The Artifact

A Publication of the Archaeological Institute of America - Milwaukee Society Vol. 23 No. 1, Fall, 2017

Contents

2017-2018 Milwaukee Society Officers and Volunteers

Letter from the President

Elisabetta Cova, Associate Professor
University of Wisconsin - Milwaukee

Dear AIA-Milwaukee Society Members,

Welcome to the 2017-2018 lecture season of the Archaeological Institute of America - Milwaukee Society and this latest edition of the *Artifact*, our members-only newsletter. It is time to mark your calendars with another outstanding program of lectures and events. I am pleased to announce that once again our society was awarded a third national lecture by the AIA national office in addition to the two usually offered. These three national speakers, in combination with three additional lectures that we are able to arrange locally, make up our slate of six lectures for the 2017-2018 lecture program.

The first speaker of our Fall lecture series is Patricia Richards, Senior Scientist in the UWM Department of Anthropology and Associate Director of UWM-Cultural Resource Management. On October 1, Dr. Richards will present her ongoing research associated with the excavation of the Milwaukee County Poor Farm Cemetery (MCPFC). The MCPFC project has recovered, documented, and studied one of the largest collections of osteological and material culture remains in the United States. Dr. Richards's lecture will highlight the results produced by the UWM Archaeological Research Laboratory, which has been documenting and studying these remains since 2008. She will also reveal new questions raised by more recent excavations carried out in 2013.

On Sunday, November 5, Sarah McClure, Associate Professor of Anthropology at Pennsylvania State University, will speak to us about the Neolithic burial site of Cova de la Pastora in Spain. She will present new results derived from recent excavations carried out in collaboration with the University of Valencia in Spain.

Our last speaker for the Fall is Tamara Thomsen, maritime archaeologist with the Wisconsin Historical Society. Thomsen will present on a topic particularly fitting as we approach the holiday season; she will discuss the underwater investigations of the wreck site of

the *Rouse Simmons*, which left Thompson, Michigan, loaded with Christmas trees on a November day in 1912 and never reached its destination.

All lectures are held at 3:00 pm in Sabin Hall, Room G90 on the UWM campus. They are followed by discussion and refreshments and are free and open to the public.

In addition to these interesting topics, we are also pleased to continue our participation in International Archaeology Day (IAD). As in past years, AIA-Milwaukee joins over 700 events worldwide and over 500 organizations in more than two dozen coutriesin celebrating IAD. The title of this year's event, which will take place on Saturday, October 21, from 1:00 to 4:00 pm, is 'Down Home Archaeology: Digging into the Past with Local Archaeologists.' The event, co-sponsored by UWM's Departments of Anthropology, Art History and Classics, will feature archaeologists from Milwaukee and the surrounding area who carry out research in various geographical areas and will present different investigation and documentation methods. The event is designed for children – and adults – of all ages and will be particularly informative for anyone interested in the work, discovery, and excitement of archaeological research. The event is free and open to the public. For more information, see the section on page 3 in this newsletter.

In this issue of the *Artifact* Dr. Bettina Arnold (UWM, Anthropology) reveals intriguing discoveries made by analyzing vessel sherds from a Hallstatt period burial mound in Germany, while our *Artifact* Editor and PhD candidate in Anthropology, Joshua Driscoll, writes on his research into Iron Age European beer brewing using experimental archaeology.

Finally, I want to thank you for your continued support and once again invite everyone to attend our lecture program and events this fall.

Elisabetta Cova

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Welcome New Members Joined Since January 2017

Mark Atchley
Lara Ghisleni
Katherine Santell
Emily Stanton
Connie Jo
Jessica McCall
Emily Slone

We are very happy you joined us!

Milwaukee County Poor Farm Cemetery Research: A Twenty-Five Year Retrospective

A Lecture by Patricia Richards
University of Wisconsin-Milwaukee

Sunday, October 1st 2017
Sabin Hall, Room G90, 3:00 p.m.

Excavations at the Poor Farm Cemetery. Photo: Patricia Richards

This lecture provides a retrospective look at the political, regulatory, methodological, and ethical conundrums that characterize ongoing research that emerged from an archeological recovery contract associated with the Milwaukee County Poor Farm Cemetery (MCPFC). Today, the MCPFC project has developed into a multifaceted research initiative focused on one of the largest systematically excavated and permanently curated collections of osteological and material culture remains in the United States. Since 2008 the UWM Archaeological Research Laboratory has curated all human remains, material culture, and documentation associated with the 1991 and 1992 excavations of over 1600 individuals at the MCPFC. In 2013, UWM's cultural resource management program conducted excavations of an additional 632 separate coffin burials representing over 800 individuals. In addition to single interments, multiple interments composed of complete individual skeletons as well as body parts likely reflective of autopsy and medical school cadaver use characterize the excavated burials. In addition, many graves contained debris consisting of general refuse and/or medical waste. This pattern is likely associated with dramatic land-use changes resulting from the development of the MCPF property from a general county facility to its current use as home to the Milwaukee Regional Medical Center and the Medical College of Wisconsin. While the goals of individual MCPFC analyses are diverse, all research is guided by

the overarching goal of returning a voice and an identity to individuals robbed of both by burial in the MCPFC.

Patricia Richards is a Senior Scientist in the Department of Anthropology of the College of Letters and Science at the University of Wisconsin-Milwaukee (UWM). She received her Ph.D. in Anthropology from UWM in 1997. From 1977 to 1997, she worked in the private sector as a Cultural Resource Management Specialist providing historic preservation consulting services to private and governmental clients. Dr. Richards was hired by UWM in 1997 to serve as Associate Director of UWM-CRM, a program that is managed as a contractual arm of the Department of Anthropology. Her specialties include mortuary analysis and historic period archaeology in the Great Lakes region. Dr. Richards is the director of the Milwaukee County Poor Farm Cemetery Project and currently serves as graduate advisor for eight PhD students and two Masters students currently working on the MCPFC project.

For more about Patricia Richards:
https://uwm.edu/anthropology/people/richards-patricia/

International Archaeology Day

Down Home Archaeology:
Digging into the Past with Local Archaeologists

Saturday, October 21st, 2017
1-4 pm Sabin Hall

International Archaeology Day (IAD) is a celebration of archaeology and the thrill of discovery. Every October the Archaeological Institute of America and organizations around the world present archaeological programs and activities for people of all ages and interests. In past years Milwaukee IAD activities have drawn upwards of 60 members of the public and have provided fun and interactive ways to explore themed topics and a variety of archaeological subjects.

This year to celebrate International Archaeology Day the AIA Milwaukee Society is hosting "Down Home Archaeology: Digging into the Past with Local Archaeologists." Milwaukee and the surrounding areas have a large archaeological community, with archaeologists working all over the world on a variety of cultures and with a vast number of materials. Join the AIA Milwaukee Society at UWM's Sabin Hall to learn about how local archaeologists do their research, from analyzing human and animal bones, making 3D models of artifacts and sites, reconstructing and analyzing ancient pottery and stone tools, to making ancient beer!

International Archaeology Day will be celebrated here in Milwaukee on Saturday October 21, 2017, from 1:00 to 4:00 pm on the UWM campus. Come to the first floor of UWM's Sabin Hall (3413 N. Downer Ave.) and join us for an exciting afternoon doing archaeology with local specialists, ranging from experimental archaeology to helping identify and analyze ancient artifacts! FREE and open to the public. Fun for all ages!

This event is co-sponsored by the Archaeological Institute of America, Milwaukee Society and the University of Wisconsin-Milwaukee Departments of Anthropology, Art History, and FLL Classics Program.

Cova de la Pastora: A Study of Death and Discovery in the Prehistory of Spain

A Lecture by Sarah McClure
Pennsylvania State University

Sunday, November 5th, 2017
Sabin Hall, Room G90, 3:00 p.m.

In the 1940s, the discovery of a burial site in the hills outside of Alcoi, Spain created an international stir. The remains of up to 70 people with copious precious and unusual grave goods including beads and carved bone idols were exhumed from the cave. Several of the individuals had trepanations – holes carved into their skulls while alive – that were the first to be documented in Spain. Dating to the Late Neolithic/Eneolithic (ca. 3000 BC), the quality of grave goods and the communal burial rite suggested to archaeologists of the day that an

elite group had been buried at this location and Cova de la Pastora became a poster child for the emergence of social inequality in the region. We challenged this interpretation, and beginning in 2007 in a joint project with the University of Valencia, we re-analyzed the finds and conducted new excavations at the site. We also reconstructed the old excavations and how material was recovered, moved from the site to various museums, and subsequently analyzed over a 60-year period. In the process we found a rich tapestry of scientific history along with new discoveries on the timing and nature of burials in this cave. This presentation tells the story of death and discovery at Cova de la Pastora.

Sarah McClure is an Associate Professor of Anthropology at the Pennsylvania State University, and holds her degrees from the University of California, Santa Barbara (M.A. and Ph.D.) and the Albert-Ludwigs-Universität, Freiburg. Professor McClure is an environmental archaeologist interested in the spread of farming in the Mediterranean and Europe. Her research focuses on environmental and social impacts of early farming societies, particularly questions of human-animal interactions, changes in land use through time, the role of local and regional exchange networks, ceramic technology, food consumption, and the emergence of social inequality. Her archaeological fieldwork is based in the western Mediterranean and the Adriatic, and she has current projects in on the Dalmatian coast of Croatia and in Valencia, Spain. She also directs the Zooarchaeology Laboratory and Ceramic Analysis Laboratory at Pennsylvania State University.

For more about Sarah McClure:
http://pennstate.academia.edu/SarahMcClure

Myths and Mysteries: Underwater Archaeological Investigation of the Christmas Tree Ship, *Rouse Simmons*

A Lecture by Tamara Thomsen
Wisconsin Historical Society

Sunday, December 3rd, 2017
Sabin Hall, Room G90, 3:00 p.m.

Surveying the wreck. Photo: Tamara Thomsen

On November 22, 1912, the *Rouse Simmons* departed Thompson, Michigan, with a load of Christmas trees bound for Chicago. She never arrived. Despite desperate searches, no one knew where or why she was lost. It was not until 1971 that the *Rouse Simmons* was discovered in 170 feet of water. Since that time, the story of the *Rouse Simmons*, better known as the Christmas Tree Ship, has grown to legendary proportions. The Wisconsin Historical Society conducted the first formal survey of the *Rouse Simmons* wreck site for nomination to the National Register of Historic Places. Learn what the Society's dive team found, both at the wreck site and in historical documents, to find out more about what happened that fateful November day in 1912.

Tamara Thomsen is a Maritime Archaeologist with Wisconsin Historical Society's Maritime Preservation and Archaeology program. Her research has resulted in the nomination of forty-three Great Lakes shipwrecks to the National Register of Historic Places. For her dedicated work, she has received awards from the Association for Great Lakes Maritime History, the Great Lakes Shipwreck Preservation Society, and in 2014, she was inducted into the Women Diver's Hall of Fame. Tamara has worked as a photographer, researcher, and research diver on projects including the USS Monitor with NOAA National Marine Sanctuaries, and RMS Titanic with Woods Hole Oceanographic Institution.

For more about Tamara Thomsen:
NPR interview: http://wuwm.com/term/wisconsin-historical-society#stream/0

AIA's 119th Annual Meeting

Boston Jan. 4-7, 2018

- For more information on the 2018 Annual Meeting as it develops please consult: https://www.archaeological.org/annualmeeting
- ALL members of the AIA are welcome to attend this annual conference at a discount registration.

A Bloody Mystery: Human Blood Proteins and Crimean-Congo Hemorrhagic Fever Virus in Hallstatt Period Burial Ceramics.

By Bettina Arnold
Professor of Anthropology
University of Wisconsin-Milwaukee

A recent proteomic analysis of six untreated sherds from the central enclosure of a Hallstatt period burial mound in southwest Germany produced unexpected results: three fragments of what are referred to as *Kegelhals* vessels (Fig. 1), often ornately decorated and with restricted necks indicating liquid contents, and fragments of two bowls all apparently held human blood and/or organs (three also contained milk). Instead of the expected traces of alcoholic beverages or food, the vessels containing human blood and tissue proteins also yielded the first evidence north of the Alps of the tick-borne pathogen known as the Crimean-Congo hemorrhagic fever virus. The analysis was carried out by Conner Wiktorowicz, who has since completed his PhD at Purdue University, at the Proteomics Laboratory at the University of Texas Medical Branch (UTMB) in Galveston, Texas. The sherds were recovered during the excavation between 1999 and 2000 of one of two burial mounds in the "Speckhau" necropolis associated with the early Iron Age hillfort known as the Heuneburg in southwest Germany, part of the Landscape of Ancestors project directed by the author and Matthew L. Murray (University of Mississippi). The extremely acidic soils of this region had destroyed all traces of skeletal remains except where bone was in direct contact with metal, but the grave goods recovered from the four burials recorded for Tumulus 17 allowed us to determine that it had a use-life of at least 150 years, from 650/600 to 450/400 BC.

Fig. 1. Reconstructions of typical Hallstatt C/D burial ceramics from the central cremation of Tumulus 18 (Illustration: A. Dittus).

The analyzed sherds were associated with the 5x5 meter central enclosure, which was demarcated by a shallow ditch with postholes at each corner and contained the remains of a four-wheeled wagon and fragmentary weapons, including two iron spear points, probably from a male central cremation, as well as a probably female inhumation with elaborate personal ornaments (Fig. 2). The incised and slipped ceramic vessel fragments from the disturbed cremation burial (Grave 5) and the head and belt ornament of the female inhumation (Grave 4), which was deposited immediately inside the northern ditch of the enclosure, date the central burial to Hallstatt D1 (650/600 BC) but the two later inhumation graves (1 and 3) were deposited at least 150 years later, during Hallstatt D3/La Tène A (450/400 BC).

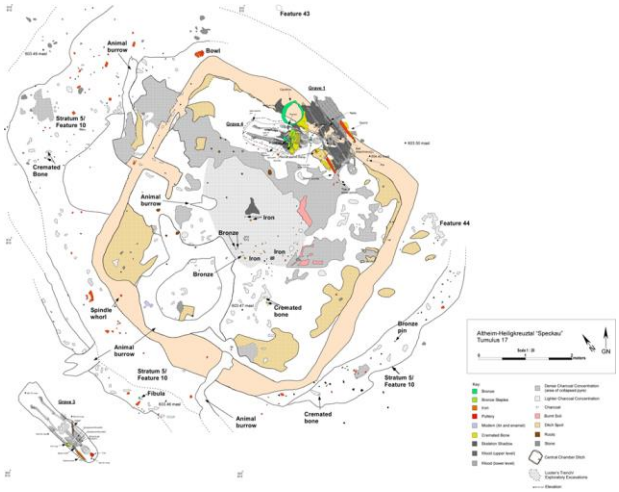

Fig. 2. The central enclosure of Speckhau Hügel 17. (Illustration: S. Schneider/K. Garstki).

The depositional layers that separated these two burial complexes contained no additional graves but did include the remains of numerous small fire places and stone altars. Even though Tumulus 17, with a diameter of 20 meters and a height of 3 meters, was virtually identical in size to Tumulus 18, which was excavated in

2002 and contained the remains of an *in situ* funeral pyre and grave goods dating it to Hallstatt C, the two mounds are quite different. Most significantly, Tumulus 18 contained four times the number of burials and included only one weapon burial with a dagger, while three of the four graves in Tumulus 17 contained weapons and all of those had spears as well as iron daggers or large knives/swords. While any interpretation of the enigmatic central enclosure of Tumulus 17 must remain speculative, the evidence suggests that we may be able to determine the cause of death of the central cremation in the absence of a body. Moreover, if the deceased individual was exsanguinated in preparation for burial, it is quite likely that whoever handled the body also contracted the disease, which has a survival rate of only 30% even in developed countries today. The female inhumation hastily placed inside the enclosure and the avoidance of this mound as a burial place, apart from apparent purification rituals, for more than a century, might all be related to the way in which this individual died.

Evidence for funerary rituals preceding or following interment are rare in prehistory, as exemplified by the adage "Archaeologists excavate burials, not funerals". The results of the proteomic analysis of the vessels from Tumulus 17 suggest that several variables could impact the function of burial ceramics and the treatment of the body, including the time of year as well as the cause and location of the death. Perhaps one of the most important outcomes of this analysis is the recognition that a selection of base and lower wall sherds should routinely be reserved and not subjected to cleaning or processing. The results of this analysis were presented in a recent issue of the *Journal of Archaeological Science*: http://dx.doi.org/10.1016/j.jas.2016.11.009.

A Taste of Power: Re-brewing Prehistoric-Style Beer to Better Understand the Parameters of Iron Age Feasting

By Joshua Driscoll
Dissertator, Anthropology
University of Wisconsin-Milwaukee

Alcohol fueled feasts were important mechanisms for generating and maintaining political power in Iron Age Europe (ca. 800 – 52 BC). Drinking together forged social bonds and heightened the ritual drama of festivals, funerals, and other events. By providing alcohol as a gift to participants, the host accrued social prestige, while demonstrating wealth and organizational ability. In simplified terms, the more alcohol provided by a host, the larger the group that could be gathered and the greater the prestige that could be gained. Anyone who has hosted a party knows that you don't want to run out of alcohol.

The quantity of alcohol for distribution would have been directly related to the shelf-life of the type of beverage stored. Beverages with longer shelf-lives facilitate stockpiling reserves, while short shelf-life beverages must be produced around the same time as the festival. Traditionally, scholars have assumed that the long shelf-life of Mediterranean wine made it a superior political resource in contrast to the short shelf-life of European beer brewed north of the Alps.

As part of my dissertation project at the University of Wisconsin-Milwaukee, I am re-brewing prehistoric-style beer in order to test this assumption. Recent advances in molecular archaeology and archaeobotany are providing more direct evidence for prehistoric beer and the vessels in which it was stored. By combining this information with historic and ethnographic sources, assumptions about prehistoric beer can be tested using experimental archaeology. Although we do not have access to Iron Age cultural tastes, the biochemical parameters of beer remain constant, allowing me to investigate terminal shelf-life. I consider terminal shelf-life to be the length of time that a beer can be kept before 1) becoming a health hazard due to pathogens or 2) turning into vinegar as a result of acetic acid bacteria.

Archaeological investigation of beer residues and brewing facilities indicate that Iron Age beer was quite different from the beverage we drink today. The bitter flavor of modern beer comes from adding hops (*Humulus lupulus*); however, hops would not become a common beer ingredient until over a millennium after the end of the Iron Age. Prehistoric beer was produced from malted barley, water, a fermentative microbial culture, and optional plant additives.

To test the shelf-life of prehistoric-style beer, I have undertaken several pilot studies. I have drawn upon the 5th century BC elite farmstead site of Hochdorf in southwest Germany. Here archaeobotanist Hans-Peter Stika identified malted six-row barely most likely used for beer brewing (*Hordeum vulgare*) in association with carrot (*Daucus carota*) and mugwort (*Artemisia vulgaris*) as beer flavor and preservative additives. While most readers will not be familiar with mugwort, it was a very common beer additive in medieval and early modern Europe. Archaeobotanical evidence indicates that mugwort was also used in prehistoric brewing in Spain and Scandinavia. Mugwort is currently being grown at UWM in the *Hortus Academicus* (Teaching Garden), located just behind the honor's college, along

with numerous other pre-hop beer flavoring plants (Fig. 1), for use in experimental archeological studies of prehistoric beer. In addition to using malted barley and mugwort, I use a base of distilled water from which to build an appropriate water profile with mineral additions corresponding to water available in southwest Germany. I ferment the beer with a mixed yeast and microbial culture (Wyeast 3763 Roselare). This too, is quite different from the average modern beer, which is fermented by a single strain of brewer's yeast (*Saccharomyces cerevisiae*). Before Emil Hanson's 1883 discovery of a method to isolate single yeast strains, most beer was produced through a mixed fermentation. Lack of modern sterilization methods in prehistory and recent residue analyses support the likelihood that mixed fermentations involved brewer's yeast, Brettanomyces yeast, Lactobacillus bacteria, and Pediococcus bacteria. When both bacteria strains are present in large numbers, they produce a sour-style beer similar to Belgian Lambic or Flanders ale.

Fig. 1. Plant bed at UWM *Hortus Academicus*. (Photo: Josh Driscoll)

Preliminary batches of sour-style prehistoric beer, suggest that prehistoric style-beer will age very well when bottled. If Iron Age people could have tolerated sour-style beer, then unhopped versions could have lasted for months, if not years, when protected from oxygen. Unfortunately, we cannot know for certain if sour-style beer would have been acceptable to Iron Age imbibers and current archaeological techniques do not allow us to directly answer this question. However, a survey of ethnographic and historic evidence reveals the pervasive presence of sour-style beer throughout history, despite its relegation as a novelty in recent European and North American practice.

The next step in testing whether prehistoric beer had a long terminal shelf-life involves investigating potential storage containers. Alcoholic beverages like wine and beer need to be protected from air since ubiquitous acetic acid bacteria (incl. Acetobactor species) use oxygen to convert alcohol to vinegar. Although vinegar is still a very useful product, it does not tend to engender the same conviviality as booze. I will be monitoring prehistoric style beer stored in vessels with known oxygen permeability rates to establish baseline data against which archaeologically identified vessels can be tested. Furthermore, I will monitor prehistoric style beer stored in oak barrels and low-fired coil built ceramics (Fig. 2) sealed with beeswax and pitch. Pitch is a tar-like coating made from pine rosin, a hardened sap-like substance. Both pitch and beeswax are archaeologically attested vessel sealants from the Iron Age. In fact, many scholars now believe that all Roman and Greek wine amphorae were sealed with pitch.

Fig 2. Fermentation vessels. Thanks to Murray Hill Pottery for firing them. (Photo Josh Driscoll)

Since sealed ceramics and wooden barrels should have relatively low oxygen permeability rates, I will likely find that prehistoric style beer could have easily kept for a significant length of time. In societies were being a generous host and distributing gifts conferred social prestige, stockpiled beer would have been a vital resource. My preliminary conclusions indicate that scholars must rethink the importance of beer as a political resource in Iron Age Europe.

For more information, including homebrew recipes see:
https://people.uwm.edu/barnold/2016/10/25/wisconsin-science-festival-power-drinking-in-iron-age-europe-event/

Sneak Preview of Spring Programs

Let's take a quick look at what is ahead…

On February 11, Nicholas Blackwell, Visiting Assistant Professor in the Department of Classics at Indiana University, will present on the Prehistoric Aegean Bronze Age (the title of his lecture is still to be determined). On March 4, Adam Rabinowitz, Associate Professor of Classics at the University of Texas, will talk about demographic and cultural transformations in the Crimean peninsula where Greeks, Scythians and Taurians interacted from the 7th to the 4th centuries BCE. To conclude this year's lecture series, on April 15, Kasia Szpakowska, Associate Professor of Egyptology and Director of the Ancient Egyptian Demonology Project at Swansea University in Wales, will illustrate ancient Egyptian beliefs on dreams and nightmares and their relationship with demons, deities and the dead. You will find more information on these events in the Spring 2017 issue of the *Artifact* and in our spring email notices.

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AIA-Milwaukee Society
Fall Calendar

PLEASE KEEP
Fall 2017

October 1	Sunday, October 1, 2017, 3:00 pm. *Lecture* **Patricia Richards**, ***Milwaukee County Poor Farm Cemetery Research: A Twenty-five Year Retrospective***
October 21	Saturday, October 21, 2017, 1:00 - 4:00 pm. **UW-Milwaukee Archaeology Lab International Archaeology Day Celebration** - ***Down Home Archaeology: Digging into the Past with Local Archaeologists***
November 5	Sunday, November 5, 2017, 3:00 pm. *Lecture* **Sarah McClure,** ***Cova de la Pastora: A Study of Death and Discovery in the Prehistory of Spain***
December 3	Sunday, December 3, 2017 3:00 pm. *Lecture* **Tamara Thomsen,** ***Myths and Mysteries: Underwater Archaeological Investigation of the Christmas Tree Ship,*** **Rouse Simmons**

All lectures will take place in room G90 of Sabin Hall on the University of Wisconsin – Milwaukee campus unless otherwise noted. Sabin Hall is located at 3413 N. Downer Ave. Free street parking Sundays.