the fact that its floor was covered by a thick layer of sheep dung which acted as a solid seal over the objects.

Shoe continued on page 5
Dates To Remember

The Dead Sea Scrolls exhibition
Open through October 24, 2010  Location: Science Museum of Minnesota

The Dead Sea Scrolls are widely considered one of the greatest archaeological discoveries of our time. A priceless collection of 2,000-year-old documents that shed light onto a little-known period in religious history, the scrolls are some of the oldest surviving written documents in human history. Containing original texts from the Bible as well as writings that tell us about the laws and society of Jewish culture, the scrolls were discovered in a cave along the northwestern shore of the Dead Sea in 1947. Since then, they have prompted rigorous scholarly debate as to who their authors may have been, and they’ve given us a rare glimpse into what life was like around the time of Christ.

Wednesday nights are Dead Sea Scrolls Family Nights

Now is the perfect time to visit The Dead Sea Scrolls with the whole family. Bring your family to the Science Museum on Wednesday evenings after 5 p.m. and you’ll receive one free child admission (12 and under) to The Dead Sea Scrolls with each full-price ticket. Free child admission includes the Omnitheater.

Bringing Light to the Carvings
Jeffers Petroglyphs Historic Site, Comfrey MN

Dates: Aug. 1, 2, 5-9, 12-16, 19-23, 26-30  Time: 3 p.m.

Fee: $6 adults, $5 seniors and college students, $4 children ages 6-17; free for children age 5 and under and MHS members.

Using mirrors to capture light greatly enhances the ability to view the petroglyphs in the late day sun. A site guide will manipulate special tools to illuminate the carvings and give background information about the possible meanings, time periods and geographical distributions of the petroglyphs and the ways of life of the people who made them. Tours are offered daily during the site’s regular hours.

Center for American Archeology 2010
Weekend Workshop in Geoarchaeology

Saturday, August 14, 2010 - Sunday, August 15, 2010  Location: Edwardsville, IL

Tuition for the workshop is $200; including room and basic field lunches (breakfast and dinner are not included). Rooms are often available on the days immediately before and after workshop dates at no additional charge. For details please visit our website: www.caa-archeology.org If you have a group of six or more people who would like to take the workshop but cannot make these dates, you may be able to arrange a workshop as our schedules permit (call the Center for American Archaeology at 618-653-4316 or e-mail gyogel@caa-archeology.org). Contact: Dr. Gregory Vogel

Archaeology Day
Saturday, September 25th, Time: All day, Location: Onamia, Minnesota Kathio State Park

Areas within the park have displays that describe Kathio’s rich history from 9000 years ago to the present.

Flint Knapping Demonstrations
Rod Johnson of the Minnesota Archaeological Society

Saturday, August 7th & September 4th, Time: 11am-4pm
Trail Day Welch Village Welch Station Goodhue County Parks & Rec.
Saturday, September 18th, Time: 1pm
Bloomington Heritage Days Bloomington, MN 95th & Garfield Bloomington Historical Society
Saturday, September 25th, Time: All day
Archaeology Day Onamia, MN Kathio St. Park MN. State Park System
MAS Board Announces Lecture Support Program

The Board of the Minnesota Archaeological Society recently approved a new program, intended to provide support for archaeology-oriented lectures and events throughout the state. Local and regional historical organizations (such as county historical societies) can request assistance in planning and paying for talks and other programs by professional archaeologists. MAS will assist with finding speakers with expertise in the region, and will provide financial support up to $300 per event for travel expenses and honoraria. No more than one event will be sponsored each quarter, and any given organization can only request support once every other calendar year. Interested organizations should contact a member of the Board of Directors for more information.
Who Does Archaeology in Minnesota?
Reprinted from the Site to Story website:
The Institute for Minnesota Archaeology

To become a professional archaeologist in the upper Midwest most people start with a college degree in anthropology. For most licensed work, advanced degrees, such as an M.A. or M.S. are required and, in some cases, even a Ph.D. is needed. For both prehistoric and historic archaeology additional experience in specialized fields is required under the standards of the Secretary of the Interior. [Link to the Secretary of the Interior’s proposed Historic Preservation Professional Qualification Standards at www.cr.nps.gov/local-law/gis/html/quals.html

For example, for historic archaeology, training in fields such as historical geography, architectural history, or others is requested. Advanced training in these disciplines give the background knowledge required, but field work and lab analysis use techniques or methods that can only be learned by hands-on training under the supervision of experienced archaeologists. The fundamental training is generally given in summer field schools and laboratory courses offered for college credit. Additional experience is gained through employment in the field or in laboratory settings. Museums and other organizations, such as the IMA, give equivalent training to volunteers.

In Minnesota, as elsewhere, there are also avocational archaeologists. Some of these people work closely with professionals, helping to ensure that sites are preserved and information carefully recorded. Dedicated volunteers of this kind contribute work and knowledge of immense value to archaeology in Minnesota.

Collectors are mainly interested in acquiring objects for their personal collections, often because of lifelong interest or because of monetary value. These individuals acquire “relics” through a number of methods. Some purchase items through the antiquities market. Other inherit or trade collections from their families - many farmers collected the “relics” that turned up in their fields as the sod was turned over. It is common to hear of old boxes in farmers’ barns filled with projectile points that have been found over the years. Some collectors traveled to Native American communities to purchase items. Many of these antiquities are now changing hands on the open market.

Unfortunately the lucrative nature of the antiquities market has created a dangerous situation for our shared cultural past. The search for “relics” continues to endanger and even destroy many archaeological sites. People who destroy protected sites are known as “pot hunters” or “looters.” These people dig in, and desecrate, protected sites on public lands in search of items to sell on the market. Some go so far as to use metal detectors and bulldozers. When working on private lands with the permission of the landowners, their activity is legal, but it nevertheless destroys precious evidence of the past, for once a site is disturbed, much of its value for research is gone. Thus future generations are deprived of a part of their cultural heritage.

10,000-year-old Wooden Hunting Weapon
Reprinted from the ScienceDaily, June 30, 2010

To the untrained eye, University of Colorado at Boulder Research Associate Craig Lee’s recent discovery of a 10,000-year-old atlatl dart that had been frozen in an ice sheet near Yellowstone National Park. The dart was straight when it was entombed and became bowed from the melting and barely survived being snapped in half by a passing animal.

(Credit: Photo by Casey A. Cass/University of Colorado)

University of Colorado at Boulder Research Associate Craig Lee holds a 10,000-year-old atlatl dart that had been frozen in an ice sheet near Yellowstone National Park. The dart was straight when it was entombed and became bowed from the melting and barely survived being snapped in half by a passing animal.

(Credit: Photo by Casey A. Cass/University of Colorado)

To the untrained eye, University of Colorado at Boulder Research Associate Craig Lee’s recent discovery of a 10,000-year-old wooden hunting weapon might look like a small branch that blew off a tree in a windstorm.

Nothing could be further from the truth, according to Lee, a research associate with CU-Boulder’s Institute of Arctic and Alpine Research who found the atlatl dart, a spear-like hunting weapon, melting out of an ice patch high in the Rocky Mountains close to
Yellowstone National Park.

Lee, a specialist in the emerging field of ice patch archaeology, said the dart had been frozen in the ice patch for 10 millennia and that climate change has increased global temperatures and accelerated melting of permanent ice fields, exposing organic materials that have long been entombed in the ice.

“We didn’t realize until the early 2000s that there was a potential to find archaeological materials in association with melting permanent snow and ice in many areas of the globe,” Lee said. “We’re not talking about massive glaciers, we’re talking about the smaller, more kinetically stable snowbanks that you might see if you go to Rocky Mountain National Park.”

As glaciers and ice fields continue to melt at an unprecedented rate, increasingly older and significant artifacts -- as well as plant material, animal carcasses and ancient feces -- are being released from the ice that has gripped them for thousands of years, he said.

Over the past decade, Lee has worked with other researchers to develop a geographic information system, or GIS, model to identify glaciers and ice fields in Alaska and elsewhere that are likely to hold artifacts. They pulled together biological and physical data to find ice fields that may have been used by prehistoric hunters to kill animals seeking refuge from heat and insect swarms in the summer months.

“In these instances, what we’re finding as archaeologists is stuff that was lost,” Lee said. “Maybe you missed a shot and your weapon disappeared into the snowbank. It’s like finding your keys when you drop them in snow. You’re not going to find them until spring. Well, the spring hasn’t come until these things started melting for the first time, in some instances, in many, many thousands of years.”

The dart Lee found was from a birch sapling and still has personal markings on it from the ancient hunter, according to Lee. When it was shot, the 3-foot-long dart had a projectile point on one end, and a cup or dimple on the other end that would have attached to a hook on the atlatl. The hunter used the atlatl, a throwing tool about two feet long, for leverage to achieve greater velocity.

Later this summer Lee and CU-Boulder student researchers will travel to Glacier National Park to work with the Salish, Kootenai and Blackfeet tribes and researchers from the University of Wyoming to recover and protect artifacts that may have recently melted out of similar locations.

“We will be conducting an unprecedented collaboration with our Native American partners to develop and implement protocols for culturally appropriate scientific methods to recover and protect artifacts we may discover,” he said.

Quick retrieval of any organic artifacts like clothing, wooden tools or weapons is necessary to save them, because once thawed and exposed to the elements they decompose quickly, he said.

An estimated 10 percent of Earth’s land surface is covered with perennial snow, glaciers and ice fields, providing plenty of opportunities for exploration, Lee said. However, once organic artifacts melt out of the ice, they could be lost forever.

“Ninety-five percent of the archaeological record that we usually base our interpretations on is comprised of chip stone artifacts, ground stone artifacts, maybe old hearths, which is a fire pit, or rock rings that would have been used to stabilize a house,” Lee said. “So we really have to base our understanding about ancient times on these inorganic materials. But ice patches are giving us this window into organic technology that we just don’t get in other environments.”
MAS members who would like to put in some hands-on time have several opportunities.

To get more information about these current projects, please contact the individuals listed.

Archaeology Lab Night: Every Thursday evening, volunteers gather at the MHS Archaeology Lab, located at Fort Snelling History Center, to process and analyze artifacts excavated from archaeological sites around the state. No specific time commitment is required; you can tailor your participation to your schedule. For more information, please contact Volunteer Services at the Minnesota Historical Society: 651-297-2605 or volunteerservices@mnhs.org.

MAS Offers Support for Local and County Archaeology Presentations

The Minnesota Archaeological Society is actively looking for lectures and presentations throughout the state that need support for speaker fees and travel expenses. We will be contacting local historical societies and other agencies in the future to see if some arrangements can be made. In the meantime, any readers who are interested in such a collaboration are invited to contact President Rod Johnson at rodjohn33@msn.com. Outreach and education are the twin missions of MAS and we are happy to entertain ideas toward such goals through archaeological activities, lecture series, site tours, interpretive talks, and other hands-on learning experiences.

Become a Fan of MAS by joining us on Facebook. You can submit photos of your collections, ask questions, or leave comments. This is a place to connect with others interested in Minnesota Archaeology. We hope to see you there! If you have questions please contact Debbie Pommer at 651-430-0137 or pomme001@umn.edu

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