Barcelona's Last Defense

Authors: MALGOSA, A., BLE, E., VALDÉS MATÍAS, P.,

During the winter and spring of 2014 and 2015 the project *"Serra de Ries: survey and eventual excavation of Spanish Civil War graves"* was conducted by a team formed by archaeologists, anthropologists and historians from both the *Universitat Autònoma de Barcelona* and the *Universitat de Barcelona*. The aim of the project was to explore one of the last battlefields of the Spanish Civil War and the location of possible soldier burial areas. Three individual graves have been identified and excavated so far, along with several fragmented bones found in secondary position. The survey with metal detectors collected a large amount of military equipment, specially rifle bullets and cartridges, whose distribution made possible to reconstruct the confrontation between the 196th Mixed Brigade and the 5th Tabor of Melilla.

Dr. Gavin Hughes (Trinity College Dublin)

ABSTRACT:

MILITARY ARCHAEOLOGIES OF 1916 COMMAND AND CONTROL: CASE STUDIES FROM MOUNT STREET BRIDGE TO THE SOMME

This paper aims to critically examine the military historical evidence and surviving archaeological nuances in the landscape of a number of crucial sites of engagement in 1916. In this, case studies from two distinct - and often controversially compared - campaigns will be considered. The first is the 'Battle of Mount Street Bridge' (Dublin, 26th April 1916), where the 2/7th and 2/8th Sherwood Foresters sustained very heavy casualties in repeated attempts to advance down the rebel-held Northumberland Road. The second is the 16th (Irish) Division's successful capture of Guillemont (3rd September 1916) and, in particular, the advance of the 7th Leinsters' bombing section under Lt. John Holland, V.C.

Whilst the paper will very briefly outline the military historical nature of both battles, it will primarily attempt to archaeologically isolate the instances of command and control of British units under fire; a) by irregular ('rebel') forces in a hastily fortified area and b) by trained German soldiers in heavily defended fortifications.

As such, it is hoped that some useful conclusions regarding the progress of these two actions - and their attendant casualty rates and commemoration - may be offered.

Biography:

Dr. Gavin Hughes studied archaeology and history at SDUC, University of Wales, Lampeter; he is currently a Research Associate with the Centre for Medieval and Renaissance Studies, Trinity College Dublin and Director of its Irish Conflict Archaeology Network.

Abstract
"DASH AT THE ENEMY!":
THE USE OF MODERN NAVAL THEORY TO EXAMINE THE BATTLEFIELD AT ELIZABETH CITY, NORTH CAROLINA

By
Adam Kristopher Parker

Immediately following the Union victory at Roanoke Island (7-8 February 1862), Federal naval forces advanced north to the Pasquotank River and the town of Elizabeth City, North Carolina where remnants of the Confederate "Mosquito Fleet" retreated. The resulting battle led to another Union victory and capture of the Dismal Swamp Canal, thereby cutting off a major supply route for the Confederate Navy from the naval yards at Norfolk, Virginia as well as destroying the Confederate fleet guarding northeastern North Carolina.

The naval tactics used in the battle at Elizabeth City have been previously examined using the documentary record; however, little archaeological research has been undertaken to ground truth interpretations of the battle. The present study is an archaeological analysis of the battle using the same framework used by the American Battlefield Protection Program, a military terrain analysis called KOCOA. Since the KOCOA framework was developed as a means to analyze terrestrial battlefields based on modern military theory, questions arise as to whether a traditionally land-focused paradigm is the best way to analyze and understand naval engagements. Hence, the present study considers amending the KOCOA foundation by integrating modern naval theories used by the United States Navy into analysis of a naval battlefield.

Between Duty and Hate:
Assigning Meaning to the Improvised Munitions Recovered at the Battle of the Crater (30 July 1864)

During the American Civil War (1861-1865), Confederate troops generally despised African-American soldiers and committed various atrocities that violated the acceptable "rules of war". During the Siege of Petersburg, southerners were accused of using "exploding" bullets. For generations, these claims have been adamantly denied as nothing more than propaganda, but during the course of the author's 2015 metal detector survey of the Battle of the Crater, two pieces of improvised ordinance were recovered in the area where Union troops breached the Confederate defenses. Both pieces of ammunition were fired and are non-standard issue items.

Documenting how individual soldiers behave in combat has been the focus of various military studies since the Second World War. Some soldiers who were successful in the shift from civilian life to warrior, adopted the trappings of institutionalized violence that went beyond the social norms of what was generally considered to be acceptable behavior. The recovery of improvised munitions at Petersburg substantiates the use of such "hateful ammunition" and shifts the discussion to who used them and why. Additional documentary analysis, along with these two finds, suggests that a far more sinister trench war existed at Petersburg than is commonly acknowledged.

Ten Years in the Trenches, what does archaeology add to the investigation of the First World War?

Alex Sotheran

This paper will examine the methodological approaches to battlefield archaeology with emphasis on work at the site of Thiepval Woods, on the Somme battlefields of France. This site has been the subject of ongoing archaeological work which seeks to understand the First World War remains that form part of the front line trench systems of the 36th Ulster Division's attack on the 1st of July 1916.

This paper will demonstrate that modern archaeological methodology can impact upon our understanding of the First World War with emphasis on material remains and archaeological features. These aspects of the First World War are often overlooked by historical accounts and the work at Thiepval is one attempt to redress this imbalance. Stratigraphic understanding of the archaeological remains is a key aspect of understanding the ever-changing digging and redigging of the trenches, not only by the Irish soldiers of the 36th Division, but other units of the British army and the French army. The archaeological excavations at Thiepval have uncovered the minutiae of the front line soldier's life, from the food they ate, to the weapons they used and adds another layer to the study of the war.

The Plain of Jars Archaeological Landscape, in northern Laos, has an aura of megalithic mystique that understandably forms one of the many draws for people to the highlands of Laos. The hidden subtext that many visitors uncover is the underlying scarring of the landscape by the Vietnam War, the history of the airbase of Long Tieng, and the presence of millions of as of yet unexploded munitions, cluster bombs, and larger bombs, or UXO, surrounding each Jar Site. These areas, along with the few known associated quarry sites, typically sit on major strategic locations within the highland plain of the Xieng Khouang province, and thus were subjected to a decade-long struggle between North Vietnam, and American-supported forces from the Hmong, Lao, and Thai armies. As part of the joint Lao PDR and UNESCO application to inscribe the Plain of Jars on the World Heritage List, detailed management plans and GIS land use assessments were drawn up for the three main Jar Sites, as well as a condition catalogue of the remaining 2000+ Jars scattered the province. Indeed, one of the more sobering GIS datasets to view comes via the US Government; B-52 bomb strike data records individual plots of 1000lb bombs, which still crater the landscape to this day. Instead of focusing on the ambiguous archaeological nature of the jars themselves, this paper will instead focus on the [arguably more interesting] landscape of conflict and its continuing effect on the modern life of the everyday Lao and Hmong peoples.

Brief Bio:

Alexander Makovics [MSc in GIS and Spatial Analysis in Archaeology, University College London, 2004] is an Archaeologist, Land Surveyor, and GIS/Geospatial professional with 13 years of continuous experience in regional land use analysis and archaeological resource management, assisting most often in performing large-area surveys, using RTK-GPS or Total Stations alongside satellite imagery, to aid in the nomination of large archaeological areas to the World Heritage List. Mr Makovics has worked on a variety of sites, including Chersonesos, Crimea; Fort Bliss, Texas; Plain of Jars, Laos; and Abydos, Egypt. In his capacity as Surveyor and GIS specialist, he has provided support to archaeological missions from University of Pennsylvania, New York University, UNESCO, University of Vienna, and the San Francisco Planning Department.

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Caesarea's Frankish Walls:
Providing Magical Protection Through Spolia and Beasts

This paper explores the function of Caesarea's Crusader city walls. Romanesque and Gothic sculpture, as well as Roman spolia, were used at several points during the wall's biography to add an apotropaic function to their physical protection. Archaeological evidence supports that a church was situated along the city's eastern wall during the Frankish occupation of 1101–1187. In this paper I argue that this structure lent a level of magical protection to the city walls through its proximity, a function which was reinforced through the inclusion of apotropaic Romanesque creatures and spoliated Roman elements in the church's floor and walls. This protection was then continued through the incorporation of the church's ruins during King John de Brienne's refortification in 1217. The magically charged spolium was then re-used once more during the next phase of Caesarea's biography during King Louis IX's monumental refortification of 1251–1252. Along with spoliated Roman architectural elements, King Louis IX also used Gothic decorations throughout the city walls to provide military and magical protection. This symbolic protection will be demonstrated by looking at existing architectural and archaeological evidence.

Small arms identification: an interpretation of 16th/17th century lead bullets

During the late 16th and 17th century, firearms became the dominating weapons. However, despite mass production no European country was able to satisfy the need for more firearms for the rapidly growing armies. New equipment had to be imported and soldiers were equipped with out-of-date weapons from armouries. That inevitably led to an inconsistent weaponry with many different calibre small arms. Adding to the problematic, calibres were measured in weight and an inconsistent European weight system led to an even more diversified calibre specification of small arms. Ammunition supply was a constant source of annoyance for every supply officer off which we have sufficient historical proof.

Lead bullets are the most common finds on early modern battlefields and battlefield archaeologists made great efforts to interpret lead bullets with success. Unfortunately, the important issue of calibre specifications mentioned by 16th and 17th century historical military handbooks, which differs substantially from our modern understanding of weapon specifications, has been misunderstood.

The aim of this paper is to demonstrate how to measure and interpret early modern lead bullets by highlighting two different weapons, the German arquebus ('Schützenrohr') and the light Swedish musket. In addition, these two weapons show their impact on the development of early 17th century infantry tactics and formations in Germany according to the examples of the 'Spanish tercio' and the 'Swedish brigade'. This case study will shed some light on Tilly's, Wallenstein's and Gustav Adolf's military reforms during the Thirty Years War.

Re-thinking Bronze Age archery: An experimental archaeological study

The bow has a varied history in war; ranging from the preserve of the elite to a weapon of multitudinous ‘peasant’ archers. However, the prehistory of archery is still poorly understood. Through experimental archaeology we test some possible strategic aspects of bow-use in the Bronze Age. Specifically, we will use a range of bow-weights with bronze arrowheads to test their ability to penetrate four types of armour; leather, fabric, sheet bronze and bronze scale. We examine two forms of archery related to different killing ranges – aimed shots over shorter distances and volley (not aimed) fire over longer distances. In particular, we are interested in evaluating if armour was effective against both forms of attack with different bow strengths. Asessing the combination of material properties of bow, arrowhead and armour allows us to evaluate cultural preferences by reflecting on training or ‘bow-fitness’. The consideration of firing efficacy in turn allows us to consider historical preferences for individual or group tactics. Our case study focusses on Later Bronze Age material culture from Mycenaean Greece and Central Europe where similar armours were used to help better understand the technical and strategic choices for archers within the unpredictable milieu of Bronze Age warfare.

Abstract for a paper

The obligation of documenting anthropological and archaeological finds in Germany is regulated regionally by state specific law. In Bavaria a certified anthropologist must be present on site when skeletal remains are discovered, however, in other states the decision of what to do with skeletal finds is not as well defined. As a result, skeletons are frequently subject to improper exhumation in order to prevent delays in construction, or they are reburied without any scientific examinations having been conducted simply to save money.

In 2008 in northern Hesse, for example, the bones of over 100 individual napoleonic burials from 1813 were collected by hand and put in body bags by police cadets and emptied as a whole into six coffins and reburied. Following an exhumation in 2012, an attempt was made to reunite the jumbled bones as individual skeletons. In only a few cases was the arduous task rewarded with a successful MATCH. This was extremely unfortunate, especially with regard to pathologies, in particular the high frequency of periosteal changes observed on the long bones. Nonetheless some very interesting results were obtained. The regional provenance of the individuals was determined using the Y-haplotype. Furthermore, molecular biological analyses were able to identify pathogens for typhus and similar agents in the bones. Alternatively it can be shown that when numerous skeletons belonging to Napoleonic soldiers were discovered during construction work near Frankfurt in 2015 archaeologists carried out a thorough excavation. Anthropological examinations will be conducted later in Göttingen. The Quality of scientific information will be compared after finishing the anthropological work.

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Patterns in the Chaos:
Spatial Relationships to Historic Battlefields

Within the burgeoning field of Conflict Archaeology, there have been few studies into the relationships between a focussed conflict site, or battlefield, and the wider network of linked features that together form a landscape. It is clear that these events do not exist in a vacuum, and this presentation exhibits what this paper has discovered relating features of the surrounding 'conflict landscape' to battlefield location using GIS as a collative tool.

What this study has seen is that not every statement made about battlefield location within a landscape is borne out by the physical evidence of a site, and moreover this study proposes that the spatial evidence of the conflict landscape may refute many long held theories about how war was fought in the past. What this paper is concerned with, is highlighting situations as described above, elucidating areas where the evidence does not support the accepted theory, but similarly, highlighting situations where such statements ring true when compared to the collated evidence in GIS. This paper aims to demonstrate the advantages of a large-scale spatial study into battles within a conflict landscape, and what that brings to Conflict Archaeology.

POSTER PRESENTATION

An Early 19th Century Mass Grave from Fränkenau, Germany – Bioarchaeological Analysis of Casualties from the Battles of Jena and Auerstedt

Presenting author: Christian Meyer (Chr.Meyer@email.de)

Co-authors: Petra Held, Marc Fecher, Mechthild Klamm, Kurt W. Alt

In 2004, a small mass grave was encountered in Fränkenau, Saxony-Anhalt during construction work. Upon excavation, associated lead musket balls, already pointed at a war-related event within the last few hundred years. This was confirmed by the osteological analysis of the skeletons, which show pipe facets in their dentition and various unhealed injuries. The demographic profile of an all-male sample with an age-range between 20 and 35 years furthermore suggests a military occupation of the deceased. Although the projectiles were found in positions indicating that they entered the soldiers' bodies and presumably caused soft tissue injuries, there is no skeletal evidence of gunshot wounds. In contrast to these results of ranged fighting are the traumatic results of close combat. Several perimortem bone fractures bear witness to blunt force and possibly sharp force attacks aimed at the individuals, including two classic parry fractures.
The combined consideration of archaeological, osteological, and historical information suggests that the skeletons found in the mass grave most likely belong to soldiers killed in the twin battles of Jena-Auerstedt, which were fought nearby in 1806. In the absence of uniform parts, isotope studies were employed to gain insight into their possible origins and to further help in reconstructing these soldiers' life histories.

Biographical sketch of the presenting author:

Christian Meyer is an osteoarchaeologist who is primarily working with human skeletal remains from deviant burial contexts. He has analysed several prehistoric and historic mass graves, most of which have been the result of lethal violent conflicts from the Early Neolithic to the 19th century.

Proposal for the 2016 Fields of Conflict conference,
addressed themes: Landscapes of Conflict, Experimental and Combat Archaeology, Methodological Approaches

An occurence at Vossenack Ridge: Understanding 'hidden' battlefields of modern warfare

In November 1944 US-American and German troops clashed over three villages in the Eifel Mountains south of Aachen. An Operation planned as a quick strike ended in bitter defeat for an American Infantry Division after several days of hard fighting. At the center of the its advance, an infantry battalion was deployed to guard a forward leaning hill slope which became a battlefield for just over a week before the war moved on. Today there are no visible traces of the events which became an important scene in the narrative of a military disaster. A University of Osnabrück team of Historians, Archeologists, Geographers and Cultural Scientists has set out in a series of campaigns to study the site, called 'Vossenack Ridge' by the Americans from an interdisciplinary perspective. It aims to integrate conventional process generated sources, archaeological findings, magnetometric evidence, narratives and memorials as well as specific post-battle processes into a GIS-based, multi layered network which facilitates a reconstruction of events as well as an understanding of their different reflections through various kinds of data often used disconnected rather than in dialog. Designed as a methodological exercise to foster interdisciplinary conflict landscape studies, the project will also shed some new light on a small but significant piece of World War II military history. All in all it contributes to our understanding of those modern day battlefields which often 'quickly' disappear in the absence of heavy earthworks, bunkers and enduring artillery bombardment.

Presenters:
Prof. Dr. Christoph A. Rass, Chair of Modern History and Historical Migration Studies, University of Osnabrueck [please find biographic and bibliographic information at www.chrass.de]

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Experimental firing and analysis of impacted 17th-18th century lead bullets

Colin Parkman, PhD candidate, University of Huddersfield

Abstract:

While the study of bullets from early modern battlefields (1500-1815) has yielded useful data regarding battle location and action there is little comprehensive research on impacted bullets. The vast majority of battlefield archaeological reports refer to the bullets as fired or not fired with little attempt at further explanation or interpretation. The mainstream theory states that if a bullet has suffered any form of impact damage or distortion then the bullet was fired, and if the bullet appears to be unaltered then it was dropped or unfired. The nature of bullet impacts and how the bullet became impacted have yet to be systematically addressed within conflict archaeology.

This paper investigates impacted bullets through experimental firing trials of early modern firearms into targets and landscape features appropriate to battlefield conditions for the period. This is completed through the use of contemporary sources and manuals to assist in building the parameters for the firing trials, the results of the firing trials are then used to examine bullets from the archaeological record. Experimental firing has confirmed that the malleable nature of lead allows distinctive features to be transferred onto the bullet surface allowing for diagnostic analysis. This parallel between the nature of the impact surface and the characteristics transferred to the bullets surface show that the bullet retains impressions transferred from specific actions and surfaces.

Short Bio:

Colin Parkman graduated from The Ohio State University in 2008 with a BA in Anthropology, where he focused on bioarchaeology and forensic anthropology. In 2011, he graduated from the University of Bradford with an MSc in Human osteology and palaeopathology, his dissertation was about the use of cadaver dogs to locate mass graves on fields of conflict. In 2014 he started his PhD at the University of Huddersfield titled *Experimental firing and analysis of impacted 17th-18th century lead bullets*. From 2011- 2016 he has been a part of multiple battlefield surveys in North America, England and Belgium.

Fields of Conflict 2016 Abstract

"... his Troops will probably have melted Majesty fired at them" (Gates, 1776)
An XRF analysis of musket balls possibly made from a Statue of King George III

by Dan Sivilich

Most excavated musket balls typically have a smooth white to tan patena coating and the surface features of the shot are distinctly visible. However, occasionally grayish color musket balls with a blistered surfaces and sometimes flaking patena are recovered. To the untrained eye, the surface characteristics of these alloy musket balls can easily be misidentified as being chewed. The blistering suggests that this is an alloy that exhibits a light galvanic action when in moist slightly acidic soils. I have observed this type of aging in low grade (low tin content) 18th-century pewterware and pewter buttons. During the American War for Independence, lead was in short supply for the Americans. Did they add pewter to their lead for making musket balls to stretch supplies? In 1776 an angry mob pulled down a "leadened" statute of King George III in New York City to make musket balls. Several pieces of the statue survived and are in the New York Historical Society. Was this statue a lead/tin alloy? Can an XRF analysis of the statue parts provide a link to excavated "pewter" musket balls from the 1778 Battle of Monmouth?

Operation Drumbeat in the Gulf of Mexico
Dave Ball and Melanie Damour

Abstract
In May 1942, the Gulf of Mexico was the deadliest waterbody in the world as German U-boats wrought havoc on Allied merchant vessels, sinking on average one Allied vessel per day. In total, 24 U-boats entered the Gulf battlefield during World War II, sinking 56 Allied vessels but losing only one of their own, U-*166*. This Type IXC U-boat carrying 58 officers and crewmen sank, now resting in 1,500 meters of water and less than one mile from its last victim, the passenger freighter *Robert E. Lee*.

The Bureau of Ocean Energy Management (BOEM), the United States governmental agency charged with leasing and permitting offshore conventional and renewable energy in U.S. federal waters, has conducted a number of archaeological and multi-disciplinary investigations of this maritime battlefield in the Gulf. BOEM's investigations have characterized the archaeological and biological features of several of these wrecks in water depths ranging from 18 to 1,965 meters. Research on these historic shipwrecks provides not only additional information on their last moments and the lives lost, but also information about their ecological importance as artificial reef habitats. Currently, BOEM is evaluating the effects of the 2010 *Deepwater Horizon* oil spill on two of these historically significant shipwrecks.

Biographical Profiles
Dave Ball is the Pacific Region Historic Preservation Officer and Regional Tribal Liaison for the Bureau of Ocean Energy Management (BOEM). Dave joined the BOEM Gulf of Mexico Region office in 1999 and transferred to the Pacific Region office in 2010. He received a Bachelor of Arts degree in anthropology from Sonoma State University in 1992 and a Master of Arts degree in anthropology from Florida State University in 1998. Dave has almost 25 years' experience in archaeology and has directed field research on both terrestrial and underwater archaeological sites across the United States, including inundated prehistoric sites in Florida and Washington, World War II shipwrecks, and deepwater shipwrecks in the Gulf of Mexico. Dave is a member of the Register of Professional Archaeologists and currently serves as an elected Officer for the Advisory Council on Underwater Archaeology, an international advisory organization supporting underwater cultural heritage preservation.

Melanie Damour is a Marine Archaeologist and the Environmental Studies Coordinator for the U.S. Department of the Interior's Bureau of Ocean Energy Management in the Gulf of Mexico Region office based in New Orleans, Louisiana. Melanie earned Bachelor of Science (1998) and Master of Arts (2002) degrees from Florida State University, both focusing in marine archaeology. Though she has worked on submerged prehistoric sites in the U.S., Melanie's area of expertise is historic shipwrecks. She has investigated shipwrecks ranging in depth from shallow rivers and bays to more than 2,300 meters in the Gulf of Mexico and in age from the Spanish colonial period through World War II. Melanie's current research focuses on the impacts of the 2010 *Deepwater Horizon* oil spill on Gulf of Mexico shipwrecks by examining the role of microbial communities in wood, iron, and steel degradation and using 3D laser and sonar scanning technology to document shipwrecks and their site formation processes for long-term monitoring efforts.

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As part of the Arras Offensive of 1917, the 1st Battle of Bullecourt 11th April was to act as a feint to draw German forces away, from developments along their defensive structure the SiegfiedStellung (Hindenburg Line). The battle proved to be short sighted in its inception and operation.

During the planning for the assault, the idea to use tanks was hastily put to the senior Commanders without an understanding, of this new weapon's capabilities or limitations. This was also the first battle, which had close cooperation between the Australian Infantry of the 4th Australian Division and the new Tanks, which were appearing on the battlefield. With that in mind, this campaign will be examined through historical sources, archaeology and scientific experimentation.

The archaeological excavations, which will be on the battlefield of Bullecourt, will be carried out in conjunction with Help For Heroes and Operation Nightingale. This gives the opportunity for serving and discharged service personnel the opportunity to understand and participate in the archaeological process. Sites will be ascertained as to their suitability and relevance to the historical record.

The set of scientific experiments into these early examples of Armoured warfare will help identify the nature and the difficulties of the changing structure of mechanical innovation during the first World War.

* In cooperation with the Tank Museum (Bovington) Carbon monoxide testing on a contemporary Mk V engine, will be assessed to understand the levels of toxins on tank crew. An experiment was carried out by a Royal Army Medical Corps (RAMC) Officer, in 1918, and it is hoped to replicate the experiment with up-to-date monitoring equipment.

* The ballistic effects of the German 7.92 mm on Mk II Tank 'boiler plate' will be conducted to understand the level of protection for tank crew.

WW2 conflict archaeology in northwest European forests: recent progress and future prospects

David G Passmore (University of Toronto Mississauga, Canada)

David Capps Tunwell MBE (La Chapelle d'Andaine, France)

Stephan Harrison (University of Exeter, U.K.)

Abstract

This paper reviews the emerging record of WWII conflict landscapes that are well-preserved in the forests of northwest Europe, and with a particular focus on recently documented and previously unpublished sites associated with the 1944 Normandy campaign in France. A classification of landscapes and features, including logistics sites, bomb and shell craters and field fortifications is established using a combination of field survey, post-war aerial photography, LiDAR and contemporary historical documents from both Allied and German sources. This is used as the basis for a critical evaluation of these landscapes with respect to ongoing and potential research themes in two linked areas.

Firstly, woodland environments are considered with respect to their preferential use for particular types of military activity and their associated landscapes, and in turn how this relates to the broader military geography of the Normandy Campaign. Archaeological evidence of such activities range from the landscapes of small-unit actions, illustrated here in the context of the advance to the River Seine by elements of the First Canadian Army, to extensive arrays of earthworks and bomb craters that are casting new light on the successes and failures of Allied intelligence gathering and subsequent bombing of German fuel and ammunition depots in the Normandy region. Secondly, it is argued that the conflict archaeology of forested landscapes offers new perspectives for the development and management of the region's WW2 heritage, and especially with regard to extending the visible archaeological record into landscapes of military support and narratives of the civilian and non-combatant experience of occupation and aerial bombing.

Author profiles

Dr David Passmore is currently lecturing in Geography in the Department of Geography, University of Toronto Mississauga, Canada. He is a geoarchaeologist with interests in conflict archaeology, military geography, environmental change and cultural resource management. His current focus is on Second World War landscapes in the forests of northwest Europe.

Mr David Capps-Tunwell MBE is a PhD student. Retired from Royal Navy after a career in aircraft engineering, he now lives in Normandy, France. He is currently researching German logistical support and the impact of Allied tactical bombing during the battle for Normandy using archive sources and geoarchaeological analysis of landscape evidence.

Dr Stephan Harrison is a climate scientist working in the College of Life and Environmental Science at Exeter University in England. His main research is on the response of glaciated mountain systems to climate change and climate change policy. He also has a long-standing interest in the ways in which geomorphological systems interact with combat situations.

Counter Battery fire in two World Wars and beyond. Did it work ?

An outline of the development of indirect artillery fire and how it worked in practice. Methods of controlling indirect fire. The concept of locating enemy artillery so as to direct counter battery (CB) fire. The methods used in locating particularly in both World Wars: observation by aircraft; flash spotting; sound ranging; balloon observation; listening and interception. Counter protection. Subsequent involvement of CB fire in the Korean War, the French Indo-China War, Vietnam, Iraq, and in the Ukraine. Modern technology and the use of radar. How effective has it all been ? Can archaeological techniques be employed to answer this question ?

Public Outreach, Focused Research, and A Broad View: Lessons from the *Palo Alto Battlefield National Historical Park*

Peter Bleed and Douglas Scott

The Department of Anthropology, University of Nebraska-Lincoln entered into an agreement with Palo Alto Battlefield National Historical Park and the Southeast Archeological Center, National Park Service to organize a series of presentations by international researchers the archeology of conflict. That conference became part of the Field of Conflict Conference. Engendering discourse and new ideas was one goal of the original effort and ultimately this is a successful conclusion to the rescheduled effort. As a formal assessment of that project, this event will reconvene participants in the Palo Alto session. With a structured round table format, we propose to engage original participants and others in discussion of emergent questions, techniques, and interpretations that were presented by post-session discussions, videotapes, and published proceedings of the 2014 Palo Alto Conference.

Please note: We would like to request a one hour block for this project, ideally in a venue where informal consumables can be available.

Peter Bleed completed his PhD at the University of Wisconsin in 1973 with a focus on Stone Age Japan. Following a long-term interest in Japanese weapons and the design of technical systems, his research expanded to historical, industrial, and battlefield archaeology. In addition to papers on theoretical assessment of archaeological materials, he has published a novel and co-authored series of archaeological volumes with Douglas Scott on conflict and military sites. He joined the faculty of the University of Nebraska in 1972. After serving as department Chair and Associate Dean of Arts and Sciences, became Professor Emeritus in 2014.

Douglas D. Scott

Retired in 2006 from the US National Park Service after more than 30 years of with the Department of the Interior, his last position was as Great Plains Team Leader, Park Programs, Midwest Archeological Center Lincoln, Nebraska. He is currently a Visiting Research Scientist at Colorado Mesa University and an affiliate with the Department of Anthropology, University of Nebraska-Lincoln. Doug received his Ph.D. in 1977 in Anthropology from the University of Colorado, Boulder. He has worked throughout the Great Plains and Rocky Mountain West on a variety of archeological projects. Doug specializes in nineteenth century military sites archeology and forensic archeology. He is particularly noted for his expertise in battlefield archeology and firearms identification having worked on more than 40 battlefield sites.

The Battle of the Rosebud: Prelude to the Battle of the Little Bighorn

Douglas D. Scott, Visiting Research Scientist, Colorado Mesa University

The Battle of the Rosebud, located in Southeast Montana, took place on June 17, 1876, some eight days before the Battle of the Little Bighorn. The Little Bighorn has often overshadowed the Rosebud story, but recent archaeological research at the battle site by Colorado Mesa University to assess the effect of a wild fire on the archaeological resources identified previously unknown fighting positions. Cheyenne warriors under the general leadership of famed warrior Crazy Horse conducted a coordinated surprise attack against an army column taking a rest break. Shoshone and Crow scouts inadvertently discovered the massed Cheyenne warriors and likely saved the day for General Crook's column. The archaeological record clearly demonstrates the role the scouts played in the early fighting. The Cheyenne victory embolden these same Indians, who eight days later annihilated five companies of Seventh U.S. Cavalry at the Little Bighorn Battle. These two battles can be considered two of the most important victories over the U.S. Army during the American Indian Wars. As a zenith of Indian power they hold great significance to Native Americans today.

Douglas D. Scott

Retired in 2006 from the US National Park Service after more than 30 years of with the Department of the Interior, his last position was as Great Plains Team Leader, Park Programs, Midwest Archeological Center Lincoln, Nebraska. He is currently a Visiting Research Scientist at Colorado Mesa University and an affiliate with the Department of Anthropology, University of Nebraska-Lincoln. Doug received his Ph.D. in 1977 in Anthropology from the University of Colorado, Boulder. He has worked throughout the Great Plains and Rocky Mountain West on a variety of archeological projects. Doug specializes in nineteenth century military sites archeology and forensic archeology. He is particularly noted for his expertise in battlefield archeology and firearms identification having worked on more than 40 battlefield sites.

The Evidence of Clothing in Investigating Conflict

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A PhD student at Cranfield University. Having completed an undergraduate degree in Forensic Science in Lincoln University Emma further specialised her studies in Forensic Archaeology and Anthropology to Masters level at Cranfield University. She then took a short break from academia to work in the pharmaceutical industry before returning to Cranfield in October 2015 to commence her PhD.

Abstract

The aim of this research was to look at the effects of ballistic trauma on different types of fabric and the underlying tissues. This poster presents the data obtained from the testing. The investigation studied WWI (1914-1918) clothing and armour using two firearms of the central powers at the time (Mauser M1916 rifle and a Luger pistol). In the experiment porcine rib cages were placed into woollen fabric bags; specimens were shot using velocities representative of two typical engagement distances. There were five replicates for each firearm at each relevant distance, including one additional set with armour and one non clothed set as a control. The nature and behaviour of the fabrics was considered (organic vs synthetic – extension and tear potential). Patterns produced on the fabric by the projectile were studied; and its shape, size and other defects were noted. Wounding on the underlying tissue was also observed, looking at whether the projectile had impacted the bone or not and the shape and size of the wound. The results from each firing were then compared, this was done in order to make a conclusion on whether the projectile type and range could be determined using clothing and wound defects. This research will assist future reporting in cases of human rights violations, civilian deaths in conflict and forensic police cases involving a victim of violent crime.

Taínos vs. Caribs: An Imagined Conflict

From Columbus forward, the Spanish colonial project was founded on the use and abuse of Americas' indigenous peoples. Whether Indians were considered rebellious, cannibals, or "useless," the Spanish found reasons to enslave the "Caribs" of the Caribbean. In October of 1493, Christopher Columbus returned to the Caribbean. This time he altered his course, this time heading to the Lesser Antilles. It was in these small islands that Columbus and his men first encountered "Carib" Indians. Finding various human bones hanging from an abandoned hut, and others boiling in a pot, the travelers deduced that the island's inhabitants were cannibals. This judgement created the dichotomy between the "good" Taínos and the "vicious" "Caribs" that would survive for centuries. The Spaniards would use the specter of cannibalism, and the label of "Carib," to justify the enslavement of indigenous peoples across the Caribbean and South America for decades to come. However, recent archaeological and historical studies highlight the fluidity of the pre-colonial Circum-Caribbean. While most evidence can only prove occasional trade between distant regions or islands, it suggests the possibility of tighter kinship bonds connecting the Caribbean islands to both North and South America. It follows that the firm distinction and conflict between the Taínos and the Caribs was a Spanish construction, ultimately designed to enslave Indians. This paper deconstructs this dichotomy and begins to reveal the pre-Colombian relationship between the Taínos and the Caribs.

ARTEFACTS DON'T LIE?

Research on conflict sites often depends on mapping distributions of metal artefacts recovered from the topsoil using metal detectors. It is therefore surprising we have such a poor understanding of processes taking place in the topsoil that impact on the stability of the evidence and our ability to recover a representative sample.

Using results from pilot experiments and surveys which have begun to address some of the issues, this paper reviews the factors at work and their implications for site potential, survey methods, interpretation of data recovered, and the conservation of the sites. Processes examined include the drift of artefacts caused by different types of agricultural machinery and practices, both modern and historic; the migration of artefacts down the soil column under worm action in uncultivated soil and the implications of this, not least for rates of decay; problems of contamination from re-enactment and other public events and public access; the implications of removal of artefacts by collectors; and issues of consistency in the recovery of objects in surveys.

The assessment leads to the conclusion that we need a large scale programme of investigation, bringing together existing data and newly collecting a wide range of objective data that can assist in transforming metal detecting from a 'craft' into a more typical archaeological survey method.

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The Centre for Medieval and Renaissance Studies

The Ninth Biennial Fields of Conflict Conference 22-25 September 2016 – Trinity College, Dublin

The Community Behavior Towards The Landscapes Of Conflict In Gaza - War 2014

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Abstract: It is hard to imagine the forms of human behaviors and reactions in dangerous environments where there are conflicts and wars. The last war on Gaza in July 2014 showed many suffering and humanitarian encroachments done by the Israeli forces and brought not only pain, vagrancy, and destruction; but also produced new cultural and urban realities and reactions that were formed by the act of the occupation and Palestinian's will to struggle and endure on the land. The research will aim to investigate the Palestinian community behavior towards the violent degradation of landscape and built form in space of conflict in Gaza during the last war 2014. The research will use the qualitative research methodology and apply a combination of two approaches to investigate social phenomena among the landscape of conflict; the phenomenology approach together with the ethnographic approach. In the ethnographic method the investigation will focus on visual ethnography which depends on using photographs as a methodological tool. On the other hand the phenomenological approach will help in investigating the external appearance and inner consciousness of phenomena based on memory, imagery, and meaning. The findings will draw lines for a new way of thinking within architecture to refine these spaces of fragmented landscape, and convert them into fertile spaces of social behavior.

Key words: *conflict, Gaza, Palestine, Community, Landscape.*

Under Pressure: PoW Camps as Sites of Conflict

PoW camps have had relatively little attention from archaeologists, with most current research carried out by historians. PoW camps have always been places where conflict was continued between prisoners and their captors, with many prisoners determined that their duty was to escape. At the same time, there were always many prisoners for whom the PoW camp was a welcome respite from the horrors of the frontline and the constant presence of death. PoW camps were pressure cookers where large numbers of young men were incarcerated with little idea of what the future held for them. This pressure could radicalise men and make them more determined to continue the war, or it could turn comrades against each other as different perspectives on their incarceration clashed. This paper will explore the historical and archaeological evidence for the different conflicts that raged in the confinement of the PoW camp.

Dr Iain Banks
Centre for Battlefield Archaeology
University of Glasgow

CHALLENGES OF WORKING WITH LEGACY DATA FROM DETECTORISTS: A CASE STUDY IN THE FABRICATION OF EVIDENCE

Dr James Bonsall[1 2] (Presenter) and Dr Glenn Foard[3]

[1]Department of Environmental Sciences, Sligo Institute of Technology;
[2]Earthsound Archaeological Geophysics;
[3]Reader in Battlefield Archaeology, University of Huddersfield

Legacy data from subjective 'leisure' metal detecting activities, rather than systematic archaeological survey poses a number of challenges to the study of conflict sites in the UK and elsewhere. An increasing level of confidence can be applied to different collection and mapping strategies. At worst there is an unrecorded and unusable jumble of finds from different sites. Very limited understanding is possible where each site is separate (as at Newburn), or vague locations from memory for rarer artefacts (as at St Michael's Mount). More is possible with a sketch plan from memory (as at Naseby), or rough locations for groups of finds (as at Lafelt, Belgium). At best, every find is individually bagged and GPS located (as at Tywardreath).

The recovery of finds from the 1644 Battlefield of Cheriton has long been an example of the best systematic work by detectorists, though data from only one field was published. The recent acquisition of finds and records by Winchester Museum, following the death of the detectorist, promised important information (recovered and recorded more than 20 years ago) to complement a major new study of terrain and action at Cheriton. Concerns for the reliability of some detectorist data have been discussed before (cf. Marston Moor), but the re-examination of finds and records from Cheriton provided a thoroughly unexpected result. Comparing the earlier analysis of 355 artefacts with previously unseen composite plans, sketches, notes as well as a reappraisal of the finds themselves, revealed a remarkable fabrication of a 'systematic' survey derived from far more 'typical' haphazard detecting. The case study highlights important issues that challenge the veracity of claims made by untrained practitioners and the use and provenance of legacy data for the study of conflict sites.

Janene Johnston
University of West Florida
A Civil War Battlefield: Conflict Archaeology at Florida's Natural Bridge

Abstract:
The American Civil War Battle of Natural Bridge was fought within miles of Tallahassee, Florida, in March of 1865. Much of the site is now the Natural Bridge Battlefield Historic State Park and a metal detector survey was conducted with the help of a wide range of volunteers and community stakeholders including students, members of Florida State Park Service, the local archaeological society, and Civil War reenactors. The results from the survey are being utilized to provide an updated analysis of the conflict and how the landscape provided a key tactical advantage for the Confederate forces. The project will also produce new interpretive signs, as well as a traveling exhibit that will be later expanded into an on-site museum. 2015 celebrated the 150th anniversary and the excitement about the project from the community helped to drive this project forward.

Bio:
Janene Johnston is a graduate student at the University of West Florida. Her main areas of interest are conflict archaeology and public outreach. She received her bachelors from Eastern Kentucky University in 2011 and took some postgraduate classes at Murray State University. Janene completed her field school at James Madison's Montpelier, where excavations were being conducted at the domestic slaves' quarters. She has also worked as an intern at the Center for American Archeology, where she supervised both high school and adult field schools. Janene is currently a public outreach intern with the Florida Public Archaeology Network.

Abstract for submission under Aspects of 1916 theme:

Basket weaving and wooden legs: the materiality of rehabilitation at the Princess Louise Scottish Hospital for Limbless Sailors and Soldiers in 1916

Dr Jen Novotny, University of Glasgow

The foundation of the Princess Louise Scottish Hospital for Limbless Sailors and Soldiers (still in existence today as Erskine) on the banks of the River Clyde in 1916 was a direct response to the need for specialised medical facilities to deal with the unprecedented number of injured service personnel returning from the Great War. At the Princess Louise Scottish Hospital, the West of Scotland medical and industrial communities came together to mend broken bodies and minds with prosthetic technology (e.g. the Erskine limb), as well as physical and mental rehabilitation to prepare the limbless to re-enter the job market.

This paper explores the materiality of health and wellness at the hospital during the war years, from the tools and materials used in the design and manufacture of artificial limbs, to the manual therapy workshops and other curative spaces created at Erskine House.

Biog:

Dr Jen Novotny is a Research Assistant at the University of Glasgow currently working on Glasgow University's Great War, a research project marking the First World War centenary by examining the experiences of the university community, 1914-18. She holds a BA (*summa cum laude*) in History and English from Chatham University (Pittsburgh, USA), as well as MLitt (with distinction) in Battlefield and Conflict Archaeology and PhD in Archaeology from the University of Glasgow. Her on-going research focuses on the vestiges of modern conflict, particularly the material culture of war and violence. She is a member of the AHRC-funded Voices of War and Peace research network, as well as the Glasgow University Medical Humanities Network.

Following the steps of Scipio Africanus:First results of the project *Via Scipionis*

Authors: GALLEGO, J. M., BLE, E., GARCIA, J., VALDÉS MATÍAS, P.

The *Via Scipionis* is an Experimental Archaeology, Historical Dissemination and Reenactment project whose aim is to recreate the march that *Scipio Africanus* led from his main military camp near the mouth of the Ebro river to the capture of the city of New Carthage. A first edition of the experiment was conducted in August 2015 and involved seven reenactors marching a distance of 460 km in 15 days (meaning an average of more than 30 km/day). A second edition is planned for April 2016.

In this paper we want to focus in the scientific and archaeological aspects of the experiment. Indeed, the seven participants (all volunteers) were characterized all the time as Roman legionaries or allied troops (Italian *socii* or Iberian *auxiliarii*). As a result, during the 15 days of the march it was able to collect much interesting data regarding both physical and personal aspects (energy consumption, hydration, common diseases or injuries) and linked to the equipment (shoes weariness, systems for shield hanging or weapons and baggage carriage, tent assembly). The alimentation of the Roman legionaries and their daily activities were also recreated, with a strict diet based on the information available from the written sources.

Frongoch camp and the archaeology of the 1916 Rising

Dr Joanna Brück, University of Bristol

In 1916, some 1700 Irish men were interned at Frongoch, North Wales, in the aftermath of the Easter Rising. Dubbed the 'university of revolution', Frongoch holds a key place in Irish nationalist narratives of the road to independence, for it was here that politically disparate groups forged a common sense of purpose. Although long the subject of historical research, archaeological approaches are only now beginning to be employed on the Rising. This paper will explore recent research on the material culture of internment, focusing in particular on craftwork made by internees at Frongoch, and will outline the results of ongoing archaeological fieldwork at the site. Such work allows us to consider how internees, guards and the local community engaged with objects, buildings and landscapes to sustain and transform both political identities and cultural values. A century on, as we revisit anew the legacy of the first world war, archaeological approaches can provide fresh perspectives on this other conflict located at the heart of empire.

Paper for the IXth *Fields of Conflict* conference, Dublin, Ireland, September 2016

THE WIDER LANDSCAPES OF FIELDS OF CONFLICT

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The literature of Battlefield Archaeology concentrates on issues of methodology but there is less concern for theorising the object of our studies.

Any battlefield is a defined area of space located within a larger space through which forces moved to reach the location of fighting. Battlefields are located with a 'theatre of war' representing the broader territory under contention and which may contain other battlefields, siege sites, fortresses, encampments and roads and waterways used for the transport of troops and matériel. These are physical spaces, definable on a map or on the ground. At the conceptual level, a battle is a particular kind of event, distinguished from other violent activity on a range of criteria. Battles are fought as part of larger campaigns involving other forms of military activity (sieges, marches, occupations, etc.) designed to achieve particular results, and these in turn are part of specific wars fought to achieve defined political outcomes. Beyond individual wars, there is the condition of 'war' or being 'at war' which may or may not involve fighting.

While battlefields are themselves physical landscapes, they are also located in wider spaces both physical and conceptual. This paper will locate the idea of the battlefield in those wider physical and conceptual landdscapes in order to examine some implications for their study.

Biographical profile:
John Carman is Senior Lecturer in Heritage Valuation at the Ironbridge International Institute for Cultural Heritage, University of Birmingham and a regular presenter at *Fields of Conflict* conferences. He co-founded the Bloody Meadows Project with Patricia Carman in 1998. Among many other publications, he is co-author with Patricia Carman of *Bloody Meadows: Investigating Landscapes of Battle* (2006), sole author of *Archaeologies of Conflict* (2013), editor of *Material Harm: archaeological approaches to warfare and violence* (1997) and co-editor of *Ancient Warfare: archaeological perspectives* (1999). He is co-founder and Convenor of *ESTOC: European Studies of Terrains of Conflict,* an international expert group on battlefield archaeology, and is the subject of an entry in the Springer *Encyclopaedia of Global Archaeology* to which he also contributed the section on 'Battlefield Archaeology'.
Patricia Carman is a historian, archaeologist and qualified teacher, a regular presenter at *Fields of Conflict* conferences, co-founder of *ESTOC: European Studies of Terrains of Conflict* and co-author of *Bloody Meadows: Investigating Landscapes of Battle* (2006) and other publications.

Fields of Conflict 2016

The Roman Siege of Burnswark Hill: A Conflict Rehabilitated?

JH Reid

Burnswark Hill is a unique complex of native and Roman earthworks in Dumfriesshire in SW Scotland. For over fifty years, archaeologists and historians have interpreted the events that took place here within a theoretical framework of non-confrontational Roman practice works. This framework is partly influenced by received wisdom on the supremacy of the Roman army and theories of Roman military training prevalent within some academic circles, and partly by selective observation. The consequence is what one author terms the 'denial of a stirring historical episode on Burnswark Hill in the mid second century AD'.

Now, following two seasons of fieldwork, data is emerging which strongly supports a bitter conflict between the Roman army and the indigenous population. The Burnswark Project utilises an innovative programme of geophysics, excavation, novel non-invasive metal detection, and drone imaging. The project also includes experimental archaeology of Roman projectiles found at the site adding to a new understanding of Roman ballistic warfare.

We will share results that challenge Romanocentric preconceptions. We will demonstrate how this orthodoxy has ultimately resulted in a skewing of evidence of what appears to be one of the earliest identifiable battlefields on Scottish soil.

Metal Detector and Geophysical Investigations on the Fall 1863 American Civil War Bivouacs of the Federal Army, 2nd Corps, 3rd Division, 2nd Brigade, Culpeper County, Virginia, USA

by

Joseph F. Balicki
Regional Director
Commonwealth Heritage Group

On 10 November 1863, after a month of active campaigning, the 2nd Corps, 3rd Division, 2nd Brigade of the Army of the Potomac established bivouacs at Milton's Mill, near Brandy Station, Virginia. Positioned in front of the main Federal Army, these troops served as pickets; the advance guard facing the Confederates. The five regiments in the brigade occupied these camps for 16 days before the Federals resumed advancing on the Confederates. These camps were front-line short-term bivouacs of troops on active campaign. The material culture these soldiers possessed differs from troops in permanent camps, rear-echelon camps, and winter quarters. The artifact assemblage found in a front-line camp reflects one activity: warfare. In such situations, ammunition, weapons, sustenance, and a means of carrying these items are essential for increasing one's chances of survival. Left behind the lines were many of the items that made life tolerable, and trappings of the social spheres in which the soldiers interacted in the civilian world. The field methodologies developed and employed to investigate these bivouac sites demonstrate that methodologies emphasizing metal detection and geophysical survey will provide quantitative and meaningful information on the material culture of front-line troops, adherence to military regulations, and intra-site patterning.

Biographical Sketch

Joseph F. Balicki is Regional Director for Commonwealth Heritage Group's Virginia, USA office. He has an MA in Anthropology from The Catholic University of America and over 35 years experience in Middle Atlantic archaeology. His research focus is on the archeology of military encampments and fortifications. He has published numerous articles on American Civil War bivouacs, winter quarters, cantonments, and permanent military camps and the methodologies used to investigate these site types. He is an instructor for the Register of Professional Archaeologist's class, Advanced Metal Detection for the Archaeologist.

Challenges and specificities of battlefield archaeology in Argentina: The case of Cepeda battlefield, 1859

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The battle of Cepeda, 1859, was one of the high points in the crucial confrontation between the Argentine Confederation and the then rebellious Buenos Aires Province, which shaped the process of modern nation state building. Whereas the confederate army commanded by president Justo J. Urquiza defeated the provincial army led by Bartolomé Mitre, this victory would not be decisive and more fighting would follow until Buenos Aires' definitive triumph in 1861. The battle has only been studied by historians, using the contradictory commanders' battle reports.

This paper presents the archaeological research on the battlefield. We discuss methods, finds, and interpretations, but also use this case study to address three major issues that differentiate this battlefield study from contemporary European and North American cases: 1) Heterodox battle tactics, which combined Napoleonic style tactics for infantry and artillery, with a locally developed emphasis on irregular and light cavalry; 2) A lack of written sources on both weapons employed and specific details of the battle; 3) Landscape transformations that significantly altered the original battle ground. As a whole, these issues -a widespread occurrence in Argentine XIXth century battles- challenge the development of battlefield studies and pose limitations to its interpretive potential.

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ABSTRACT

This contribution will deliver examples of generated predictive models which have led to a range of success in finding previously unknown features and evidence of battlefield activity on the Brandywine Battlefield, September 11, 1777. These innovative approaches: KOCOA-PLUS (KOCOA+) and INTEREST-DENSITY (I-D) have been utilized to locate an extant battlefield trench, portions of a 1777 road, and a tangible approximation of one area of the hottest fighting: The American artillery position under the command of Col. James Proctor, assaulted and taken at point of bayonet by Crown Forces and their allies. Additionally, a portion of the American second line of defense may have been located as well as another reinforced position. .

The potential to expand from interpretive analysis to predictive model has been supported by this new approach coined: Interest-Density and the KOCOA-PLUS variant. Through the application of additional attributes of historiography, military science, and game theory this paper contributes new and improved approaches in conflict archaeology. KOCOA+, which builds upon the general requirements of KOCOA (interpretive) to KOCOA+ (predictive), and Interest-Density (I-D) a linguistic and textual analysis of contemporary and supplemental primary resources as well as post-battle and later histories. This research has identified significant and previously unknown battlefield features.

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My research takes a multidisciplinary approach to eighteenth-century conflict archaeology, emphasizing the relationships among the historical and material culture records, historical ethnography, preservation, the archaeological record, and public outreach service programs. It also involves developing my technical skills in archaeological and ethnographic fieldwork, GIS applications, remote sensing, and photogrammetric analysis in order to better understand site formation processes and community development. I received my B.A. in anthropology from the University of Pennsylvania in 2005.

"*This wouldn't happen at Gettysburg*": A development proposal within the Inventory of Historic Battlefields, Scotland

In December 2011, Highland Council received a planning application for 16 houses at Viewhill Farm near Inverness, Scotland. The site in question was the location of a large modern farming complex, which by 2011 had been derelict for a number of years. However, it also lies on land within the Inventory of Historic Battlefield's boundary for the battlefield of Culloden (1746). The subsequent media coverage and international interest in the case highlighted differing perceptions of the purpose of the Inventory, and the planning system within Scotland more generally.

This paper will analyse the case in detail, beginning with the initial planning proposal. It will look at the reasoning and decision made by Historic Scotland not to object to the specific development, the media and public narrative created around the case, and the results of the appeal process lodged by the applicant. It will also discuss the subsequent events since the appeal was granted in 2014.

Finally, the paper will consider a phrase often repeated during the case: "*this wouldn't happen at Gettysburg"*. The paper will compare the situation at Gettysburg with that of Culloden, and examine where the differing approaches can both be effective, and their weaknesses.

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Most visitors to Niagara Falls, Ontario Canada are very familiar with the tourist areas of Lundy's Lane and Drummond Street but few are aware that one of the bloodiest battle of the North American War of 1812 took place below this urban centre. Multiple battles occurred around Niagara Falls during the War of 1812, -and later during the Rebellion Crisis of the 1830s- and this has caused the area to be a veritable "hot bed" of artifact discoveries by the public. Houses, hotels, and restaurants sprang up to meet the tourism trade in the area; these pockets of expansion were often on top of areas where battles were fought or soldiers were billeted. That urbanization of former battlefields has created somewhat of a unique situation in Niagara Falls; particularly since the public can regularly find a large number of artifacts that could be tied to historically significant moments in Canadian history. This paper investigates how the Niagara Falls History Museum decides what artifacts to accept when they are brought in by locals. Of particular interest will be the public attitudes towards museums that are associated with famous conflicts or battles and how the collection of battlefield artifacts has changed in the last 30 years in Canada. Finally the paper concludes with a short examination of what steps may be taken to enhance the knowledge of our military past without filling our museums with artifacts not deemed worthy of collection and/or display.

Cowpens Revisited: Bullets and Battle Episodes

IX Fields of Conflict

Dublin, Ireland

2016

By

Lawrence E. Babits

East Carolina University (ret.)

Greenville, North Carolina

Abstract

The book, *Devil of a Whipping* (Babits 1998), was originally written as an historical study preceding archaeological research on the 17 January 1781 battle between British forces under Banastre Tarleton and Americans under Daniel Morgan. During August 2015, an archaeological survey and recovery project covering over 75 percent of the battle site took place under National Park Service aegis. The precise locating of artifactual material generated fairly specific questions relating to battle episodes, troop placement, and combat performance, especially musket and rifle use, as well as post-battle land alteration. While the

interplay between documentary and archaeological artifacts changed some interpretations, it also enhanced understanding of what occurred, and where, during the engagement.

Brief Bio

Lawrence E. Babits, George Washington Distinguished Professor
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Larry Babits has extensive experience in military and maritime archaeology. He has excavated battlefields, fortifications, and a World War II POW camp. In addition to his academic side, Babits served three years in the US Army, largely with B Company, 1st Battalion, 21st Infantry (Gimlets). He has extensive experience as a reenactor, especially Revolutionary War and Civil War private soldiers. He has sailed tall ships and traveled extensively, including Afghanistan, Iran, and Europe. He is currently involved with researching smoothbore musketry accuracy and shooting Civil War weaponry competitively with the First Maryland Infantry of the North-South Skirmish Association. In his leisure time, he does rugby.

Going ballistic: Identifying sling shot injuries in prehistoric Europe

Skeletal trauma evidence offers information on the frequency of violent interaction and answers questions on behavioural patterns – who was involved, the scale of the event, tactics employed and the most likely aim of the attack. As documented in both the historical and ethnographic record with practice anybody can learn how to competently use a sling - children and adults, men and women. Depending on preference and local conditions, suitable ammunition is readily available, including clay and stone shot. It makes slings an extremely powerful and potentially ubiquitous weapon. The use of slings as weapons of interpersonal violence in prehistory, the Neolithic in particular, has been well-documented only for southeast Europe and Western Asia – but slings have been neglected as an important feature of violent interaction in the small-scale, tribal societies of the Western and Central European Neolithic.

This paper will present the results of an experimental study of sling trauma, utilising Synbone spheres, filled with ballistic gel to simulate brain tissue, that were hit by an experienced slinger with sling shot from varied distances and with different clay and stone missiles. Synbone is bone-like polyurethane displaying the same fracture properties as human bone and widely used in ballistics testing. The fractures resulting from the experiment will be discussed and compared to a substantial record of Neolithic cranial trauma cases to explore possible matches and to try and identify the wider use of slings and their associated cranial injuries in the osteological record of Western and Central Neolithic Europe.

Linda Fibiger is a Lecturer in Human Osteoarchaeology and Programme Director of the MSc in Human Osteoarchaeology at the University of Edinburgh. Her recent publications focus on violence and conflict in Neolithic Europe as well as aspects of history, guidelines and practice in osteoarchaeology and forensic archaeology.

Luisa Nienhaus is a PhD candidate at the UCL Institute of Archaeology, focussing on the commemoration of the Napoleonic Wars and battlefields.

Surveying the Battlefields: Battlefield Landscapes and the Public

This paper deals with the public knowledge of battlefields and discusses the questions:

- How does the public comprehend battlefields?
- Is it enough to know the historical background on certain events to understand a battlefield?
- What are the roles of displays at battlefields in the educational process, and how can they be used effectively?

For this discussion, three battle sites were chosen: Bosworth (1485), Boyne (1690) and Culloden (1745). All three chosen sites represent a major event within their respective country's history and have dramatically varied levels of significance to visitors as sites of commemoration. The diverse nature of the topic required a multidisciplinary approach which includes museum studies, battlefield tourism, visitor studies and ethnographic methods.

The study shows that all three sites successfully increased their visitor's understanding of the historic context and the battlefields, while utilising very different learning and interpretation strategies. Furthermore, the paper will demonstrate how positive learning outcomes are likely to be determined by a balanced use of factual information combined with other elements of edutainment, as well as the visitors' emotional engagement.

Parker's Revenge Revealed

Margaret S. Watters

Northeast Regional National Park Service, Lowell, MA

April 19, 1775, at the border of the towns of Lexington and Lincoln in Massachusetts, Captain John Parker and the Lexington Militia met the British Regular troops for a second time as the British column retreated to Boston following the exchange of fire that marked the start of the American Revolutionary War at Concord's North Bridge.

A long time focus of the Lexington Minute Man re-enactment community, the location and details of the battle were not known despite the robust body of historical research. Using an integrated archaeological approach the historical landscape was reconstructed enabling targeting and identification of not only the location of the battle, but also insight to the tactics utilized during that engagement.

The 32 fired and dropped Colonial and British musket balls mapped through metallic surveys are revealing details of the battle. Focused investigation of individual musket balls looking at velocity impact and patterning on the musket balls combined with X-ray florescence and protein analyses seek to provide a detailed interpretation of the moment of engagement.

From its inception, the Parker's Revenge project combined best practices in archaeological investigations, commitment to public engagement, and strategic planning for site access and preservation. The project has engaged in community collaboration using archaeology as a gateway to science fully incorporating the inherent STEM principles of this discipline in field research, planning for outreach programming, and site rehabilitation.

Military barracks at the border of Buenos Aires indigenous territories and the coast of the Río de la Plata during the XVIII and XIX centuries.

María Inés casadas; María Eugenia Peltzer; *Guillermo Bertami and *Leonardo Mudry.

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This paper presents the archaeological research of the leading military strategic points according to their hierarchy. Protect forts, fortresses, and barracks functions were to conquer the different indigenous territories of Buenos Aires pampas and to protect cities from external invasions on the Costa del Rio de la Plata. Which have resulted in the creation of historical settlements as villages.

Our objective is to analyze the historical sites of the region in terms of spatial, functional, and socio-historical relationships. By applying the methods and techniques of historical archeology we will obtain maximum information on the aforementioned settlements, the procedures relating to the first cities, and their changes in sociocultural over time.

This research also intends to conduct a comparative analysis of the materials recovered from the different archaeological sites in the area in order to determine the spatial correspondence, technologies, sources, and other characteristics that show their connection and relationship to the regional area.

Mästerby, Gotland, 1361- the discovery of the mythical battle

Maria Lingström

Lingström, M. 2016. Mästerby, Gotland, 1361- the discovery of the mythical battle

The Danish invasion of Gotland in 1361 is well-known amongst archaeologists due to the finds from the mass graves at Korsbetningen in Visby. Around 1,800 men were buried, many of them in full armour, after the battle outside the town wall on the 27 July.

What is not commonly known is that several battles were fought on Gotland prior to the Visby conflict. In 2006 a project group called *Mästerby 1361* was founded. The goal was to locate the mythical 1361 battle/s, which according to oral tradition took place near the inland parish of Mästerby.

So far 340 battlefield finds have been located and recorded, include sword fragments, battle knife fragments, spear heads, crossbow bolts, spurs, parts of armour and links of chain mail. The objects are almost exclusively ferrous. The Mästerby weaponry finds complements the information from the mass graves in Visby, where very few weapons were found. The Mästerby 1361 finds constitute a 'time map', on which battle events are traced.

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The Structure of Battle: Vázquez de Coronado and Evidence of Expeditionary Conflict in the American Southwest from 1540-1542

Matthew Schmader
University of New Mexico
City of Albuquerque Archaeologist

From 1540 to 1542, captain general Francisco Vázquez de Coronado led the largest land-based sixteenth century Spanish exploration of the western United States. The expedition consisted of about 375 European men-at-arms and an estimated 1,300 indigenous Mexican soldiers. Weaponry was scarce, with just 21 crossbows, 25 *arquebuses*, and 60 swords. The expedition found its way to the Rio Grande valley in present-day New Mexico. There, unprepared for the coming winter, Coronado's men appropriated a native Puebloan village and began a series of escalating hostile actions. After several battles, more than 200 native people were killed and any hopes for peace completely broken.

In the modern city of Albuquerque, New Mexico, the intact remains of a pueblo village contain evidence of Coronado's fight with indigenous peoples. The site of Piedras Marcadas pueblo has been investigated by geophysical remote sensing since 2007 and has produced material evidence of a battle. Crossbow boltheads, lead musket balls, broken and lost personal items, and many metal fragments are found in association with buried mud-brick (adobe) architecture. The relationship between metal artifacts, adobe walls, and other indigenous artifacts such as slingstones and stone arrow points depicts the structure and inferred tactics of fighting at the site.

[suggested as an entry under the "Landscapes of Conflict topic]

Archaeology at Paoli Battlefield: Expanding the Interpretations of Conflict

Matthew A. Kalos

On the evening of September 20, 1777, and into the morning hours of September 21, British Major General Charles Gray led an elite force of British soldiers on a nighttime bayonet raid against American General Anthony Wayne's encamped troops. The bloody attack enraged the Patriots, and the battle became engrained in American ideology as the Paoli Massacre. Although the battle was brief, its national and local importance extends for over 225 years. Today, archaeology at the Paoli Battlefield, in Chester County, Pennsylvania, seeks to uncover not only details of the battle, but also how the battle influenced and continues to impact the surrounding community. This paper explores the role archaeology takes to expand the analysis of conflict sites from narrow explanations of a single event and to the holistic interpretations of the broader social and cultural landscapes; these efforts lead to an understanding of the lasting impacts of warfare.

Biographical Information

Mr. Kalos received his BA in Anthropology with honors from Franklin and Marshall College in 2008. Following graduation he worked in CRM for a year before starting the PhD program at Temple University in 2009. In 2015, Kalos earned his MA in Anthropology and advanced to doctoral candidacy. While in graduate school, Kalos' research has focused on the American Revolution; specifically, the Philadelphia Campaign of 1777. His dissertation research focuses on the Battle of Paoli and how the archaeological study of a military site reflects broader social issues. In addition to working at Paoli Battlefield, Kalos works as a seasonal archaeologist for the National Park Service at Valley Forge National Historical Park, where he leads public archaeology programs focusing on the study of the 1777-1778 winter encampment of the Continental Army.

Fields of Conflict Conference
22-25 September 2016 | Trinity College, Dublin

Max van der Schriek – *PhD Candidate Vrije Universiteit Amsterdam.*

Archaeological research and Heritage management on WWII conflict sites in The Netherlands.

Compared with the neighboring countries, Dutch academic interest in the heritage of war, or in the skills and cultural-historical policies practiced by local and national government, has been limited until recently. However, World War II (WWII) holds strong in the popular imagination of the wider public. Modern conflict archaeology plays a vital role with regard to the preservation of these sites and relics. Wars are etched on the memories of nations, communities and individuals. What people remember, and how, changes with time, especially now historic events pass out of living memory.

During this presentation I will show the benefits and drawbacks of such research conducted in the Netherlands. I use a landscape archaeological approach as conflict sites can be considered as cultural landscapes, influenced and shaped by man. The history of a landscape can be updated constantly and therefore a landscape of memory is also changing continuously, effecting heritage management.

It is possible to map and investigate WWII conflict sites by means of non-invasive techniques like LiDAR. This remote sensing technology can provide a detailed digital elevation model (DEM) of a landscape. The first results showed that some forests and heathlands conceal a preserved landscape of non-hardened military structures, features of which the heritage value is hardly investigated. DEMs can be very useful for landscape studies and to better understand conflict sites.

Biography

Max van der Schriek studied both Heritage Studies (2009) and Archaeology (2010) at the Vrije Universiteit Amsterdam. In 2011 he worked as a researcher on the Odyssey-project 'Buried Past of War', the first official archaeological study of WWII relicts in the Netherlands. During 2012-13 he was a junior researcher at CLUE+ for the cluster 'Heritage and Memory of Conflict and War.' In 2014 he started his PhD research, entitled: 'Buried Landscapes of War. The archaeology and heritage of the Second World War in the Netherlands.'

Uncovering Morgan's Masterful Maneuver: Archaeology of the Battle of Cowpens

By Michael Seibert

The Battle of Cowpens is one of the major battles of the Southern Campaign of the American Revolution. Located in Chesnee, South Carolina, Cowpens is known as the American Cannae with the Militia and Continentals under General Daniel Morgan causing the complete destruction of the British forces under Lieutenant Colonel Banastre Tarleton. The innovative deployment of the previously unreliable Militia by General Morgan would have far reaching consequences for the remainder of the Southern Campaign and a significant impact on the outcome of the American Revolution.

Recent archaeological surveys by the National Park Service have shed new light on the battlefields extents, troop locations, and the usage of terrain by General Morgan. Using GIS analysis, pXRF, and LiDAR, the survey aims to not only expand our knowledge of Cowpens National Battlefield but to develop a more advanced methodological approach to battlefield landscape research in the Southern Campaign of the American Revolution National Parks Group managed by the National Park Service.

Abstract:
Fort King, located in central Florida, played a pivotal role during the Second Seminole War (1835-1842). Built in 1827, its location was chosen to enforce the boundary between the Seminole Reservation and settler populations. As tensions escalated into another war, Fort King became a central command post. Enquires into this important depot have mainly focused on the fort itself without understanding how the connected network of Florida forts were meant to operate. The goal of this project is to move from studying this historic site in isolation to look at how a network level of analysis can shed further light onto this crucial piece of infrastructure. While the use of KOCOA has led to investigating battlefields in a more holistic and connected nature, the same level of attention has not been paid to how these fortifications functioned as a supply network. This paper will discuss Fort King as a test case for studying indirect expressions of warfare to include features such as supply movement, troop movement, and other logical matters that impact the effectiveness of these frontier outposts.

Bio:
Michelle Sivilich
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I received my Ph.D. from the University of South Florida where I studied the role standardized education officers received at the Military Academy at West Point, NY played on the outcome of the Second Seminole War (1835-1842). This is the first time large numbers of officers who were West Point trained were put in the field during combat. Since Florida was unlike any environment they had trained for, this unknown environment hampered their ability to conduct successful operations. In addition to my research with the Seminole Wars, I have over 15 years experience in a variety of archaeological settings ranging from 17th century Maryland's first Capital of St. Mary's City to Revolutionary War sites throughout the Northeast United States. I also received my M.S. from Indiana State University studying molecular archaeology and used a novel approach to genetic fingerprinting to assess levels of relatedness within cemeteries, which relates to the changing cultural practices regarding the cemetery layout in the mid-1800s.

Abstract Submission Fields of Conflict 2016

The Localization of Taphonomy: The Impacts of Physical Environments and the Memorialization Practices of Local Populations on Combat Loss Archaeological Sites

Mindy R. Simonson, MA

The taphonomic processes that affect archaeological remains in a given location are some of the most significant factors to be taken into consideration when assessing the type and amount of information (both in the form of knowledge and material evidence) potentially recoverable from an archaeological site. These taphonomic processes vary widely based upon geographic region as well as environmental and topographic setting within that region. Human agency as a taphonomic process has similar geographically and culturally-based variability. Through remembrance, memorialization, and commemoration, or lack thereof, to include exploitation and willful destruction, humans as taphonomic agents are particularly impactful upon battlefield and other combat loss sites. Through the presentation of a number of these more geographically variant and dependent taphonomic processes, both geophysical and human, it is possible to attempt a comparative, cross-cultural study of the taphonomy of combat loss sites as we encounter them in an archaeological context. Investigations and excavations of worldwide U.S. World War II and Vietnam-era combat loss sites, including battlefield and combat aircraft crash sites, serve as case studies to illustrate these geographically and culturally-reliant taphonomic processes and the subsequent recoverability of the archaeological remains, human and artifactual, these processes alter.

Abstract Submission Fields of Conflict 2016

The Search for Those Left Behind: Attempting to Recover Human Remains from Battlefield and Ground Loss Sites

Mindy R. Simonson, MA

Presently manifested in the form of the Defense POW/MIA Accounting Agency (DPAA), the United States federal government continues a decades-long effort to locate, recover, and identify U.S. servicemembers and civilians lost as a result of its nation's past conflicts. Archaeologists and forensic anthropologists investigate and excavate possible loss archaeology sites throughout the world in an attempt to recover the human remains and associated artifacts and personal effects of U.S. losses primarily from World War II and Vietnam. With increasing frequency, the archaeologists of the DPAA are focusing on investigations and excavations of large-scale battlefield and ground loss sites. While battlefield archaeology is not a new field, much less research and fieldwork has been focused on these more recent conflict sites. And while our manifest function – the excavation of a battlefield site – is the same, our purpose is distinct. Though the function of deciphering the past and collecting data to scientifically document historically significant events is not without regard, it is subsidiary to our primary goal of recovering human remains. The challenge facing us, therefore, as we address these significantly more convoluted and complex battlefield and ground loss sites, is to implement a methodology, or methodologies, incorporating elements of forensic, historic, and battlefield archaeology as well as any other applicable subfields, that is not only sustainable in light of inevitable time and resource limitations and pressures, but also facilitates the necessary archaeological documentation of the sites and the achievement of our primary purpose, the recovery of the remains of those Americans left behind on the battlefield.

Obstructing the "Mighty Apalachicola:" Riverine Defenses of the Confederate States of America

Nicole Grinnan, M.A., RPA
Florida Public Archaeology Network

William Lees, Ph.D., RPA
Florida Public Archaeology Network

By the mid-19th century, the Apalachicola River operated as a major thoroughfare of commerce in the southern United States. Cotton-rich plantations in Georgia, Alabama, and Florida relied on the river and its connection to Apalachicola, a bustling Gulf of Mexico port city, to sell goods internationally. The onset of the American Civil War in 1861 brought renewed significance to the river and the cities along its banks: up-river, the manufacturing center of Columbus, Georgia, supplied the Confederacy with textiles, iron-worked goods, and naval vessels. To defend this strategic supply route and prevent Union invasion of the interior via the river, Confederate forces constructed a series of defenses and obstructions along the southern extent of the Apalachicola River in an area known as "the Narrows." This paper highlights new research into the evolving landscape of the Apalachicola River in the years following the sinking of these Confederate obstructions, emphasizing the dynamic relationship between culture and the environment. Additional discussion focuses on recent efforts to relocate and record these wartime defenses, which may be some of the best-preserved obstructions of the American Civil War.

Finding the Fallen: the History of America's Efforts to Recover its Missing Service Members

Owen L. O'Leary, Ph.D.
DPAA Laboratory, 590 Moffett Street, Bldg 4077, JBPH-H, HI, 96853

The United States government has been actively engaged in the recovery, repatriation, and identification of its military personnel who have died on the field of battle for over 170 years. This paper will discuss the origin of those efforts and their evolution over the 20th century as lessons were learned from the two World Wars, Korean War, and the Vietnam War. This will include detailing the creation of specific organizations for the task, adoption and incorporation of anthropological methods and techniques, and the invention of concurrent return. Additionally, emphasis will be paid to the development of the modern efforts to account for missing servicemen since the Vietnam War and how the various iterations of organizations have led to the present day Defense POW/MIA Accounting Agency (DPAA).

Fields of Conflict Conference 2016 – Call for Papers

Title: A spatial modelling approach to the investigation of early modern sieges, a case study of the siege of Kinsale, Co. Cork, AD 1601

Abstract

The investigation of a relict siege landscape can be a daunting prospect. Its considerable geographical extent, coupled with usually scant project resources, can make it difficult to identify key sites, let alone gain greater insights into the conduct of the siege. Although historical siege plans are often available, they generally consist of oblique, perspective views of non-uniform scale and rotation from which it is quite challenging to extract any usable information. This paper examines whether GIS-based techniques can be used to more successfully harness the potential of such plans for the purposes of archaeological investigation, taking as a case study the 1601 siege of Kinsale, Co. Cork. Kinsale is the best preserved Elizabethan siege landscape in Ireland, encompassing approximately 6 km of siegeworks. Historical plans of the siege are central to a spatial modelling approach that combines georeferencing, digitising, raster overlay and modelling of 'fields of fire' in order to delineate the siege landscape, map its key features and assess the offensive and defensive capabilities of both the besiegers and the besieged. The methodology developed is applicable to any early modern siege and represents a cost-effective, GIS-based approach to the study of relict siege landscapes.

Biography

Paul O'Keeffe

Paul is an archaeologist with Transport Infrastructure Ireland and is co-director of the Kinsale Battlefield Project. He studied Archaeology and Geography at University College Cork and is a member of the Institute of Archaeologists of Ireland and the Irish Post-Medieval Archaeology Group. He has a particular interest in the archaeology of 16th- and 17th-century conflict and the analysis of lead bullets and military-related artefacts of the period. He is currently studying for an MSc in Geographical Information Systems at the University of Ulster.

Fields of Conflict, Dublin 2016

Theme

Methodological Approachers

The Garrison, A field of Conflict on the border between traditional and Battlefield Archaeology
This paper deals with the methodlogical and theoretical differences between conventional and Battlefield Archaeology, concerning the willingness to use and follow the evidence found in the field and to draw conclusions from the facts rather than play it safe with a traditional or symbolic interpretation of a strange find context. In this paper I will present the finds from the excavations at the from the Viking Age Garrison on Birka, Sweden. In my dissertation I wrote about the development of the arrow points from the Iron Age in Scandinavia, and constructed a typology for this artefact. My research brought me to Norway and Russia, where I saw a lot of arrow points and was able to see three different tradtions. About this time colleagues told me about the finds from the Garrison, where they found a lot of arrow points. I managed to get access to the material and soon discovered that the arrows belonged to a different type compared with the finds from the graves on the Iseland and mainland Sweden! What was it, and why where they there? When I followed the the leads, the historical facts and the cirumstantial evidence know about the period and the development of Birka I concluded that the Garrison had been attacked by a foreign force, something that my colleagues reacted to with much concern, some either meant that the finds belonged to a sacrificial context or chose to have no oppionion concerning the material at all, but remained sceptical to new theory of a Battlefield on Birka.

Curriculum Vitae 1978-2015

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Education

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Guide 1993 Eketorps borg
Guide 2001 Birka

Seminariegrävning Gamla Uppsala, Norra Gärdet 1992, 1994,
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Seminariegrävning, grävledare, Valsgärde 1996-1997

Amanuens RAÄ E4:an 2002.05.13-11.12., Fullerö, Svanby
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I have published some articles on Academia.edu

'Touching the Face of God' – Setting new standards in the recovery of Military Aircraft Crash sites

Peter Masters, Research Fellow, Cranfield Forensic Institute, Cranfield University, Defence Academy of the United Kingdom, Shrivenham, Wiltshire SN6 8LA

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Since 2012, a total of 7 airccraft crash sites dating from the Second World War have been recorded using an integrated approach. These have included a Spitfire at Upavon on Salisbury Plain and a Messerschmitt MF110 at Lulworth Ranges, Dorset and more recently the Spitfire in the Cambridgshire Fen in October 2015.

This paper will demonstrate how important it is to recording the remains methodically using traditional and scientific methods used in archaeology. The strategy and methodology used in these investigations showed how effective and important it is to recover as much of the remains as possible to place it into a meaningful context in order to understand the reasoning behind why they crashed. Techniques have included metal detecting, fieldwalking, geophysics, excavation and post-excavation analysis of the aircraft parts.

More recently it has been possible to create 3D models of the crash site in order for archaeologists to understand more fully what happened.

The recovery of these aircraft crash sites has involved Operation Nightingale, an initiative to aid in the recovery process of injured soldiers that have recently returned from Afghanistan by getting them involved in archaeological investigations.

The Military Aircraft Crash Sites guidelines issued by Historic England (formerly Enlgish Heritage) in 2002 are currently being revised, which will encompass the work undertaken by the author of this paper.

This paper will set out the new guidelines to demonstrate the importance of using such an integrated approach to the recovery of military aircraft from crash sites from the Second World War.

BIOGRAPHY

Peter Masters is a Research Fellow in Forensic Archaeology and Anthropology, Cranfield Forensic Institute, Cranfield University. Peter's area of research includes geophysics, forensics, landscape studies and battlefield archaeology.

Peter works in the commercial area of geophysics as well as undertaking research in Conflict Archaeology, especially on First World War battlefields. He has carried out surveys in

Belgium and France. Peter's current research includes looking at the First World War front line trenches at Ploegsteert (Plugstreet), Belgium.

In 2011, he was commissioned by the Flemish Institute to do a landscape survey along the Western Front in West Flanders, Belgium. Since 2008, he has been running a short course in *Conflict Archaeology* at Cranfield.

Peter has published several articles in peer reviewed journals and books.

He has undertaken work on Salisbury Plain, in particular looking at the practice trenches dug during the Great War of 1914-18. His recent research work includes recording the Civil War remains at Newark, Nottinghamshire, and Edghill, Warwickshire as well as recording mass grave sites at the Battle of Bosworth, Leicestershire and Battle of Stoke Field, Nottinghamshire.

Fields of Conflict 2016 abstract

R. J. Alexander

Cultivating Trade
Trade between POWs working in Agriculture and Civilians in WW1

During the First World War approximately twenty five percent of captured German troops were transported to England, where they were held in one of over five hundred Prisoner of War and civillian internment camps in Britain. These camps varied in size from holding over a thousand prisoners to small camps holding less than fifty. Just under a hundred and fifty of these camps were agricultural camps where POWs were employed as farm labourers in the English countryside. At the initial outbreak of war robust security of the camps was considered essential as there was a risk that they would form a ready made occupying force in the event of invasion. As the war progressed and the risk lessened security became less of a priority; security at smaller camps, particularly the agricultural camps, became much more relaxed. This paper will consider how this approach to security, together with the nature of the agricultural work the POWs undertook, and the overarching national policy towards prisoners of war may have impacted upon, and indeed, encouraged trade between German POWs and English civilian populations.

Pointe du Hoc, April 25, 1944 Revisited: A Methodology for Identifying, Interpreting and Recording Bomb Damage from an Individual Mission.

Richard Burt
McWhorter School of Building Science, Auburn University

Robert Warden
Center for Heritage Conservation, Texas A&M University

FOC Topic - Methodological Approaches

Pointe du Hoc Ranger Monument and Battlefield which is administered by the American Battlefield Monuments Commission is one of the best preserved battlefields in the Normandy invasion area. The site contains numerous structures and craters that provide ample evidence to the visitor of the damage inflicted by the pre-invasion bombing and shelling. The initial bombing raid conducted by the 416th & 409th Bombing Groups of the 9th Air Force, against the medium coastal battery on April 25, 1944 was significant, in that the damage caused by this raid resulted in the guns being removed from their emplacements to another location. A methodology was developed for identifying, interpreting and recording the formation processes relating to this raid. Analysis of archival documents illustrate how the site was developed. Mission reports from the Air Force Historical Research Agency are used to describe the raid and identify where individual bombs landed. Contemporary interpretation reports are used to identify damage caused by the bombing. The results of the bombing are evident at the site today, and detailed survey work conducted at the site between 2003 and 2008 recorded the damage caused by this and other raids. Results of the survey work recorded as Historic American Building Survey (HABS) architectural drawings aided significantly in identifying the extensive damage to gun emplacements numbers one and four. The results of a direct hit on gun emplacement number four, identified in the mission report and confirmed in the interpretation reports is clearly illustrated on the HABS drawings on this emplacement. These results would confirm other scholars' claims that the guns were moved to an inland location immediately following this raid. The results of this work provide a greater understanding of the formation processes of two of the structures and role this individual raid played in the events that unfolded on June 6, 1944.

Towards an Archaeology of Boarding: Naval Hand-to-Hand Combat Tactics of Northwestern Europe in the 16th Century

Rolf Fabricius Warming, Combat Archaeology

Much research has been undertaken over the years to illuminate the use of naval power in European warfare in the past; yet, there has been surprisingly little written on the subject of naval boarding and hand-to-hand fighting tactics at sea in general. Although a few brilliant exceptions touch upon this aspect of naval warfare, it is evident that naval hand-to-hand combat has sunken into oblivion under the enormous waves of literature on wind gage, cannon fire and lines-of-battles. The research presented in this paper is an attempt to remedy that situation. Focusing on archaeological and historical lines of evidence from the 16th century, the author explores the extent to which warships of the period were specifically prepared for naval hand-to-hand combat and how these practices were conducted in Denmark and England. The insights gained from a dialectic archaeologicalhistorical approach provide an unparalleled degree of micro-level detail regarding the practice of naval handto-hand combat, revealing underlying tactical frameworks that involve complex and comprehensive operational management of technology and soldiers. Moreover, being a cultural performance – and not merely a pragmatic phenomenon contained within a social vacuum and devoid of a social discursive history – the details uncovered in the investigation are at once reflective and instructive in matters that can be ascribed to general macro-level categories, such as sociopolitical and economic structures. The research underscores the significance of boarding in naval warfare and the need for further studies into this aspect of naval warfare on both a micro and macro scale.

Spear Superiority and (un)Knightly Warfare: Reconstructing and modelling the conflict landscape of Bannockburn (AD 1314) with GIS and KOCOA

Abstract

Locating and delineating the location of a Medieval battlefield in the modern landscape is difficult, from the perspective of both archaeologists and historians. Landscape modifications, lack of records, and the decay/destruction of battle associated material culture are contributing factors. However, presented here is a predictive model for finding these forgotten fields; this theoretical and methodological framework asserts that conflict landscapes were selected by conscious human agency in terrain, informed by a praxis of temporally distinct tactics. For the Medieval period, this becomes pertinent, as past research on medieval battlefields—until the recent works of Strickland, Brown, Bennett et al—misinterpreted key aspects of medieval warfare. Consequently, this theoretical and methodological approach allows for the digitization, reconstruction, analysis and modelling of possible battlescape locations. Bannockburn, the penultimate battle of the First War of Scottish Independence, serves as an ideal case study. As the earliest battlefield located archaeologically in Britain—by a multipartner project run by the Centre for Battlefield Archaeology—it will be shown this desk based approach can be utilized to select the most probable terrain and topography for the conduct of medieval warfare, within a modern landscape. It will be demonstrated that battle material culture from the Centre project correlates with key areas highlighted by this desk based approach. This proves the core concept of the modelling, that it allows the prioritisation of high probability areas of conflict sites by future archaeological investigations, and places forgotten fields of conflict back on the map.

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Biographical Profile

Samantha Rowe is currently a PhD researcher at the University of Huddersfield in collaboration with Historic England and funded by AHRC, researching the decay of archaeological metals in topsoil deposits. Previously she has worked as a community archaeologist in Liverpool and as a Finds Liaison Assistant for the Portable Antiquities Scheme.

Abstract

'A methodological approach to assess the condition of battle-related artefacts from conflict sites'

The majority of archaeological data on battlefields consists of unstratified metal artefacts deposited during periods of conflict. These assemblages are close to the soil surface and are vulnerable from the effects of the weather, erosion, and human and animal activities. A major threat to the survival of battlefield assemblages is intensive agricultural processes such as ploughing, sub-soiling, and the application of agrochemicals which can make the soil environment hostile towards metal artefacts.

The removal and manipulation of topsoils, various agricultural activities, night hawking, metal detecting involving little recording, contamination from re-enactments, and the decay process itself means data has been and continues to be lost from sites, restricting our ability to interpret and define the character of battlefields.

The author has devised a method for assessing the condition of lead bullets from 17th century sites of conflict. It correlates their condition with the character of the soil and with historic land use to improve understanding of the relationship between the condition of artefacts and their burial contexts; enabling evaluation of threats towards buried metal assemblages.

Battlefields do not benefit from statutory protection and data loss through decay is a significant issue. It is the author's hope that this research will enable improvements to be made in site management policies and more informed decisions on recording versus in-situ preservation of unstratified buried metal assemblages on battlefields and other types of archaeological sites.

'Archaeology of Alcohol:Military Culture during WW1'

' Alcoholic beverages such as rum have long been associated with the navy. But alcohol was more than just a comforting tipple in the trenches for soldiers; it became embedded in the very structure of the British Army serving on the Front Line.

In war conditions, alcohol was seen to fortify the morale of soldiers, giving them extra bravado to stay motivated in the face of combat, helping them to bond with their comrades, assisting them in sleep, suppressing their fears, and providing comfort and warmth when sleeping fearfully in cold, wet trenches. It also helped enforce the hierarchical structure of the army: alcohol was issued by senior ranks, and could be withheld as punishment.

Small doses of rum would be passed along to soldiers before going over the tops of the trenches. Alcohol served as a stimulant in this context- as an aid to help steady the nerves of men when faced with industrial warfare. Lt Colonel J S Y Rodgers observed "had it not been for the rum-ration, I do not think we should have won the war" in a 1922 enquiry into shellshock.

Rum became a part of everyday life for soldiers of the British Empire, which was in stark contrast with the temperance movement taking place in England at the same time. In January 1915, Lloyd George declared that Britain was "fighting Germans, Austrians and Drinks, and as far as I can see, the greatest of the foes is Drink". Yet alcohol was considered medicinal on the front line, helping to numb the nerves of those in shock, providing mild anaesthesia for those with injuries.

Alcohol helped men deal with the transition between warfare and trench life. As a substance we now take for granted, alcohol was an essential part of daily life for the WW1 soldier, which would also influence social patterns in post-war Britain. '

Having completed my MSc in Forensic Archaeology and Crime Scene Investigation in 2013, I have begun to focus my academic research on identity discs, and the identification of war graves 1914-18. This has led to further work on the daily life of the soldier in the trench. Having written for DigVentures.com for a year, I am currently working on papers with Mr Rob Janaway and Dr Emma Brown following a successful presentation of our work at the 2013 AHRC/EPSRC sustaining Science & Heritage Research Event. I have spoken at the University of Bradford and the University of Bristol, having also developed my own 8 week course in Forensic Archaeology as part of the 'College+' programme at Calderdale College. I hope to take my research through to PhD in the near future.

Death, Burial and Identification in the Landscape of Industrial War 1914-18

The ‘Great War’ introduced new methods of warfare including tanks, trench warfare and gas attacks. Industrial warfare had a devastating impact on not only the landscape, but on the bodies of men. The nature of trench warfare meant that many a body would remain exposed for a long period of time, perhaps never receiving burial, as soldiers avoided enemy fire.

Noone had anticipated that war would last so long. In fact, the British Government had estimated that it would all be over by Christmas 1914. And in turn, no one had anticipated death on such a scale. The system of Identification Discs was already in use at the outbreak of war. The initial fibreboard design was modified a number of times between 1908-1918, as flaws in the systems of burial and identification became apparent very quickly. Identification of human remains was difficult, and the marking and mapping of make shift graves left much to be desired.

Barbed wire restricted the movement of men, whilst the rabbit warren of trenches divided the landscape, limiting space available for burial of the deceased. Hand grenades, aerial bombing, and the churning effect of tanks (introduced in 1916 at the Battle of Flers) disturbed existing burials, exposing and even destroying human remains.

How did the British Army handle death on a mass scale? What provisions were made for the later rediscovery of graves and appropriate memorialisation in communities shattered by the huge absence of men? We will explore the processes of death, burial, and identification considering contemporary documents, memorial statues and commemorative items such as the “death penny”.

Fields of Conflict poster (200 words):

A major part of the landscapes of battle are battle burials, but we still have a very limited understanding of battle burial practices. The major assumption, particularly amongst military historians, is that the battle dead will have been buried on the battlefield, in mass graves, by the victorious army. This assumption is far too general and fails to consider how the individual context or circumstances of a battle may have affected how the dead were buried. What happened to the dead, for example, at battles like Stamford Bridge [1066], where the victorious army had to quickly leave the battlefield, or Edgehill [1642], where there was no decisive victor? How did religious beliefs, such as the use of consecrated ground, impact on how the dead were treated? What happened to the bodies of those killed in routs? Were they buried where they had fallen or conveyed to a church for burial? My poster will highlight the need to study battlefield burial practices, historically, in order to aid our understanding of the landscape of battle. Was there a prevailing battlefield burial practice, based on practical necessity, as historians suggest, or did this practice vary according to the context of a battle?

Biography: I started my PhD in October 2015 at the University of Huddersfield, supervised by Dr Glenn Foard. I studied Medieval History and Archaeology at Cardiff University for my BA, graduating in July 2014, and completed my MA in Medieval History from Durham University in September 2015.

Conflict Archaeology in a Modern Urban Environment: Finding the Battle of Atlanta

Stacey R. Whitacre, Scott Butler, and James M. Page

The American Civil War left a permanent mark on the landscape of the United States. Many battlefields remain largely as they were in the nineteenth century. However, several have been altered by modern development. In July 1864 City of Atlanta was besieged by Federal forces under the command of Major General William T. Sherman. In the years preceding the attack, Confederate forces constructed miles of defensive trenches, set up artillery positions, and fortified river crossings and railroads in preparation for a possible attack on Atlanta. The physical remnants of this fight gradually faded into the background as the needs of a growing city altered the nineteenth century landscape. Today, Atlanta is the largest city in the southeast; the modern urban landscape consists of paved highways, dense residential neighborhoods, high rises, office complexes, and the ever present new construction of additional development. This paper discusses the challenges, limitations, and overall potential of conducting conflict archaeology in a modern urban environment. We assert that such archaeology is possible and achievable, however it is necessary to have a proper mindset and plan of action prior to fieldwork. We present a case study of a transmission line project through the City of Atlanta. Due to diligent background research, careful field investigations, and patient metal detecting, Brockington archaeologists located several Civil War sites including a Confederate gun emplacement on the Chattahoochee River in a residential backyard.

here is an abstract I am submitting which demonstrates some of my findings, using experimental archaeology to better understand archery and bow-making in Viking Dublin.

Abstract:

The poster visually demonstrates the various phases of production of the kind of bow an average person would have owned and used in Viking Dublin during the 10th and 11th Centuries. Since the Bronze-Age archery had been forgotten in Ireland until it was reintroduced with the arrival of Vikings in the 8th century. With Dublin's unique quality of preservation, the wooden bow fragments uncovered from the excavations of Wood Quay, provide some of the most crucial links in what is typically the incomplete story of archery in the Medieval and Viking Age.
From my analysis of the Viking Dublin bow fragments at the National Museum of Ireland and my several seasons crafting bows and arrows in the reconstructed Chieftain's longhouse at the Lofotr Viking Museum in Northern Norway - The poster demonstrates the basic process of Viking bow-making in Dublin. From choosing the right tree, splitting and shaping it with the right tools and finally, shooting the arrow, the poster gives an insight into not only the unique technological advantage that Scandinavians had in Dublin during one of Ireland's most conflicted times - but also gives an insight into the crafter behind the weapon; who was ultimately one of the the first 'Dubliners' of Ireland.

FORT MOTTE: REVEALING THE LANDSCAPE OF CONFLICT AT A REVOLUTIONARY WAR SIEGE

Fort Motte, located in South Carolina, USA, was a British outpost constructed during the American Revolution. The fort consisted of a newly-built plantation house, surrounded by a heavy, palisaded earthwork parapet and ditch. In May, 1781, an American force under Colonel Francis Marion and Colonel "Lighthorse" Harry Lee surrounded and laid siege to Fort Motte and its garrison. After resisting for 6 days, the 184 man force of British regulars, German Hessians, and Loyalist provincials surrendered. Since 2004, archaeologists from the University of South Carolina have conducted archaeological investigations at the siege site revealing its features including: the Motte house and fort, the American siege trench, the American 6-pounder battery, the older farmhouse that figures in accounts of the siege, and the campsites of the various military units involved. This paper will discuss not only the archaeology and landscape analysis used to reveal battlefield details, but also, how the archaeological evidence has provided credence to the some mythological aspects of the siege.

AUTHOR:

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Steven D. Smith, Ph.D., is the Director of the South Carolina Institute of Archaeology and Anthropology, University of South Carolina. He has 30 years experience in historical archaeology with a specialty in conflict archaeology. He has published extensively on Conflict archaeology of the American Revolution and Civil War. He was the conference organizer of the 2014 Fields of Conflict Conference held in Columbia, South Carolina. For examples of his publications see:
http://works.bepress.com/steven_smith1/

Abstract

Achim Rost, Susanne Wilbers-Rost:
The Varus Battlefield (9 A.D.) at Kalkriese – an ancient landscape of conflict

During the last years investigations at Kalkriese have dealt with the wider area of the battle: the conflict landscape. Detailed studies of the Germanic settlement patterns and infrastructure help understand those factors which had a crucial influence on the progress of the combat between Romans and Germans, a battle in a defile with permanent attacks on the flank of the marching Roman troops at several places. Knowing the extent of the development of the landscape by the indigenous population we get a better understanding of the distribution of Roman military artefacts between the Kalkriese Hill and the Great Bog as remains of a vast battle area. Besides, we get information about the consequences of the battle for the German people living in that region. In this context, some ancient written sources may give additional impulses for the interpretation of the archaeological record in the conflict landscape of Kalkriese.

Biographical profiles Achim Rost and Susanne Wilbers-Rost

Achim Rost has studied Prehistoric Archaeology, History of Art and Ethnology at the University of Göttingen where he got his doctor's degree (1988) with a dissertation about the development of settlements from late palaeolithic until late antiquity in a mountainous region. In the early 1990s he organized the first large exhibition about finds and results of investigations at the ancient battlefield of Kalkriese. For more than 15 years he has been working on methodological aspects of battlefield archaeology. As a research fellow at Osnabrück University he was responsible for a project to investigate the conflict landscape at Kalkriese.

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Susanne Wilbers-Rost has studied Prehistoric Archaeology, Palaeoethnobotany and Ethnology at the University of Göttingen. She got her doctor's degree (1990) with a dissertation about Germanic horse harnesses. Since 1990 she has been working for the Kalkriese project. Since 2000 she is head of the

Archaeological Department of the “Museum and Park Kalkriese” and responsible for the organization and interpretation of excavations and coordination of multidisciplinary studies in Kalkriese.

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Confederate States of America Small Ordnance Laboratory Explosion: Unearthing the Ghosts of Brown's Island

Tamara A. Mihailović

The American Civil War is a topic that has captured the attention of a wide audience. Numerous works of fiction and non-fiction have told real and imagined stories about the conflict famous for pitting figurative and literal brothers against brothers. The majority of these creations focused on the military aspects of the war. Some of the works put their emphasis on civilian life during the conflict. Few, however, tackled the question of civilian contributions to the war efforts and the noncombatant deaths that resulted from the conflict. A March 13, 1863, explosion at the Confederate States of America (CS) Small Ordnance Laboratory on Brown's Island in Richmond, Virginia (VA) resulted in over 40 civilian deaths. The majority of the casualties were women, the ammunitions factory's primary work force. Richmond's newspapers provided considerable coverage of the casualties. Over the following 150 years the industrial accident on Brown's Island was revisited by means of occasional newspaper stories and establishment of several historical markers. This case study examines the difficulties inherent in studying Civil War civilian casualties by looking at how the CS Small Ordnance Laboratory explosion was perceived, remembered, misremembered, and memorialized.

About the Author:

Tamara A. Mihailović is a Master of Arts (MA) student in the History Department at George Mason University (GMU), Fairfax, VA. Her current studies focus on military history. She holds an MA in Public Anthropology from American University (AU), Washington, D.C., and a Bachelor of Arts (BA) in Anthropology with a minor in Ancient Art and Archaeology from GMU. Both her graduate and undergraduate studies had an emphasis in conflict and historical archaeology.

An Analysis of the European Fire Lance for Munitions Staging, Range and Lethality

Dr. Terence Christian

During the 1970s, Dr. Colin Martin (University of St Andrews) excavated the remains of *La Trinidad Valencera*, a Spanish-conscripted Venetian transport ship carrying supplies for the invasion of England, off the coast of Ireland. Amongst the trove of unique finds was a seemingly ordinary olive wood cylinder. Identified as a Spanish bomba (alternatively called a fire lance, fire trunk, fire torch or lantern), the *La Trinidad Valencera* fire lance remains the only known surviving example of this extraordinary weapon. Although military scientists described the fire lance's design and popularity for more than 200 years, the battlefield effectiveness of the weapon's purported dual-function ammunition remained undocumented. In order to obtain ballistic data for the European fire lance, nine half-scale reproduction fire lances were constructed and tested for ammunition range, velocity and lethality. Loaded with historically accurate munitions, testing demonstrated the fire lance to be an effective and lethal close-range weapon. This paper will discuss the fire lance's introduction to Europe, the weapon's design evolution from the 14th to the 17th century, and the method and results of the experimental archaeology research.

Key Words: experimental archaeology, maritime archaeology, ballistics, gunpowder, siege warfare, late medieval warfare, post-medieval warfare

Speaker Bio:

Terence Christian completed his PhD with the Subject of Archaeology/Centre for Battlefield Archaeology, University of Glasgow in 2014. In his thesis he developed a standardized investigative methodology tailored to the unique characteristics of historic aircraft wreck sites. Before undertaking his PhD, Christian completed his Master's degree, also with the Centre for Battlefield Archaeology, University of Glasgow, and worked in commercial archaeology in the United States. Christian currently consults as a subject matter expert to government agencies, NGOs, and private business providing archaeology-based risk management recommendations, GIS mapping solutions, and project development support. His research centres on ballistics in archaeology; the role of materials science in historical design processes and government policy decisions; the intersection of material culture, archaeology, and forensics in exploring aviation history; and the origins, performance, and legacy of complex logistical supply operations during the World Wars.

Abstracts: Tomas Englund

This paper is part of my dissertation work and research on the battle of Baggensstäket 1719. At Baggensstäket Russian units conducted a amphibious operation near Stockholm in Sweden. The Swedes defended the inflow with galleys and an infantry regiment; on both sides overall about 5 000 men participated in the battle.

Great uncertainty has prevailed how the inflow was fortified, the scenario of the battle and where the fallen soldiers were buried. Morover, both sides claimed victory in the battle.

Battlefield archaeological investigation - both on land and in water, osteological analysis of a mass grave along with analysis of unpublished documents from Swedish and Russian archivs has given unexpected results in the understanding of the battle.

For example: The redoubts which considered to have had a central role in the battle was in fact constructed after the battle; the reserve units who should have manned the redoubts ”only” manned the galleys; the Swedish victory on the south side of the inflow was infact a Russian victory; the analysis of what was claimed as a Russian mass grave was in fact 200 years older; and the purpose of the Russian landing operation was never to invade Stockholm.

The engravings in the Theatrum Europaeum – a specific source for battlefield archaeology

Two examples form Bohemia

Václav Matoušek

This collection of 30 engravings of war events in the Czech lands during Thirty Years‘ War (1618 to 1648) has been analysed by a team of specialists from the Faculty of Humanities at Charles University in Prague, the Faculty of Civil Engineering at the Czech Technical University in Prague and the Institute of Art History Academy of Sciences of the Czech republic. Most of these engravings were published in the publicist opus Theatrum Europaeum between 1633–1663 in Frankfurt am Main by Swiss engraver and publisher Matthäus Merian (1593–1650). Complex interdisciplinary analyses are based on a combination of terrain research (including archaeological investigation), study of more recent cartographic sources, history of arts methods, application of geospatial technologies focused on geo-referencing using current and old map series, and identification of captured territories, including territorial determination through recognized depicted objects and analyses of visibility from possible observation points.

On White Mountain by Prague the localization of the battlefield from 1620 was by the combination of engraving analysis, original terrain sketches from 1620 and archaeological excavation certified.

On Třebel battlefield from 1647 destroyed fortification of sweedish camp was by the combination of engraving analysis, LIDAR technology and archaeological excavation certified.

Preserving Hallowed Ground: Battlefield Conservation in the State of Florida

Preserving historical landmarks, especially battlefields, is one of the toughest tasks facing any nation. In the United States, the federal government protects numerous battlefields, but many fall to the states for preservation. States receive funding through the federal government in the form of grants, but still have to determine successful ways to implement the funding to preserve these battlefields. Comparing three Florida state parks will illustrate the process of preserving battlefields and making them attractive to tourists and residents, while working with a limited budget. This work will incorporate park management plans, federal and state laws, and state park records to demonstrate the process and challenges faced by the Florida government. The State of Florida has received four nominations for the National Gold Medal State Park Award, and won the award in 2005 and 2013. This paper analyzes how state governments preserve battlefields, while also considering whether this model is relevant as an example for other states, and other nations throughout the world.

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EDUCATION

PhD Student in History (2013-Present)
University of Southern Mississippi

Master of Letters in Battlefield and Conflict Archaeology (2012)
University of Glasgow
Thesis: "Blueprints of Captivity: Comparing Layouts of Second World War POW Camps"
Advisor: Tony Pollard

Bachelor of Arts in History (2011)
University of South Florida

PRESENTATIONS

"The Marines Have Landed:" Remembering the Dominican Intervention in Southern Newspapers.
2015 Gulf South History and Humanities Conference

UNIVERSITY AND COMMUNITY PARTICIPATION

2014 National History Day at University of Southern Mississippi
Judge of Webpage creation for 6th-8th Grade

2015 National History Day at University of Southern Mississippi
Judge of Exhibits for 11th-12th Grade

2015 Undergraduate Symposium at University of Southern Mississippi
Panel Moderator

RESEARCH INTERESTS

United States-German relations during the United States Occupation of Haiti during World War One

The 1965-1966 U.S. Intervention in the Dominican Republic

The archaeology of battles during the U.S. occupations of the Dominican Republic and Haiti

Wallace Bruce, Abraham Lincoln, and Edinburgh; Civil War Memory or Scottish Nationalism?

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The year 1893 saw the grand dedication in Edinburg's Old Calton Burial Ground of a statue of martyred US President Abraham Lincoln towering over an obviously grateful emancipated African American slave. Funded largely by US donors, the Edinburgh monument was the inspiration of American Wallace Bruce who served as United States consul at Edinburgh between 1889 and 1893. Ostensibly dedicated to the Scottish American soldier who served during the American Civil War, this statue is enigmatic outside of the United States. While there are other statues to Lincoln, for example in London's Parliament Square and in Manchester, England, and while there is a monument to "Confederado" ancestors in Santa Bárbara d'Oeste, Brazil, the Edinburgh monument may be a unique tribute to the American Civil War and its soldiers outside of the United States. The symbolism on this soldier-dedicated monument is also enigmatic by its statuary of Lincoln and an emancipated slave, as well as by accompanying inscriptions. After a journey through the history of this monument and of Wallace Bruce, I suggest that Lincoln may stand in Edinburgh perhaps more as a symbol of Scottish nationalism than of remembrance of Scottish-American sacrifice in the American Civil War.