Fields of Conflict

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Landscapes of War: Indigenous Resistance to Settler Colonialism in the Oregon Territory, 1855-56

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Abstract

The wars of American imperialism in the North American West are crafted in historical memory through the tropes of Manifest Destiny, where intrepid pioneers, penetrating a virginal wilderness to make their homes, must overcome a variety of morally dark forces that include the depredations of indigenous people. In this telling of the tale, the U.S. Army serves as paternalistic and heroic force, arriving just in the nick of time to rescue the pioneers from behind their encircled covered wagons. This paper interrogates this historical memory through an examination of the Rogue River War that took place in the Oregon Territory during the Gold Rush of the 1850s. Through battlefield archaeology and historical archaeology, I uncover a landscape of war that embroiled civilians as well as combatants in a complicated and ambiguous series of events that saw indigenous people fighting a guerilla campaign against the settlers and the United States Army. At the same time, in this immediate pre-Civil War era, the settler volunteers were contesting—sometimes at the point of a gun—against the federal troops.

1. INTRODUCTION

The Southern Oregon University Laboratory of Anthropology (SOULA) has conducted oral history, ethnohistoric, and archaeological research into the era of settler-colonialism in southern Oregon for over 20 years, and this work has come to include the methods and topics of battlefield and conflict archaeology (cf. Tveskov and Rose 2019; Tveskov 2017, 2007, 2001; Tveskov and Cohen 2014; Tveskov and Johnson 2014). The American settlement of southern Oregon and northern California began in earnest with the Gold Rush, and conflict was immediate and endemic as thousands of gold miners and settlers arrived in the early 1850s. Periodic attempts at negotiation by indigenous and settler diplomats were interspersed by episodes of violence, and in 1853, federal agents and the leaders of the Shasta and Takelma people of the interior Rogue River valley signed the Table Rock Treaty, that in theory, ceded much of southern Oregon to the United States and established the Table Rock Reservation (Figure 1). Although many settled on the reservation, neither all indigenous people nor all the local settlers believed in the wisdom or justice of the treaty process, and violence remained ongoing. After two years of rising acrimony, open warfare broke out in the fall of 1855. By the following spring, the indigenous people were defeated by the U.S. Army and were removed from their sovereign lands for a distant federal reservation, or else were left living in small numbers in remote enclaves with their settler husbands.

The 1855-56 Rogue River War of the Oregon Territory does not fit comfortably into contemporary tropes of warfare stereotyped in Napoleonic or Hollywood Western terms. There were no front lines, and it involved, in the most visceral way possible, not just male combatants but also women and children of both indigenous and settler background. Nor were there bold lines dividing two conflicting sides. On the immediate pre-Civil War far western frontier, the settlers were sharply divided among themselves. Many were advocates of States' Rights who argued for and in many cases carried through with the outright mass murder of indigenous people, while other settlers, Indian Agents, and many of the U.S. Army officers argued for the less deadly, but still patronizing due process of treaty making and reservation resettlement (Tveskov and Cohen 2014; Schwartz 1997; O'Donnell 1991; Schwartz 1997). Among the Takelma, Shasta, Athabaskan, Coquille,

Coos, and Umpqua people, some leaders attempted to negotiate and to varying degrees accommodate the realities of settler colonialism, while others advocated for overt armed resistance and rebellion. Even less considered in history are those settlers and indigenous people that lived in the middle ground: families raised by indigenous women and settler men that in many cases avoided conflict all together (Tveskov 2007; Douthit 2002; Wasson 2001).

2. BATTLEFIELD ARCHAEOLOGY

SOULA's research into the Rogue River War included the study of the Battle of Hungry Hill and the Battle of Big Bend, the two set piece battles that marked the onset and conclusion of the war, respectively. In early October 1855, the leaders of the Shasta and Takelma initiated an armed rebellion against the settlers and the U.S. Army (Tveskov 2017; Douthit 2002; Beckham 1971). They established encampments in relatively inaccessible mountainous areas near the few trails that led in and out of the interior Rogue River valley. For several weeks, they accosted pack trains, killing the drovers and robbing the supplies, and raided outlying homesteads, burning down structures, murdering the inhabitants, and stealing livestock. Companies of local volunteers took up posts at now-fortified homesteads, and from the U.S. Army's Fort Lane, Company E of the 1st Regiment of United States Dragoons patrolled back and forth along the Oregon-California Trail.

The Battle of Hungry Hill began when Captain Andrew Jackson Smith, in command of Fort Lane, received intelligence as to the location of a Takelma encampment on an isolated mountain peak. Smith assembled a force that included Company C and Company E of the 1st Dragoons and several companies of citizen volunteers that, together, totaled some 300 armed men. Marching through the night, Smith hoped to surround and overwhelm the Takelma encampment of some 150 men, women, and children (Tveskov 2017). The location of this battlefield was discovered by SOULA in 2012, and subsequent archaeological survey, oral

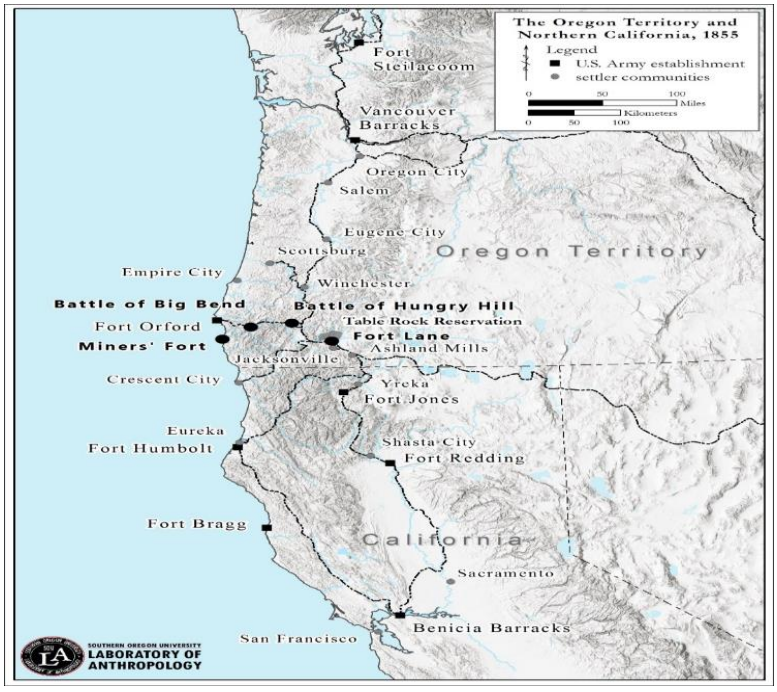

Figure 1: Settler communities and U.S. Army posts in Southern Oregon and Northern California, 1855-56.

history research, and ethnohistoric research helped outline the subsequent defeat and rout of the American forces. Smith's men became lost in the darkness and came together at dawn upon the front of the fortified Takelma position. A poorly organized frontal assault failed and most of the citizen volunteers abandoned the field in a panic, leaving the remaining dragoons and volunteers pinned down (Allston 1855). By nightfall the Americans found themselves surrounded in a narrow gully, suffering several friendly fire casualties in the darkness and confusion. The Takelma took advantage of the encirclement to evacuate their non-combatants and livestock before allowing Smith's men to return to the settlements the following morning with numerous casualties.

In contrast, the Battle of Big Bend seven months later was a victory for the United States Army (Applen 1997; Beckham 1971; Douthit 2002; Tveskov and Johnson 2018). Over the winter, the indigenous rebellion spread to include the Tututni, Joshua, Mikonotunne, and other Athabaskan-speaking people on the southern Oregon coast, who in February 1856 lay siege to the settler community of Gold Beach at the mouth of the Rogue River. The Takelma and Shasta were by then encamped in the relatively inaccessible Rogue River gorge that separated the coast from the interior valleys, having been fought to a stale mate by the Oregon volunteers now operating independently of the U.S. Army. That April, General John Wool, from his headquarters in Benicia, California, mobilized over units of the U.S. 1st Dragoons, 4th Infantry, 3rd Artillery regiments, who converged on the lower Rogue River to break what had become an impasse. In the subsequent campaign, Wool's men relieved the settlers at the mouth of the Rogue River, then proceeded up stream, destroying indigenous communities and their stored supplies, thus pressing the indigenous forces against the Oregon volunteers encamped at Fort Lamerick further east. Effectively trapped and with little food, many indigenous leaders began to turn themselves and their people in to the Army (Figure 2).

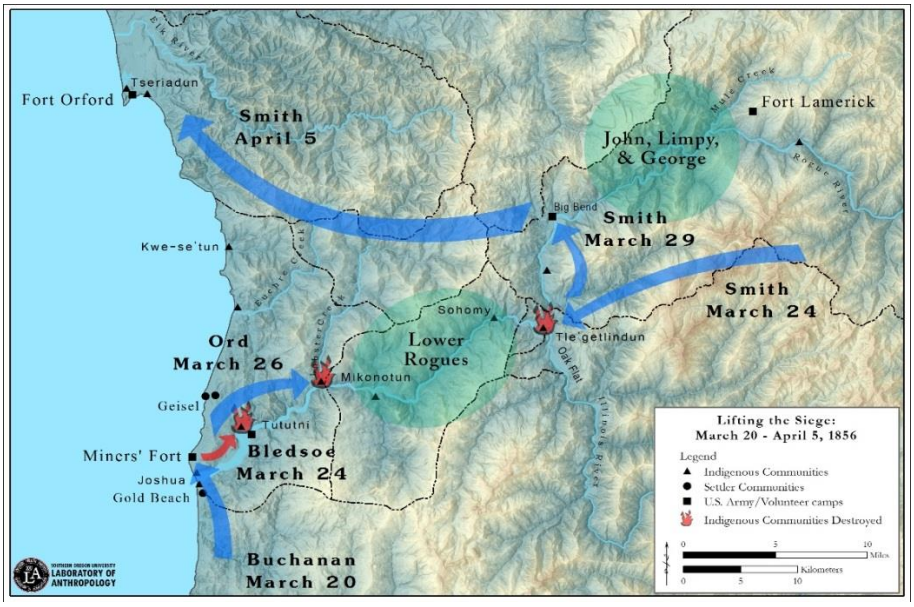

Figure 2. Campaign on the Lower Rogue River, spring 1856. On March 20, members of the 4th Infantry and 3rd Artillery Regiments under the command of Major Robert C. Buchanan, U.S. Army, relieved the settlers at the mouth of the Rogue River who had been besieged within Miners' Fort since February 22. Subsequently, volunteers that had been within the fort under the command of Ralf Bledsoe destroyed the Tututni community, Captain Edward O.C. Ord and two companies of regulars destroyed the Mikonotun community, and Captain Andrew Jackson Smith and Company C, 1st Dragoons, arriving from Fort Lane in the interior valley, destroyed the Tle'getlindun community at the mouth of the Illinois River. The Athabascan-speaking people on the lower Rogue River and the Shasta and Takelma under Tyee John, Tyee Limpy, and Tyee George were thus cut off from their supply bases and effectively surrounded.

The Battle of Big Bend began on May 26, 1856 as Captain Smith, with Company C, 1st Dragoons and a detachment of Company E, 4th Infantry awaited the surrender of the Shasta at the Big Bend of the Rogue River. Tyee John, the leader of this group, had decided, however, to make a final military stand. The Shasta assaulted the outnumbered dragoons and infantrymen, who had secured themselves on a nearby hilltop. Smith was able to diffuse this attack with a 12-pounder mountain howitzer, but found himself fully invested for the next two days (Figure 3). Losing a third of his force to incoming fire, Smith reduced his perimeter and his men hunkered down in expediently dug trenches. The Shasta taunted the Americans, suggesting they could choose to either die of thirst or be captured and hung in nooses placed conspicuously in nearby trees (Cram 1859; Sweitzer n.d.). Relief came on the afternoon of May 28 with the timely arrival of Company G, 4th Infantry. Smith and his men sortied off the hilltop, and the now-combined force routed the Shasta from the field.

Figure 3. One-inch diameter iron canister shot recovered within the U.S. Army's perimeter at the site of the Battle of Big Bend. Captain Andrew Jackson Smith, 1st Dragoons, had a 12-pounder mountain howitzer that he used to diffuse the initial assault by the indigenous forces.

Archaeological survey using metal detectors, LiDAR, and GIS analysis was employed at both the Battle of Hungry Hill and the Battle of Big Bend sites and allowed for a greater understanding of both battles than afforded by documentary evidence alone (Tveskov and Johnson 2018; Tveskov 2017). For example, contemporary documents often bemoan the short range and inaccuracy of the .69 caliber short-barreled Springfield musketoon—then standard issue for the dragoons on the Western frontier. At the Hungry Hill battlefield, an array of fired .69 lead shot in front of—but not on—the indigenous position attests to the dragoon's attempt to approach and fire upon this position. Presumably, this attempt failed due to the short range of the weapon, particularly when fired while pinned down by the longer range of the arms held by the indigenous forces. Likewise, at the Battle of Big Bend, Smith's men suffered the largest number of casualties on the northern end of the perimeter, where the local topography placed them within the ~100-150-meter range of the indigenous firearms, but largely out of the ~50 meter range of the dragoon musketoons (Figure 4 and Figure 5). Still, the archaeological work at Big Bend did not alter the larger received historical narrative of the battle that much; Smith and his men were surrounded and close to annihilation, but with help arriving in the nick of time, the U.S. Army persevered and ended the war by defeating Tyee John. While the mythic quality of this narrative of victory conforms basically to the facts at hand, the same cannot be said about the Hungry Hill battle, where the abandonment of the field by many of the volunteers and the subsequent defeat of the U.S. Army by an indigenous force at least half their size was minimized in historical memory as simply a strategic withdrawal, more or less a draw, or even as a settler victory (Tveskov 2017). The mythic quality of the retelling was such that in some later accounts, Tyee John was recalled as being the principle antagonist at both battles, despite not actually being involved in the Battle of Hungry Hill. This is understandable, as on a local level, Tyee John plays the archtypical role of Tecumseh, Sitting Bull, or Geronimo, as a wily, brave, heroic but ultimately safely defeated indigenous leader. Instead, the architects of the American military defeat at Hungry Hill were the Takelma leaders Tyee George, Tyee Limpy, and a woman named Queen Mary (Tveskov 2017).

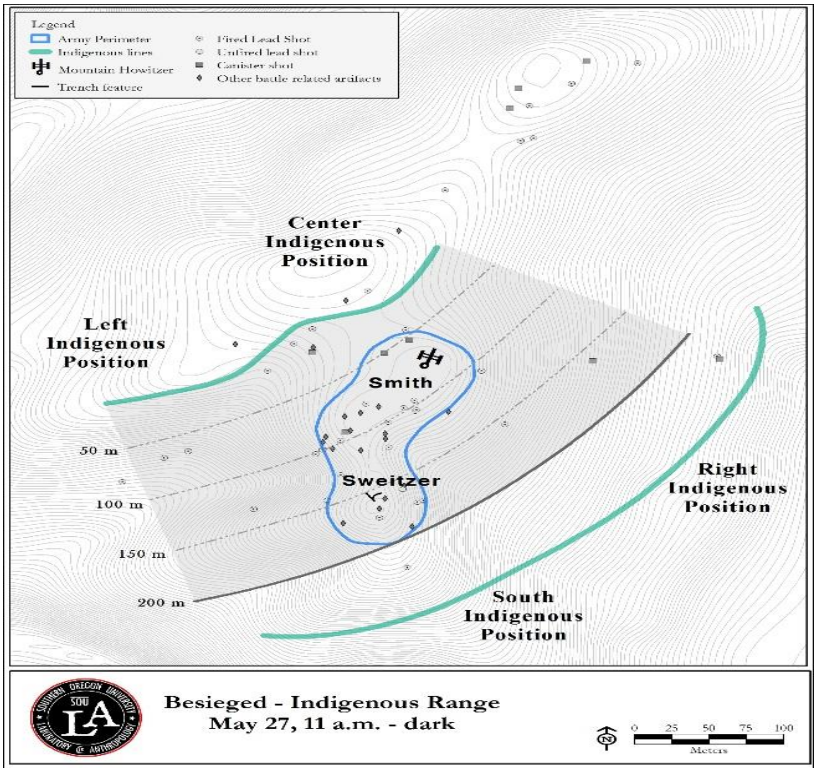

Figure 4. Detail of the Battle of Big Bend battlefield. The perimeter of the U.S. Army's position is shown, with Company C, 1st Dragoons under Captain Andrew Jackson Smith occupying the northern end of the knoll and a detachment of Company E, 4th Infantry under the command of Lt. Jacob Bowmen Sweitzer occupied the south end of the knoll. Company C's position was well within the range (shown in shaded gray) of the muskets used by the surrounding

indigenous forces, particularly those occupying left and center positions on ridge to the north that overlooked the army's position. Company C accordingly took a disproportionate number of casualties that day.

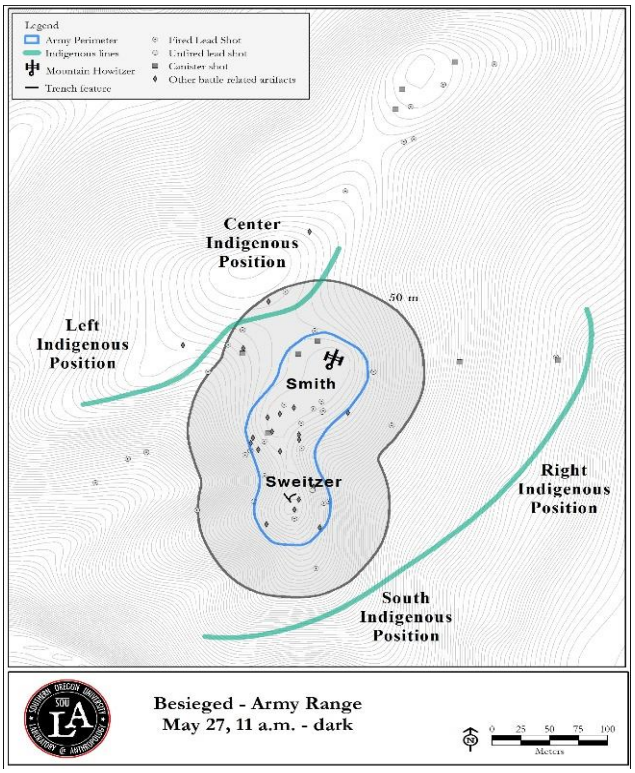

Figure 5. Detail of the Battle of Big Bend battlefield. The shading in this figure marks a 50 meter buffer around the U.S. Army's position, showng the inability of the short-barreled .69 caliber musketoons used by the Dragoons to reach the surrounding indigenous positions.

3. SETTLERS & THE UNITED STATES ARMY

Even before the disaster at the Battle of Hungry Hill, the relationship between the U.S. Army and the local volunteers was strained, sometimes to the point of violence. In the 1850s, U.S. Army units were stationed primarily at Fort Orford on the coast, Fort Jones on the Klamath River in northern California, and at Fort Lane in the interior Rogue River valley (Tveskov and Cohen 2014; Tveskov and Rose 2019). In the years leading up to the indigenous rebellion, Captain Smith used his dragoon companies essentially as a police force to enforce the terms of the Table Rock Treaty, investigating robberies and murders reported to have been perpetrated by indigenous people and attempting to keep settlers from violating the treaty rights of the Shasta and Takelma. This task was confounded by the discordant social relations then at play. Unlike the sedentary homesteaders, indigenous people were accustomed to fishing, gathering, and hunting in usual and dispersed places. Many moved on and off the reservation at will, and were certainly dismayed to find their fishing, hunting, and gathering grounds disrupted by settler livestock and gold mining. Some indigenous leaders, such as the Shasta Tyee Tipsu, had not signed the treaty at all, and remained off the reservation entirely (Beckham 1971; Douthit 2002). The decentralized political leadership of the indigenous people of southern Oregon was as unfathomable to the settlers as the sharp arbitrary boundaries of the reservation probably were to the Takelma and Shasta. In theory, Tyee Tipsu had every right to not sign the treaty and not submit to the agreements made by those who did, but he was painted and treated as an outlaw, and he and his people were reduced to a guerilla existence in the mountains on the Oregon-California border.

Smith's job was also confounded by the inclination of many settlers to murder, rape, and rob indigenous people as they conceptualized Native Americans as less than human and simply impediments to settler colonialism to be removed violently. Initially, Captain Smith took the settlers' accounts of Indian depredations at face value. One of his first actions was in early 1854, when he joined local volunteers from Yreka, California upon word that the Shasta were preparing for war. Smith went so far as to fire his mountain howitzer at the entrance of a cave inhabited by the supposed hostiles (Smith 1854). After a parley, however, Smith became "convinced that the whites (miners) were the aggressors, and very much to blame for their unprovoked attack upon the Indians" (Smith 1854). Apparently, a group of settlers calling themselves the "Squaw Hunters" had murdered a family of Shasta while attempting to abduct women, and had turned to the Army for help after subsequently losing four men when the victim's family retaliated. Smith concluded that the settler dead had been lost in "a fair fight" and returned to Fort Lane after warning the Shasta that the Yreka settlers would "massacre, indiscriminately, men, women and children" if they lowered their defenses (Smith 1854).

Over time, relations between the Army and many of the settlers deteriorated. Frustrated by settler hostility, Smith wrote to his superiors in May, 1855 that he was "determined to shoot the first White man" that would "attempt to molest [indigenous people] while under [his] charge" (Smith 1855a). Two months later, a group of 200 armed northern California vigilantes confronted Captain Smith at Fort Lane about two indigenous men being held prisoner in the post's guard house, accused of murder on the Klamath River (Anonymous 1855a). A deputation demanded that Smith turn the two over to the volunteers to be lynched, threatening violence if refused. According to Lt. Sweitzer, who was an eyewitness, the volunteers retreated after Smith responded "bring it on" (Sweitzer n.d.). On August 27, 1855, in a similar scenario, another group of civilian settlers shot and killed two indigenous people in a canoe—one a prisoner being held between the knees of an Army corporal who was paddling and the other an indigenous employee of the Oregon Indian Superintendency hired to steer. The U.S. Army soldiers in the canoe returned fire, killing three of the settlers outright in defense of their indigenous prisoners (Tichenor 1883; Anonymous 1855b).

4. MASSACRE

Such occurrences were indicative of a landscape of everyday violence. Regardless of the proximate causes, murders, lynchings, rapes, and robberies continued in southern Oregon throughout the Gold Rush era (Tveskov and Cohen 2014; Beckham 1971; Douthit 2002). Although exact numbers are impossible to determine, historian Nathan Douthit estimated, probably conservatively, that between 1850 and 1856, approximately 2 of every 100 settlers died violently at the hands of indigenous people and that approximately 14 of every 100 indigenous people died violently at the hands of the settlers (Douthit 2002:Appendix 2). Among the worst examples of this endemic violence were the premediated, coordinated attack on indigenous communities and the indiscriminate murder of their inhabitants. Since the start of the Gold Rush, numerous indigenous communities in northern California and southern Oregon had suffered this fate at the hands of settler vigilantes (Madley 2016; Tveskov 2001; Beckham 1971).

As one example, the indigenous communities on the lower Coquille River were attacked and destroyed twice in the span of three years. In the fall of 1851, several settlers were killed while trespassing on Coquille land, prompting General Ethan Allen Hitchcock, commander of the United States Army of the Pacific before General Wool, to order three dragoon companies to southern Oregon. The dragoons, in a scorched earth campaign, proceeded to burned down every plank house on the river, each filled to the rafters at that moment with freshly harvested salmon and other winter stores (Tveskov 2000:411-418). Three years later, in January, 1854, forty vigilantes from a newly established gold mining community burned down the lower Coquille communities again. In contrast to the Army's actions, the gold miners attempted to inflict as many casualties as possible, killing at least fifteen Coquille men, women, and children as they fled their burning homes (Tveskov 2001; Wooldridge 1971:275). An employee of the Federal Indian Superintendency would describe the event as a "most horrid massacre" and "out and out barbarous murder" (F. M. Smith 1854). The archaeological remains of these communities researched by SOULA and other archaeologists indicate use for thousands of years, from the Middle Holocene into the 19th century before being finally destroyed by the

settlers (Tveskov 2000; 2001). K'ama'c dun, one of the largest of these Coquille communities, is today an Oregon state park used for fishing, camping, and picnicking, and no signs commemorate the attempted genocide that occurred there.

The Rogue River War of 1855-56 was an indigenous rebellion against settler colonialism sparked by one of the most notorious events of that era, the so-called Lupton Massacre of October 8, 1855 (Beckham 1971; Douthit 2002). That fall, the Table Rock Reservation experiment lay in tatters; A week before the massacre, Indian Agent George Ambrose (1855a) reflected that the "prospects for peace are anything but flattering" as vigilante companies aggressively mobilized, aggrieved over a series of murders perpetrated against settlers in southern Oregon and northern California over the summer and frustrated that the federal authorities would not punish the accused to their satisfaction. Captain Smith was also concerned, and sent his officers to encourage indigenous people to remain on the reservation, warning them against settler attack (Sweitzer n.d.:19; Smith 1855b). On the morning, of October 8, Smith and his men were awakened to the sound of distant gunfire; on the edge of the Table Rock Reservation, a large party of vigilantes had attacked three separate indigenous camps. The vigilantes killed over two dozen men, women, and children, before fleeing at the approach of Company C, 1st Dragoons, who rode the three miles to the massacre site at haste. Lt. Sweitzer, in command of this company, had his men bury the dead and gathered the indigenous survivors together, bringing them to the relative safety of Fort Lane (Sweitzer n.d.:20). This event, in historical fact, was a complete inversion of the popular meme that presents the U.S. Army arriving in time to rescue settlers beleaguered by indigenous people.

5. REBELLION

The Lupton Massacre ironically helped realize the settler's worst fears by catalyzing a coordinated indigenous rebellion. That day, as Captain Smith conferred with the Takelma leaders on the reservation, news arrived that an Indian Agency employee had been killed in revenge (Sutton and Sutton 1967:143; Smith 1855b). Tyee John, upon news of the Lupton Massacre, had burned down the house that was being built for his use, killed the man hired to build it, and then led a good portion of the Shasta off the Reservation (Amborse 1855b). Smith hurried back to Fort Lane and Tyee Sam and Tyee Elijah began to gather to Fort Lane their own Takelma people as well as the remaining White agency employees for protection against both settler vigilantes and the indigenous people who had decided to fight back. Upon news of the massacre, Tyee George, then encamped off the reservation with his own Takelma band, fell upon the homestead of settler Jacob Wagoner. For the first time, indigenous people adopted the same tactics as the settlers, and burned the inhabitants alive inside their homes (Smith 1855b). The scene was repeated several times that day, and dozens of settlers were killed (Victor 1894:343-346; Sutton and Sutton 1969:143-146). By the following February, the Athabaskan-speaking people along the coast had also joined the fight, engulfing all of southern Oregon in open warfare.

Narratives of attacks against settler families during this uprising are conspicuous in the pioneer mythology of the Oregon Territory to the present day. These stories emphasize, in the tradition of the Captivity Narrative genre, the travails pioneer women and the martyrdom of the men (Tveskov and Rose n.d.; Sayer 2000; Slotkin 1973). Among the homesteads attacked on October 9 in revenge for the Lupton Massacre was that of the Harris family on the Oregon-California Trail, resulting in the death of George Harris, his son David, and a hired hand. Mary Harris and her daughter Sophia, so the story goes, barricaded themselves in the cabin, fending off the attackers with bullets molded under the instruction of the dying husband until rescued by the dragoons from Fort Lane the next morning (Tveskov and Rose n.d.; Sutton and Sutton 1969:146). On the coast, an enduring story is that of the Geisel family, German immigrants attacked in their home on February 22, 1856. In this narrative, Christina Geisel and her two daughters are taken captive after being forced to watch as the father and two sons are killed and their home is burned down on top of their bodies (Tveskov and Rose n.d.; Beckham 1971:3-5).

To the present day, the Geisel and Harris stories are mainstays of any narrative about the Rogue River War (Tveskov and Rose n.d.). Unlike the locales where settlers massacred indigenous people, the sites of both

the Geisel homestead and the Harris Homesteads have been publicly memorialized as highway waysides with historic signage and monuments. Archaeological investigation at both sites revealed austere architectural remains and rudimentary artifact assemblages befitting the life of immigrant families living on the Gold Rush frontier. Many artifacts recovered from the Geisel homestead were melted by a very hot fire, confirming the documentary record of the events of the attack. Alternatively, only a single percussion cap and one musket ball was recovered from the Harris homestead despite systematic testing, horizontal excavations, and metal detector survey of the surrounding landscapes (Baxter et al. 2011; O'Neill et al. 2014; Rose et al. 2018; Tveskov et al. 2017). The paucity of ammunition or other material evidence of armed conflict at the Harris homestead challenges the very narrative of the events that transpired there.

6. THE SEIGE OF MINERS' FORT

During the war, the settlers employed a variety of fortifications, ranging from larger homesteads used as strongpoints by several families to more carefully prepared locales that included stockades. Among the most formal of these was Miners' Fort, built by gold miners in the fall of 1855 on the coast near the mouth of the Rogue River. On the night of February 22, 1856, the Tututni, Joshua, and Mikonotunne joined the rebellion and in a coordinated attack, assassinated the local volunteer captain and a federal Indian Agent, and spent the night burning down isolated homesteads, killing or kidnapping their inhabitants (Beckham 1971; Douthit 202). By the following morning, with the settlement of Gold Beach in flames, the surviving settlers were besieged within the walls of Miners' Fort, a small chest high revetment constructed of sod and mud.

At Miners' Fort, aerial photography, LiDAR, earth resistivity survey, and magnetic survey documented a rectangular structure some 35 meters by 21 meters in size, with circular bastions in two corners. Inside the fort, in agreement with primary documents relating to the siege, were two log cabins. Archaeological excavations recovered a rich and diverse assemblage of mid-19th century artifacts, including nails, ceramics, clay tobacco pipes, glass beads, bottle glass, lantern glass, ink wells, and many other items (Figure 6 and Figure 7). Occupied for only a month, the very high density of gunpowder container lids, crucibles for melting lead, and freshly molded lead shot and sprues speak to the seriousness of the siege, as do the fired lead shot found in the cabins and in one bastion (Figure 8). Primary accounts of the siege recall the settlers having to keep their heads down while on guard duty in the bastions, due to the "shower of bullets" from the outside, and that this hostile fire that knocked "splinters off the roof" of the cabins (Webster 1884:235-240).

Figure 6. Front barrel band and butt plate of a musket recovered from the hearth in the south cabin at Miners' Fort (Southern Oregon University Laboratory of Anthropology.

Figure 7. Clay tobacco pipe and pipe fragments recovered from the south cabin at Miners' Fort. The artifact on the upper right is a face pipe with a representation of President Millard Fillmore (Southern Oregon University Laboratory of Anthropology).

Figure 8. Sample of the lead ammunition recovered from the Miners' Fort site. The three pieces of lead shot on the upper left are freshly molded with the sprues still attached, and the lower left two are fired lead shot that impacted the fort. On the right are clipped sprues from lead shot molded in the fort. Scales, crucibles, lead ingots, and lead slag were also recovered in quantity during the archaeological excavation (Southern Oregon University Laboratory of Anthropology).

For a month some 100 were besieged inside the fort. This contingent included 70 settler men, including one of African origin, eleven children, eight white women, and four indigenous women, that latter having come to the fort as partners to settler men (Berry1856; Berry et al. 1856; Bledsoe 1856; Dunbar 1856; Glisan 1874; Jones 1856; Merservey 1856; Weaver 1856; Webster 1884). The participation of indigenous people and people of color belie the historical memory of the fort as a bastion of white settler colonialism. The African settler described in the primary documents as Negro Ned was killed while participating in an attempt to forage for food outside of the forts walls, and Betsy Brown, a Tolowa/Chetco woman married to a Russian settler, was recalled in both primary documents and family oral history as instrumental to the ransoming of several white women from captivity back into the relative safety of Miners' Fort (Jones 1856:522-526; Joel Bravo, personal communication, 2017). The agency of indigenous women inside Miners' Fort is indicated by the identification of a cobble earth oven known generally in the Far West of North America as a camas oven that is of indigenous design.

7. CONCLUSION

The Rogue River War in historical memory is presented as a grave but ultimately successful trial faced by white settlers in their conquest and domination of the wilderness on the Western frontier. The erasure and white wash of the complexity of this historical event and the demographics of the participants was completed by the myth-making of settler memorialists (Tveskov 2017; see also Cothran 2014; DeLucia 2018; Slotkin 1973). Here, the Manifest Destiny of Christian settlers to expand across the continent and subdue both the animate and inanimate facets of the wilderness served as casus belli (Whaley 2010; Robbins 1998; Cronan 1983; Slotkin 1973). To flesh out this landscape of war, SOULA has investigated though document research, oral history, and archaeology a broad range of site types in our conflict archaeology, ranging from traditional battlefields, massacre sites, settler homesteads, U.S. Army fortifications and encampments, trail systems, and settler revetments. This catholic approach has allowed the active and creative role of people of color or indigenous people to be seen, particularly inside spaces such as Miners' Fort usually conceptualized as wholly settler arenas.

In settler mythology, the Rogue River War was simplified into a battle of good versus evil, pursued by cardboard participants following simple motivations. Historical works have progressively illuminated more facts and complexities about the Rogue River War, for example, outlining the internecine conflicts among the settlers or at least acknowledging that indigenous people had, in the end, just cause to try to resist being conquered (c.f. Whaley 2010; Wilkinson 2010; O'Donnell 1991 Beckham 1971). With few exceptions, however, victory by the settlers is cast as ultimately inevitable and as natural as a concrete war memorial, a contest against indigenous people painted as savages variably ignoble or tragically noble depending on the time frame. Indigenous leaders are denied complexity or nuance in their reactions to historical circumstances and seen simply as failing to remain "friendly" or "pacified" as they tragically lead "outbreaks" of irrational violence in a lost cause (e.g. McNally 2017; Douthit 2002; Beckham 1971).

The notion that both settlers or indigenous people—as individuals and groups—reacted to complex historical events variously through diplomacy, opportunism, generosity, aggression, insight, foresight, apathy, rage, calculation, fear, nobility, or stupidity based on complex individually or culturally informed factors remains elusive. The diversity of those caught up in the violence of the Rogue River War has also been largely written out our collective historical memory in favor of a relatively simple and safe morality play that reinforce the tropes of nationalism and Manifest Destiny writ large. Rather than following the script of a traditional Western narrative where the cavalry comes to the rescue of pioneers in a wagon train, the Rogue River War, in many ways, resembled instead recent conflicts such as the Vietnam War, The Iraq War, or the Afghanistan War. As in these conflicts, there were not two antithetical 'sides' amenable to easy delineation, and guerilla tactics, civilian causalities, and a propagandized historical memory were the norm.

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One Battle, Many Cultures: Vázquez de Coronado and the "Tiguex War" of 1540-1542

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Introduction: The Vázquez de Coronado Expedition of 1540-1542

Spanish exploration and colonization of the western hemisphere or "new world," as it would be called, proceeded at breakneck speed in the first decades of the sixteenth century. Spain and Portugal were engaged in a race not just to find and claim new lands, but especially to gain control over the world's most valuable commodity at the time: spices. The 1494 decree by Pope Alexander VI, codified in a papal bull called the Treaty of Tordesillas, ordered that Spain would retain ownership of all lands found east of an arbitrary line in the Ocean Sea (or Atlantic); subsequently many ships were sent in exploration of this "fourth part of the world" (Lester 2009). Conventional wisdom was that ships sailing west from Europe would soon encounter islands that would be part of Asia, hence the unwavering belief by Cristóbal Colón that the new lands he found on the initial voyage of 1492 were in fact part of India, or the indies.

With the explorations of the Caribbean basin in the early 1500s, Spain already had a strong base of operations in Cuba. In 1513 Ponce de Leon made the first landfall of North America described in written texts, and Juan de Grijalva explored the Yucatan peninsula in 1518. But the most important developments were the stunning conquests of two immense indigenous empires: the Aztecs by Hernan Cortés from 1519 to 1521, and the Inca by the Pizarro brothers in 1532. In both those cases, great civilizations yielded vast amounts of gold, silver, and jewels which enriched the Spanish treasury and provided the financial means to further expand colonial efforts.

In less than 15 years of Cortés' conquest of the Aztec empire, Spain had already established a colonial administration in Nueva España (now México), with Antonio de Mendoza serving as its first viceroy from 1535 until 1550. Mendoza was accountable to none other than Charles V, the Holy Roman Emperor (also Carlos II, king of Spain), and most powerful person in the world at the time. The stage was set for the next undertaking to find another great civilization in the new world.

Geographic understanding at the time held that the next settled areas to explore from Nueva España lay to the north and northwest, and that route would also provide the shortest approach to Asian lands of Cathay (China), Sipangu (Japan), and India. Adding to these perceptions was information gained from Álvar Núñez Cabeza de Vaca's harrowing journey of survival across present-day Texas and the United States-Mexico border: de Vaca reported settled lands and tantalizing clues (such as camel-hair clothing) that hinted of Asian origin (Goodwin 2008). Thus began the search for a mythic northwest passage or shortcut to Asia, a pursuit that mesmerized various European countries for well over 300 years.

In early 1539 Mendoza decided to send out an advance reconnaissance and chose a cleric, Fray Marcos de Niza, to lead it. Up to date information gained from de Vaca was that a great civilized land lay to the north of Nueva España's west coast. De Niza had the advantage of enlisting Esteban, an African Moor and one of just four survivors from the de Vaca journey, as his main scout. When de Niza approached his intended target, a land called Cíbola (now Zuni Pueblo in New Mexico), he sent Esteban ahead to assess the settlements. Esteban was killed in that encounter, and de Niza, having never actually reached Cíbola, rushed back to Mexico city to favorably report that a larger expedition was warranted.

Any new explorations sanctioned by the Spanish crown were to only be conducted under royal contract, or cédula, the rights for which were actively competed. Interest in this new enterprise was high and several luminaries competed for the right, including Nuño Beltrán de Guzman, Hernando de Soto, Pedro de Alvarado, Cortés, de Vaca, and even Mendoza himself. In the end, the cédula was awarded to Mendoza but as

was the case at the time, the crown would not fund the expedition and the entire enterprise was to be privately funded (Flint and Flint 2005).

Organization of The Expedition

Antonio de Mendoza's first task was to organize this newly sanctioned venture and as word spread of the prospects of possible riches, enlistees and investors lined up to participate. By the time all contributions were amassed, the total value of the enterprise was almost 600,000 Spanish pesos, or about 19 tons of silver (S. Flint 2003). This was an immense fortune for the time. Mendoza and Pedro de Alvarado each contributed the equivalent of several million dollars. The average cost for each captain was about $175,000 and even the average soldier fronted about $30,000 in goods.

To command the expedition, Mendoza needed a trustworthy leader and chose a person of high rank closely linked to the Mendoza family: capitán general Francisco Vázquez de Coronado y Anaya. Coronado was then just 29 years old, and had administrative background but little military experience. He was the current governor of the province of Nueva Galícia and had proved himself capable and loyal to Mendoza. He was also connected to wealth by way of his marriage to his teen-aged wife, Beatriz de Estrada. For his contribution, Coronado staked several million dollars in value against the family estate of Beatriz de Estrada.

By the time the whole enterprise came together, it was quite possibly the largest land-based expedition ever conducted under the auspices of the Spanish crown in its many early explorations of the New World (Schmader 2014). It was even supported in part by ships following along the west coast of Mexico under the command of Hernando de Alarcón. Vázquez de Coronado's expeditionary force consisted of 350 European soldiers and another 25 clerics (Flint and Flint 2019). Significantly, at least 1,300 (and most likely more than 2,000) additional men were indigenous Méxican soldiers called indios amigos or aliados, of mixed cultural ethnicities from central and west-central México (Flint 2008:58-60). Thus, three-fourths of Coronado’s armed forces were indigenous Méxican fighters, not Europeans.

The cultural mix of this entourage was remarkable for its diversity. No less than eight European nationalities and several North African groups were represented. European countries of origin included Spain, Portugal, France, Germany, Italy, England, Scotland, and Crete. The indios amigos derived from at least 20 different ethnic groups at last count (Flint and Flint 2019). These groups included Mexica, Tarascans, Tlaxcalans, Tlaltecans, Otomi, Caxcanes, and Zapotecas. It is not hard to appreciate that simple communication and language barriers alone would have been significant. Most likely the two common languages used were Spanish for the Europeans and Nahuatl for the indios amigos.

Fortunately, the Coronado expedition has a number of surviving documents associated with it, despite the fair number that have also been lost over the ages (Flint and Flint 2005). One of the more interesting documents is that of the first muster roll, or alarde. On February 22, 1540, most of the entourage appeared before Mendoza and Vázquez de Coronado in Compostela, the provincial capital of Nueva Galícia. The main purpose of the muster roll was to present assets and to establish individuals' rights to the apportionment of riches that were expected to be found. This accounting of the alarde gives a detailed inventory of what was brought along and used by the whole expeditionary force.

Military technology found in Nueva España at the time was a mixture of sources and types. The European soldiers gathered and used what was available to them, some of it aged, and as a result their assemblage of weapons was for practical purposes late medieval in its content. The long-time foot soldiers' weapon of choice, the crossbow, was just then beginning to be replaced by newer firepower of the powder-fired musket (or arquebus) by the mid-1500s (Schmader 2011:316). The muster roll listed just 25 arquebuses and 21 crossbows for all of the European soldiers, along with 60 swords (Aiton 1939). These totals were for the 260 men who started out from Compostela, as another 90 joined up later in towns such as Culiacán. Using the same proportions of weapons to soldiers, the estimated final numbers were probably 35 arquebuses, 29 crossbows, and 83 swords for 350 men. Thus, the Europeans were not a heavily armed contingent and their

usage of indigenous weaponry was commonplace. The indios amigos, it can be assumed, relied entirely on their own indigenous weapons such as the bow-and-arrow, the slingstone, and the stoned-edged war club (called a macana or a macahuitl).

The European army was organized into companies under the leadership or affiliation of more than a dozen captains. The captains often enlisted soldiers known to them, and so each loosely assembled fighting unit had ties based on relationships, not military assignments. The organization of the indios amigos is less well known but likely was centered around ethnic ties. Each of the various contingents and companies had additional support such as porters, animal tenders, cooks, and other laborers.

Animals made up a significant component of the expedition's support. At times, several thousand head of various livestock are described as being driven along to supply the forces. Most important were the 1,100 or more horses and mules counted at the alarde; these beasts not only bore much of the burden for moving the mounted soldiers ahead, but also for carrying the more needed supplies that could not be kept up by human porters. Horses used as fighting beasts had a major role in the eventual fighting that took place, since horses were completely unknown to the native world of the American Southwest. Europeans were experienced in the use of horses in warfare as a sort of fighting "tank" employed in assaults. Nothing was written about how many war dogs went along, but they were certainly used as a military and psychological asset. Coronado was brought up himself on charges that he loosed war dogs onto natives and terrorized his native guides with them.

Route of The Expedition

Vázquez de Coronado's presumed destination was Cíbola, or present-day Zuni pueblo, in western New Mexico in the American Aouthwest (Figure 1). There, according to the advance reconnaissance by Fray Marcos de Niza in 1539, Coronado would find large settlements and likely, riches. This was the assumed next "great civilization" and potential gateway to Asia. Upon arrival at Zuni, it was clear there were no large cities or abundant wealth and the disappointment in de Niza's account was palpable (Hammond and Rey 1940). But with the forces having marched across the Sonoran Desert in early summer, they were hot, tired, and hungry. The Zunis thought the army had come to avenge the killing of Esteban and were determined to defend their village. With both sides hopelessly at odds, the first battle between Europeans and Native Americans in the history of the American West occurred on July 7, 1540 (Damp 2005). Coronado personally led the initial attack and although injured in the assault, his forces prevailed. Over four months into the expedition, with huge investments riding on the outcome and already failing to find new civilizations, Coronado had to choose between continuing on or returning to México.

Figure 1: Route of the Vázquez de Coronado expedition, 1540-1542. The entire journey covered about 3,900 miles (6,000 kilometers) and lasted almost 2 ½ years.

Vázquez de Coronado sent a scouting party east to confirm reports of other settlements to the east. His captain Hernando de Alvarado reached the Río Grande valley in central New Mexico by September 1540 and after seeing numerous villages, encouraged Coronado the relocate the expedition's base there. The area was called the "Tiguex Province" after the local pueblo people's name for themselves, and twelve towns (Figure 2) were said to exist in the province (Hammond and Rey 1940:183). With fall approaching and one of the coldest winters on record about to occur (and since the indios amigos had never experienced extreme cold), the huge exploratory party was compelled to take over one of the major Tiguex villages in late 1540.

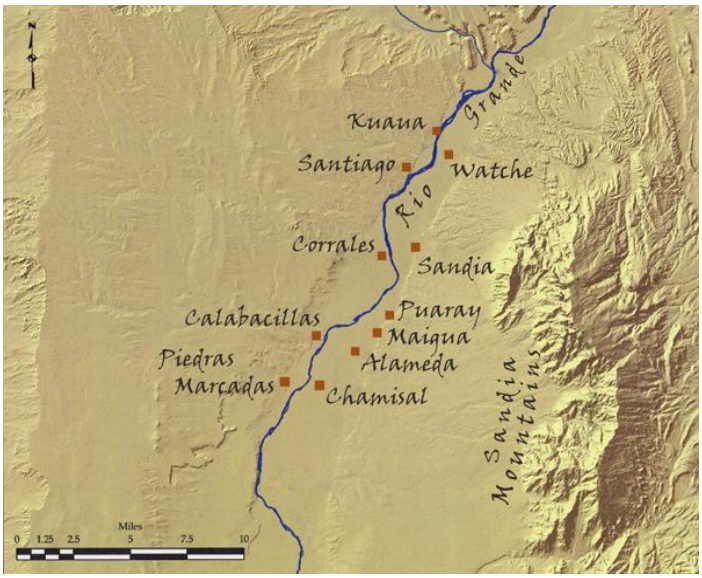

Figure 2: Map of the Tiguex Province, north of present-day Albuquerque NM, showing locations of eleven of the reported "twelve towns." The twelfth town is likely Isleta Pueblo, about 20 miles south of Piedras Marcadas (map by author).

This forced take-over of a village, subsequent appropriations of clothing and food, strained relations between expeditionary soldiers and natives, and persistent puebloan acts of resistance all escalated into a series of skirmishes and battles that historians have called the "Tiguex War"—the first such named conflict between European explorers and native peoples in the history of the United States. By the time it ended, over six months and several battles later, more than 500 pueblo people would die.

Piedras Marcadas Pueblo, New Mexico

Surprisingly, given the expedition's size and the number of battles it fought, there is little physical evidence of the events that took place in Tiguex (Schmader 2014). In the former Tiguex Province, now located in and north of Albuquerque, New Mexico (see Figure 2), there are just two battle sites left (Mathers 2011; Schmader 2011)-- Santiago Pueblo and Piedras Marcadas Pueblo. This is partly because many sites are now lost to urbanization and development, and others were excavated decades ago. In addition, improved criteria for recognizing sites and artifacts of the time period have only emerged in the past 20 years or so.

This paper presents the results of research done at the huge multi-storied adobe village called Piedras Marcadas Pueblo. This site is not only the largest of the Tiguex (or southern Tiwa) pueblos, it is also the most intact remaining settlement in the area dating to the Contact period. The site is arranged in three quadrangular apartment-like adobe constructions of rooms, each built around an open central area, or plaza. The three roomblocks contain an estimated total of 1,000+ ground-floor and several hundred upper-story rooms; because the buildings were constructed from adobe which has melted into the ground over the centuries, there are no visible surface remains of any walls.

Traditional Native American pueblo communities consider Piedras Marcadas to be an ancestral site and as long ago as the 1990s, requested that non-invasive research methods be used in order to avoid large-scale excavations (Schmader 2016a). The most effective geophysics technique used at the site has been electrical resistivity (ER), conducted in 2006 within the central of the three known roomblocks (Markussen et al. 2007). The ER surveys in the central roomblock have identified about 450 ground-floor rooms (Figure 3) and areas of second- and third-story rooms (based on the amount of melted adobe), in an area of 2.5 acres or one hectare. Other architectural features such as passageways, an open central plaza, and large square ceremonial rooms called kivas are also apparent, The depth of detection for the ER equipment was set at 50 centimeters below modern ground surface.

Clearing shrubs to conduct the ER surveys (Figure 4) exposed several metal artifacts on the surface; these were then determined to be 16th century in age and likely associated with the Coronado expedition (Schmader 2011). Following suggestions of Charles Haecker (National Park Service, retired), systematic metal detection surveys were initiated in 2007. After several years of intensive metal detection surveys, over 1,100 16th century artifacts have been found in an area of 5,200 square meters (1.2 acres or 0.5 hectare). This intensive metal detection area is approximately the size of a football field.

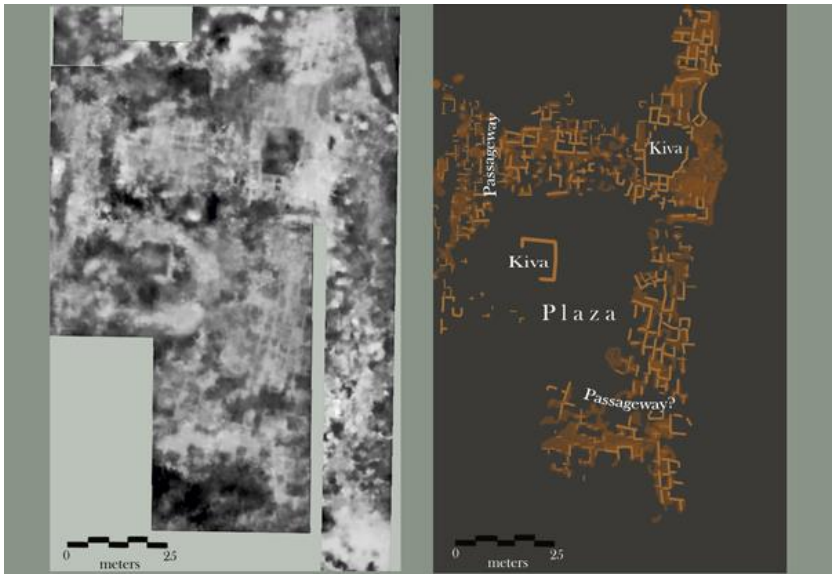

Figure 3: Electrical resistivity survey at Piedras Marcadas Pueblo showing results on left (after Markussen et al. 2007) and generalized interpretation of architecture on right.

Figure 4: Electrical resistivity work at Piedras Marcadas Pueblo (being done by Christine Markussen), showing general site setting and shrub clearing needed for survey.

The opportunity to combine two geophysics techniques—ER and metal detection—produced a unique outcome showing the relationship between architecture and contact-period materials without excavation (Schmader 2016b:55). The strong relationship between subsurface architecture found by ER and metal-detected artifacts would not be discernible if not for the intactness of the site. It has experienced little erosion or deposition, as indicated by the shallow average depth of 16th-century artifacts, which average just 3 cm to 8 cm below modern ground surface (Schmader 2014). Importantly, metal artifacts found at the site date to either the 16th or 20th centuries; none are dated to the 350+ year-long interval between the Coronado expedition and the modern era (Schmader 2011). This is a distinction from other pueblos in the Tiguex province, which also have 17th- and 18th-century colonial-period materials that can overlie or obscure the patterning of earlier events.

Sixteenth-century artifacts sort into two basic types of material: ferrous and non-ferrous (Schmader 2016b:55). Ferrous artifacts consist of chainmail (Figure 5A), wrought iron nails, wire, chain of various thicknesses, larger pieces such as horse shoe fragments, and many smaller pieces of fragmentary iron. All iron artifacts were forged and none were cast. The most distinctive of the wrought-iron nails have a peaked, faceted head (Figure 5D) and are diagnostic of the sixteenth century period (Mathers and Haecker 2011).

Non-ferrous items are made of copper, copper alloys, and lead. These artifacts include bell fragments (Figure 5B), lace tags or aglets (Figure 5C), clothing fasteners (Figure 5E), buckles (Figure 5F), strap ends (Figure 5G), scabbard tips (Figure 5H), belt loops (Figure 5I), medallions (Figure 5J), and horse bridle cinches (Figure 5K). Copper alloy items were often cast pieces. Abundant scraps of sheet copper found at the site were likely carried as raw material.

The most diagnostic artifact of the time period, and indeed unique to the Coronado expedition, were pure copper crossbow boltheads. Twenty-two copper crossbow boltheads (Figure 6) have been found in the metal detected area. Lead isotope analyses of the crossbow boltheads trace back to copper sources and mines in the west-central Méxican region of Míchoacán (Thibodeau et al 2012). The mines at Michoacán were a well-known source for copper in the pre-Contact period; in one remarkable example, Cortés was able to order the manufacture of 8,000 boltheads by native workers in about a week (Gagne 2011:241).

Finished lead artifacts included musket balls (Figure 7), which were ammunition for arquebuses. The caliber of musket balls range from .25 caliber to .55 caliber, with the exception of one large .89 caliber ball which was too large for an arquebus. The average size of musket balls was about .40 caliber but the median is .50 to .55 caliber, the approximate bore diameter of a sixteenth-century arquebus. Much lead was found in unshaped blobs, indicating that expeditionaries also carried lead as raw material, presumably to make into more musket balls when needed.

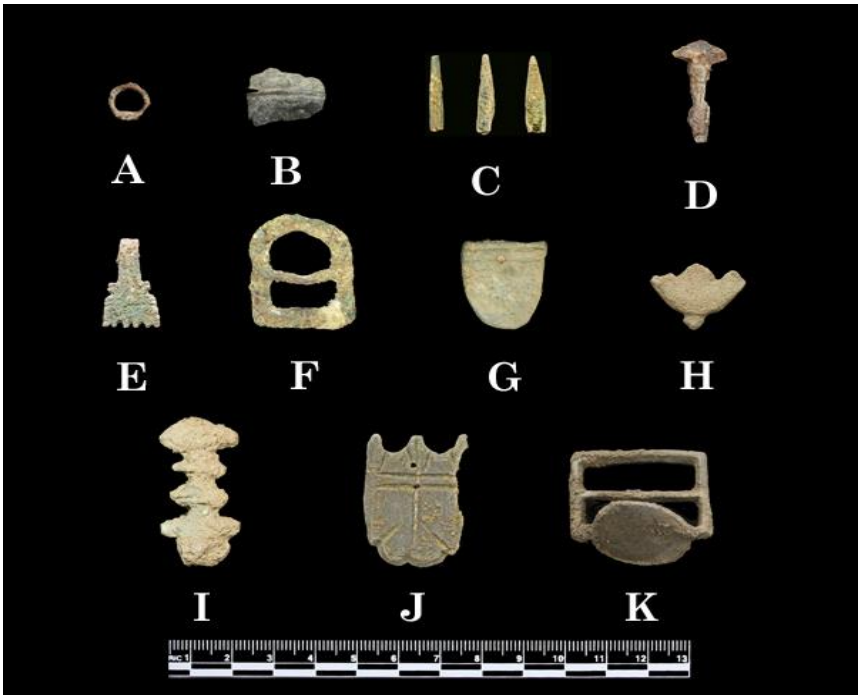

Figure 5: Examples of 16th century metal artifacts from Piedras Marcadas Pueblo.
A, chainmail. B, bell fragment. C, clothing lace tags (aglets). D, wrought iron facet-headed nail. E, clothing fastener. F, buckle. G, strap end. H, scabbard tip.
I, ornate strap loop. J, medallion. K, horse bridle cinch.

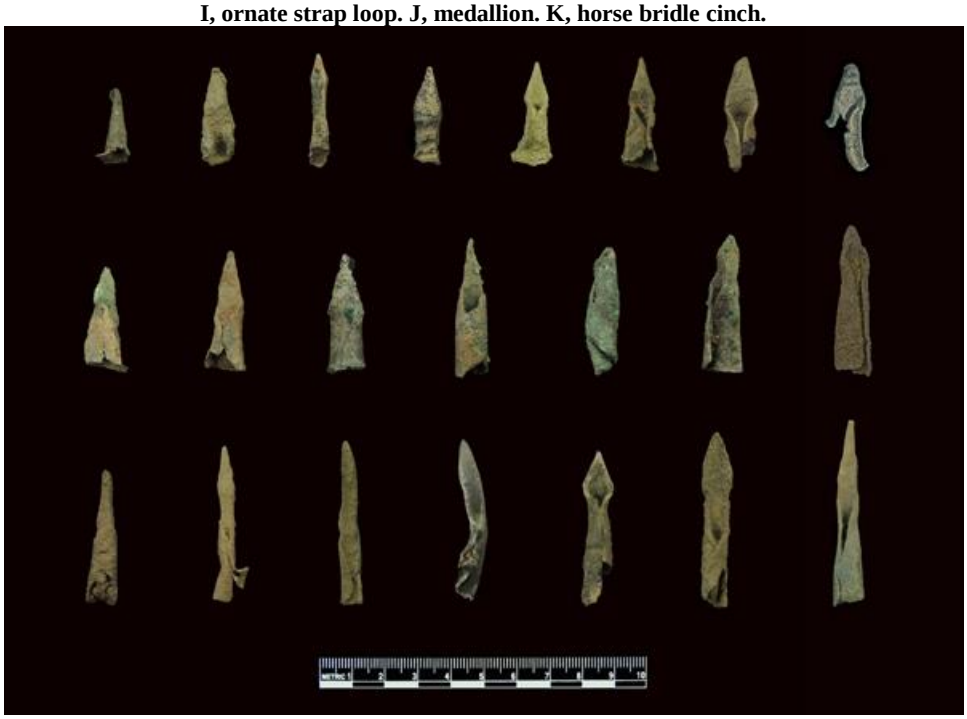

Figure 6: Crossbow boltheads recovered from Piedras Marcadas Pueblo. All are made of Méxican copper, an important diagnostic trait of the Vázquez de Coronado expedition.

Figure 7: Lead shot musket balls used as ammunition for arquebuses. Sizes range from .25 caliber to .89 caliber but most are about .50 to .55 caliber, the diameter of a sixteenth-century Spanish arquebus bore.

Interpreting Battlefield Patterning

European military tactics brought to the New World regarded sites such as an enclosed pueblo as a kind of fortification or castle. Spanish tactics, in particular, reflected centuries of conflict with the Moors on the Iberian peninsula, culminating by the end of the 1400s. Just decades later, conquistadors such as Hernan Cortés employed the same approach to overwhelm adversaries with much greater numerical advantage. When faced with exterior walls of a fortified village such as Piedras Marcadas Pueblo, the strategy for of attack would have been to scale the fortress walls to access the interior as if it were a castle.

The central roomblock of Piedras Marcadas is a quadrilateral of multiple rooms on all four sides enclosing an open plaza. There are at least 450 ground-floor rooms, averaging 2.5 meters by 3 meters in size and all built from adobe (see Figure 3). Electrical resistivity results show areas of deep adobe melt indicating upper-story rooms. The exterior edifice of these adobe rooms would have presented themselves as fortress-like walls to be scaled to access the interior plaza of the pueblo. Indeed, eyewitness accounts from Coronado's own men describe attempts to scale these walls as a first line of attack (Hammond and Rey 1940). A second common tactic was to drive any adversaries into corners of enclosed spaces and effectively concentrate firepower for maximum control and casualties. Evidence of both tactics may be found at Piedras Marcadas.

Basic patterning of metal artifacts in relation to subsurface architecture reveals several concentrations that are dissimilar to each other (Figure 8). That is, even a basic distinction in artifact material between ferrous and non-ferrous items reveals non-random differences. If the artifacts were randomly distributed by material type, then no differences would be found. These patterns become more distinct as artifact types and details of certain site areas are examined.

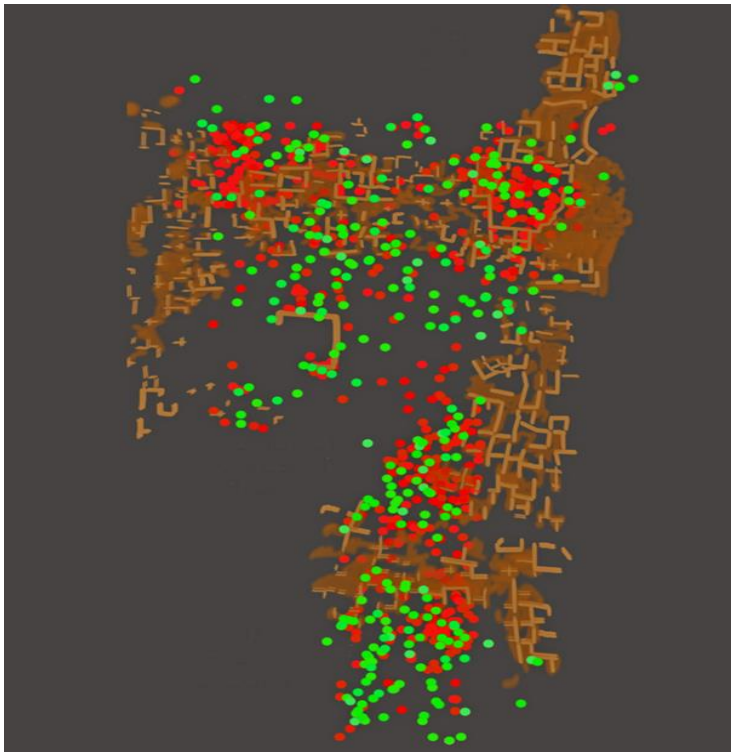

Figure 8: Integration of architecture found by electrical resistivity surveys and all16th century metal-detected artifacts (red are ferrous items and green are non-ferrous).

The south side of the central roomblock has the clearest example of assault on exterior walls to access the pueblo interior (Figure 9). Over 165 pieces of sixteenth century metal were found in a 600-square meter area. These items include 16 personal items (horse bridle, ornate strap loop), 9 crossbow boltheads and fragments, 9 lead balls, 16 blobs of lead, 24 pieces of copper sheet, 18 facet-headed nails, 15 other nails, 34 broken nails, only 3 wire pieces, and 21 iron fragments. Almost all of these items are outside and against the exterior walls and few are found overlying the interior walls' architecture.

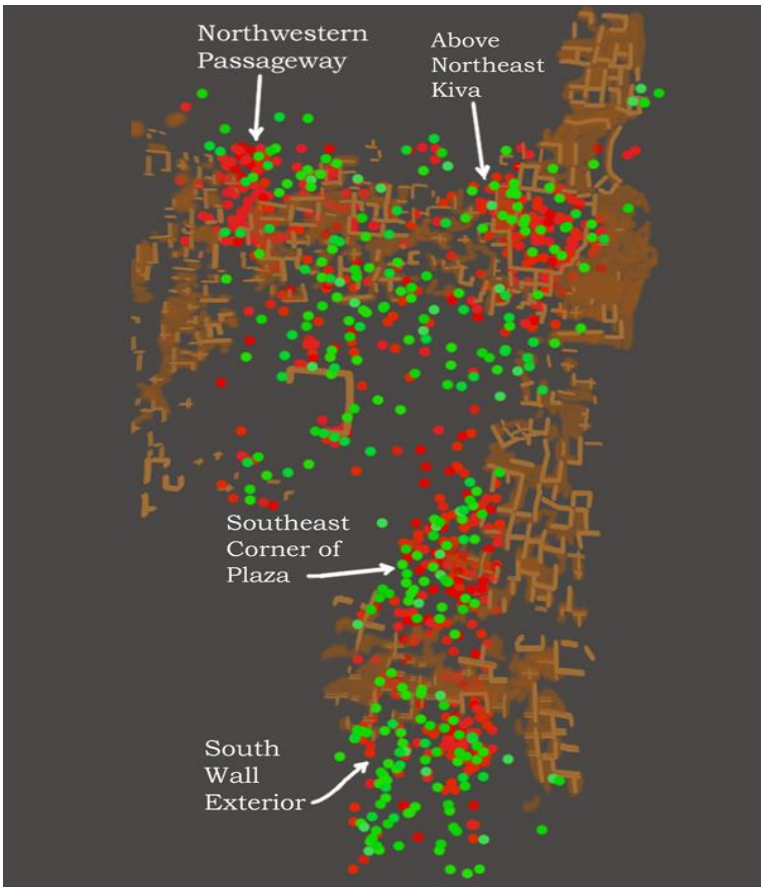

Figure 9: Identifiable zones of attack as interpreted from artifact concentrations.

Another line of attack is apparent in the northwestern part of the central roomblock, where a former passageway (see Figure 9) was probably blocked off. Typical village layouts included open passageways but these had to be palisaded by puebloan defenders to protect the interior plaza. Within a 300-square meter area, 112 metal artifacts were found but just 2 crossbow boltheads and no personal items-- a distinct contrast to the south wall attack zone. Ten pieces of copper sheet, 5 lead blobs, 24 facet-headed nails, 13 other nails, 13 nail shafts, 36 pieces of wire, and 9 iron fragments complete the assemblage in the passageway.

The northeastern corner of the roomblock contains a large square room called a "kiva," used for communal ceremonies. This kiva area was the locus of a possible attempt to access the plaza (see Figure 9) by either breaking into the room or by climbing in its roof. A 400-square meter area contains 180 metal artifacts. No crossbow boltheads and just one personal item were found in the area. Twelve pieces of sheet copper, one lead ball, 17 lead blobs, 25 facet-headed nails, 11 other nails, 27 nail fragments, 11 pieces of wire, and 45 iron fragments were found.

A fourth concentration of artifacts in the southeastern corner of the plaza (see Figure 9) likely represents the tactic of crowding enemy into a confined space to concentrate firepower after accessing the pueblo interior. In a 500-square meter area, 163 metal artifacts were found. These included 10 crossbow boltheads, 4 personal items, 11 pieces of copper sheet, 7 lead balls, 12 lead blobs, 18 facet-headed nails, 34 other nails, 45 nail fragments, only one piece of wire, and 21 iron fragments. The content of the area, with high numbers of ammunition and nails, is more similar to the assault area on the south side of the exterior wall. These four areas, totaling 1,800 square meters, contained 620 metal items—more than double the artifact density found at the site overall.

Although artifact concentrations in relation to site architecture are necessarily biased towards metal items due to metal detection surveys, it is important to consider the expedition's native weaponry used by its larger Mexican indigenous fighting force. Surface finds of stone artifacts provide an indication of the indigenous soldiers' fighting role. At least 25 slingstones (Figure 10) and 9 stone projectile points (Figure 11) have been found on the site surface (Schmader 2016b:54); of course, not all are attributable to the Mexican soldiers since there was obviously vigorous defense of the pueblo by the village's inhabitants. However, slingstones were unknown in the pre-Contact pueblo world and their use was certainly introduced by the México indios amigos. Certain basally notched projectile point styles are distinctively México as well)Medrano Enriquez 2012:127). The artifact types are distinctive enough to identify in terms of projectile point styles and from the formal shaping of slingstones. These artifacts indicate one of the only times in United States history when indigenous groups from thousands of miles apart-- México and the American Southwest-- were compelled to fight against each other.

Figure 10: Slingstones found on surface at Piedras Marcadas Pueblo.

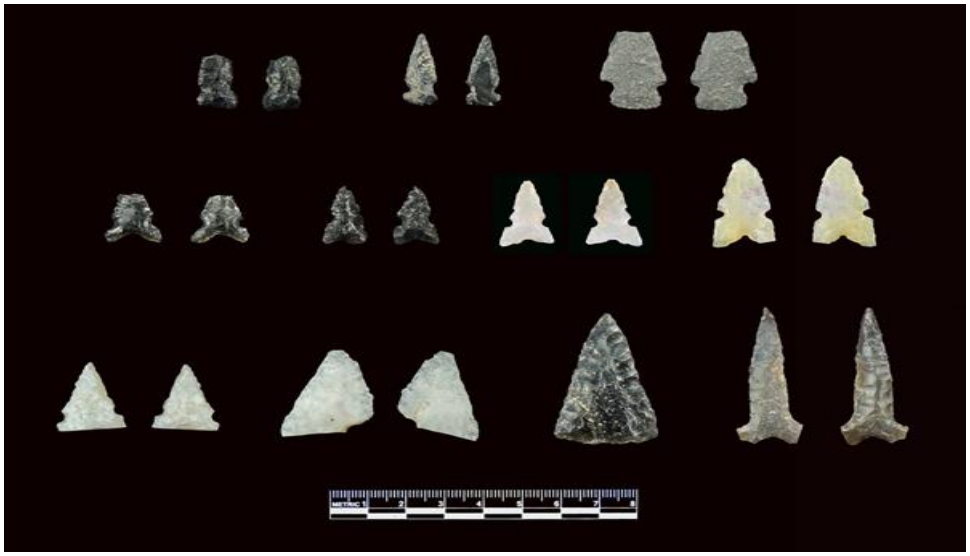

Figure 11: Stone projectiles found on surface at Piedras Marcadas Pueblo. Top row are puebloan-style projectiles while the bottom two rows are Mexican-style (compare to Medrano Enriquez 2012).

Target Zones, Firing Zones, and Fighting Zones

Apart from artifact clusters described at various parts of the pueblo, it is also possible to identify certain tactical areas (Figure 12). The first of these are target zones, that is, areas where ammunition fire was concentrated. To reconstruct these target zones, an inferred useful range of 75 meters was used for crossbows and arquebuses, and 50 meters was used for slingstones and projectile points. The combined distribution of crossbow boltheads, lead balls, slingstones and projectile points shows that most of the targets were within and along the margins of the plaza and on the outside of the north and south exterior walls of the pueblo. Tellingly, many slingstones were found on top of architecture in the northern and southern tiers of the roomblock, suggesting they were hurled from the outside and onto the roofs of the pueblo.

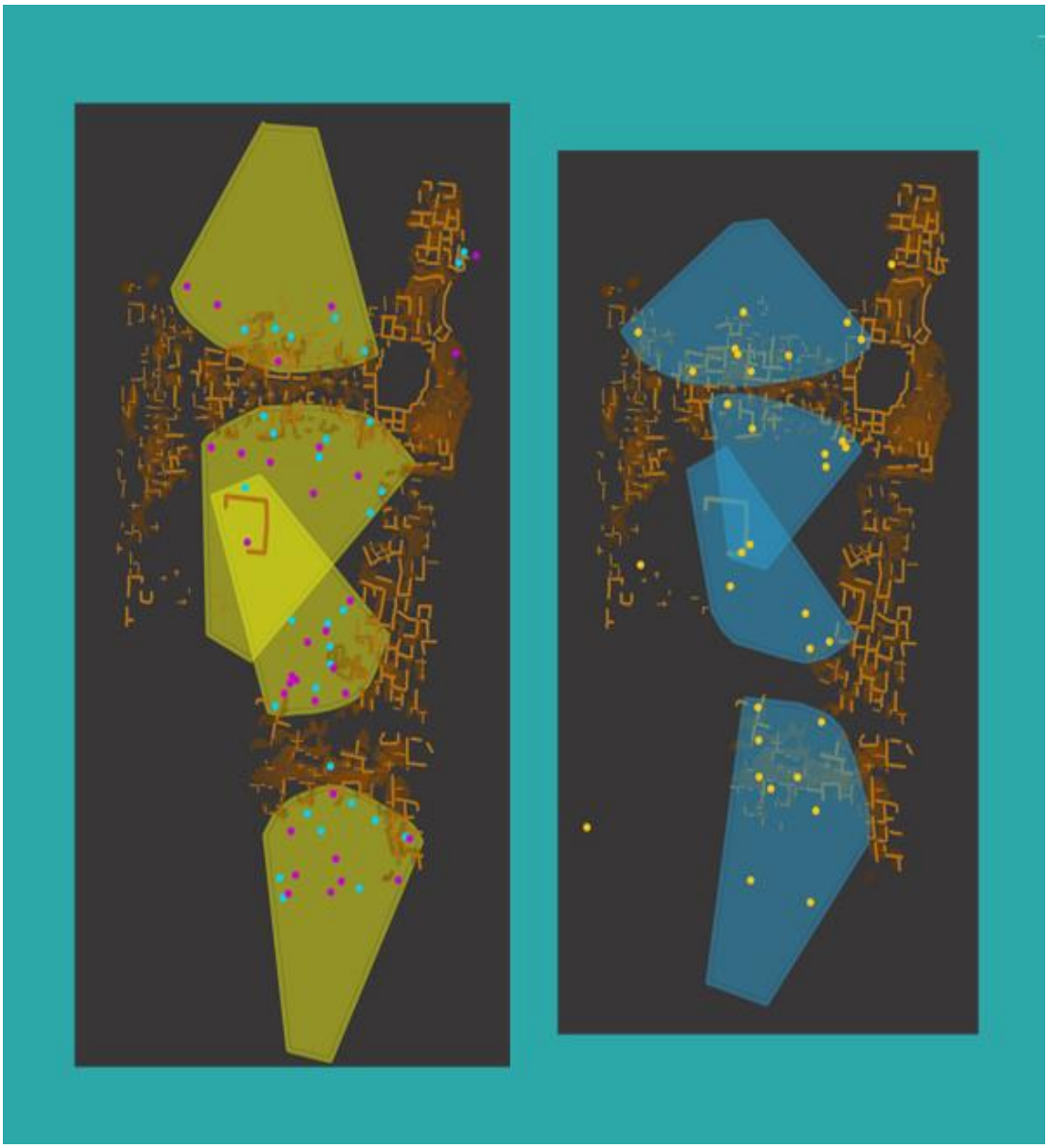

Figure 12: Inferred target zones. Left, crossbow boltheads and arquebus lead balls showing an assumed range of 75 meters. Right, slingstones and projectile points with an assumed range of 50 meters.

Fighting zones, where hand-to-hand combat and casualties are most likely to have occurred, are best indicated by the heavy loss of personal items (Figure 13). These items include not only clothing and adornments, but other objects that individuals would have had on themselves, such as chainmail and bells (see Figure 5). When the distribution of these artifacts is examined, likely fighting zones are also inferred within and along the margins of the plaza and outside the north and south exterior walls (especially the south). These areas are not identical to the target zones, but do overlap. Multiple sequencing of events can make different activities hard to isolate when they recur or overlap in the same area. Shooting and hand combat can co-occur before or after each other in confined areas, and likely did within the plaza. Further, not all artifacts may be combat-related as certain post-battle activities may have taken place. One such example is the kiva area in the northeast corner of the roomblock, which contained many iron fragments and numerous pieces of slag, indicative of possible post-battle forging activity.

Consequences and Aftermath

The Vázquez de Coronado expedition began with heavy investment and high hopes for finding great new civilizations, exploitable wealth, and a possible route to the Orient. It did not succeed in any of these goals, due mostly to poor intelligence and excessive expectations. But the carrying out of the enterprise, and its effects upon native peoples, lay with the leaders of the expedition itself. First encounters between European explorers and indigenous peoples of the Americas often followed the same pathways of brute force, demands for submission, and retributions for resistance. Native peoples, in turn, had never experienced anything like the military and philosophical orientations brought by Europeans. Traditional strategies of negotiation and mutual respect systems were never engaged by both sides, leading repeatedly to resistance and hostility (Schmader 2017). In the Tiguex province, every major settlement was burned, stores were ravaged, and massive movements of displaced people occurred within a short period of time.

The tactical and economic failures of the Coronado expedition were profound. All of the participants lost their investments and many spent the rest of their lives trying to recoup anything they could (Flint 2008). Moreover, the deep disappointment in the outcome resulted in a complete lack of interest by the Spanish crown in regions north of Nueva España for the next 40 years (Hammond and Rey 1966). It was not until the early 1580s that small explorations began to range into Nuevo México, and not until 1598 that a first major attempt at establishing a new colony by Juan de Oñate would occur. By then the focus had shifted from a pursuit for riches to one of saving souls of the native populations.

The impact on native peoples was far more profound. Entire settlements and social structures were destroyed and pueblo peoples resorted to a broad range of tactics for survival. These tactics included population movements, relocations, and hiding. Major villages were temporarily abandoned, even for decades, and upon being resettled were often abandoned repeatedly as new explorations arrived (Schmader 2017).

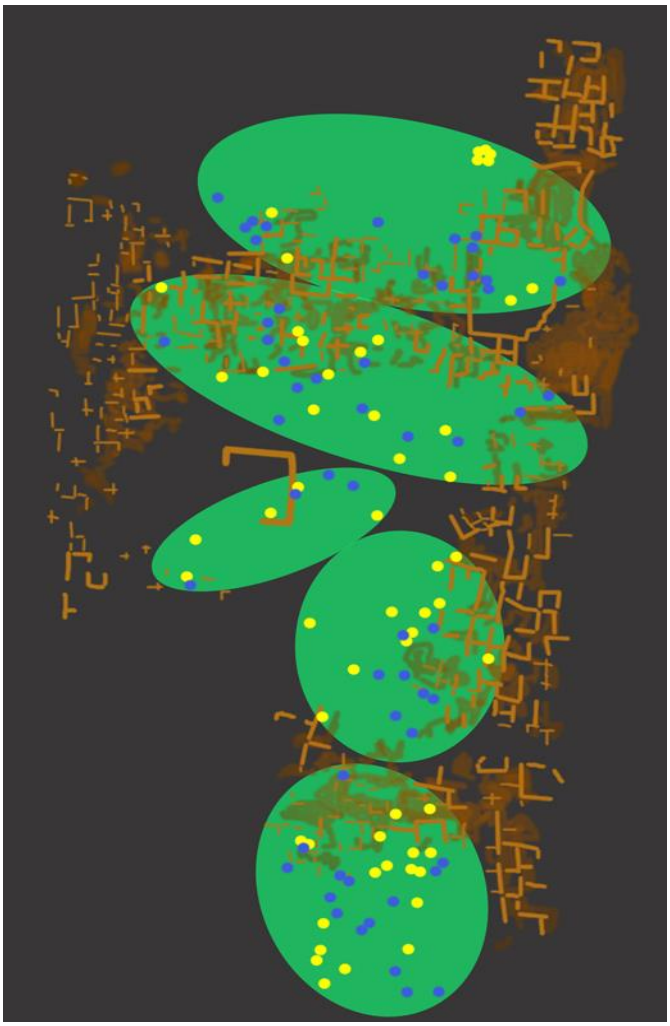

Figure 13: Inferred fighting zones and probable areas of hand-to-hand combat based on breakage and losses of personal items (clothing, adornments, chainmail, bell fragments).

These responses and the resiliency of the native peoples ensured their survival during a time in history when many cultural groups in the new world were extinguished (Wilcox 2009).The collapse of the pueblo peoples of central New Mexico was almost total, however. From an estimated population in the Tiguex Province of 10,000 to 20,000 people in twelve villages at the time of first contact in 1540, there remained just 800 people in three villages by 1620 (Barrett 2002).

One of the most important consequences of the first contact was the introduction of native peoples from other indigenous areas and the first intermarriages. New Mexico has long been a land of mixed blood--called mestizaje-- and the mixing of the bloods happened almost immediately upon contact. Unknown numbers of Mexican indigenous participants did not return but elected instead to stay in Nuevo México (Flint and Flint 2019). The same can be said for a smaller number of Europeans and blacks. With these defectors came the first elements for intermixing race that characterizes today's New Mexican populations.

Conclusions

This paper has presented the context for, and contents of, one of the earliest important battle sites between Spanish expeditionary forces and native peoples of the American Southwest. The huge exploration led by Francisco Vázquez de Coronado from 1540 to 1542 has left only three known battle sites, two of which

date to the earliest named war in United States history: the "Tiguex War," which took place in the middle Rio Grande valley of New Mexico.

Piedras Marcadas Pueblo still represents a place of deep reverence to traditional pueblo communities living in the area (Schmader 2016a). Evidence of their ancestral village and memory of events that permanently transformed puebloan history and lifeways, is ever-present at the site. The place itself likely lives on in oral histories and cultural geographies not accessible to non-puebloan people.

Piedras Marcadas is certainly one of the most significant conflict locations in the western United States dating to sixteenth-century explorations by Spain, based on the numbers and types of European artifacts found at the site (Schmader 2011). Beyond its significance as an early battle site, the documented finds at Piedras Marcadas exhibit several important characteristics. It is unique in terms of the time period, the artifact assemblage and site content, and the overall intactness of the site. The time period of the battle-- either late 1540 or early 1541-- represents a major turning point in warfare technology, when the crossbow was being phased out and the arquebus was being phased in. As such, the nearly equal use of both forms of firepower is not found at later conflict sites.

Not only was the European warfare technology at a key turning point in time, but the whole battlefield artifact assemblage is decidedly mixed from a variety of sources. Eight European countries and a contingent of Africans were represented on the Coronado expedition. Moreover, the expedition relied heavily on indigenous soldiers, with three-fourths of its fighting force being Méxican ethnic descent; more than 20 cultural groups from México were present in the exploration. Méxican soldiers, in turn, fought against native pueblo peoples in some of the only such inter-indigenous fighting to have occurred in the history of the United States.

The intactness of the site has produced results from geophysics surveys that lay open the structure of this conflict site, frozen in time during the transition from medieval to more modern warfare technology and tactics, and embroiled in the hopes for exploratory glory, the pitched fight for survival, and the crush of vastly different cultures onto one tumultuous stage.

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"Chicasa 1541: Narrowing the Search for Soto's Battle with the Chickasaw"

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ABSTRACT

In 1539 Hernando de Soto landed in Florida with 625 soldiers to explore, conquer, and search for treasure. Their journey left a trail of destruction that profoundly impacted Native Americans across the Southeast. In late 1540 Soto's entrada entered the modern state of Mississippi and arrived at the town of Chicasa, chief town of the ancestors of the modern Chickasaw Nation. After a stay of several months, Soto decided to move on. The Chicasas, frustrated by Soto's request for slaves, attacked and set fire to the village on March 4, 1541. A fierce, brief, battle raged before the Chicasas withdrew; only to attack Soto again at another location on March 15. Archaeologists and historians have studied and debated Soto's route since the 19th century. Recent discoveries have suggested that the town of Chicasa is near Starkville, Mississippi. This paper relates the research being conducted by archaeologists from the South Carolina Institute of Archaeology and Anthropology, University of Florida, University of Mississippi, and The Chickasaw Nation to find both battlefields. This research includes historical and archaeological analysis, pXRF metal analysis, and comparative collections analysis of 16th Century Spanish assemblages across the Southeast.

Key Words: De Soto, Chicasa, Chickasaw, pXRF, conflict archaeology

INTRODUCTION

The battle of Chicasa in 1541 involved a confrontation between the Hernando de Soto expedition and Native Americans in southeastern North America in what is today northeastern Mississippi. It was a disastrous clash for the Spaniards, who lost a significant portion of their matériel and livestock. In many respects, 16th century conflicts throughout the Americas occurred in a unique interval in the annals of warfare. Rarely in history have opposing forces known so little about their adversaries and shared so little overlap in their tactics and technology of war. These conditions created challenges for combatants and archaeologists alike.

For the Spaniards, a key challenge was that their early forays into unknown regions required sizable expeditions equipped for much more than battle. Everything from trade goods to satisfy local chiefs to Catholic sacramental paraphernalia needed to be factored into journeys that could last from months to years. For Native Americans who opted to defy European invaders, their greater numbers were often offset by the surprise and effectiveness of strange armaments and animals of war. As a result, low intensity skirmishes and pitched confrontations within villages were the norm, rather than open engagements. For archaeologists working in the southeastern United States, these variables obscure the visibility of conflict. Because Spaniards often occupied the villages they engaged, their domestic goods are intermingled with their armaments. But they also occupied villages peacefully, providing opportunities to trade and to lose a variety of goods in a way that would mimic sites of conflict. Adding to this ambiguity, the items carried on the first expeditions were

novel to Native American eyes. These objects were often intensively and repeatedly modified into more familiar Indigenous forms, and they also entered regional exchange networks (Brain 1975, 1985a; Smith 1976; Hally and Smith 2011).

With these thoughts in mind, this paper addresses three issues. First, we discuss the historical, archaeological and most probable geographical context of the battle of Chicasa. Second, we describe how we happened to locate what we think is at least its general location, somewhere near the cluster of archaeological sites known as Stark Farms, west-northwest of Starkville, Mississippi. Finally, we discuss our investigations there, with particular attention to the collection of metal artifacts that we believe date to 16th century Spanish contact. As will be seen, we believe that the documentary and archaeological evidence combined suggest that we have located evidence for the encounter at Chicasa, with the caveat that these materials may be in a secondary context, mined from the site, recycled, and traded locally.

Our discussion of Hernando de Soto's route and associated activities is based on the four extant written accounts of the Soto expedition. The three most useful first-hand accounts are by the Portuguese Gentleman of Elvas (Robertson 1993), Luys Hernández de Biedma, Soto's Secretary (Worth 1993b), and Rodrigo Rangel (Worth 1993a). A fourth account published in 1605 by Garcilaso de la Vega based on interviews and perhaps written testimony, is less reliable than the other three (Shelby 1993; Hudson 1997:450-451).

THE HISTORICAL CONTEXT

The route taken in the four years (1539-1543) that the Soto expedition spent traveling through the southeastern United States represents a great puzzle, and there have been countless efforts to reconstruct that route from the sparse evidence contained in the four extant written accounts (Swanton 1939, Map 2; Brain 1985b:xlvii). Those efforts have resulted in the clear identification of only one associated archaeological site, Apalachee, the site of the first winter camp (Ewen and Hann 1998). Strong cases have been made for other town Soto visited including Xuala in North Carolina (Beck et al. 2016) and Casqui in Arkansas (Ethridge and Mitchem 2013:180-182), but no definitive proof of the expedition's presence at any other site other than Apalachee has so far come to light.

When Hernando De Soto and his army of 625 men landed in Tampa Bay, Florida, in April, 1539, he was searching for mineral wealth like that which had been found in other parts of the New World (Hudson 1997). His plan was to stay close to his ships in the Gulf of Mexico for resupply and for evacuation if needed. The plans changed when he reached Apalachee, the Indian province in the vicinity of present-day Tallahassee, Florida. There he learned from traders that there was gold and silver inland in the province of Cofitachequi which was located in what is today central South Carolina (DePratter 1994). After making contact with his ships and instructing them to meet up with him farther west along the coast, in the spring of 1540 Soto turned his army inland. He did not find gold at Cofitachequi nor at any of the Indian provinces he visited on a months-long loop through Georgia, South Carolina, North Carolina, Tennessee, and Alabama (Hudson 1997) (Figure 1).

In mid-October, 1540, Soto and his men arrived at Mabila, on the Alabama River in central Alabama,

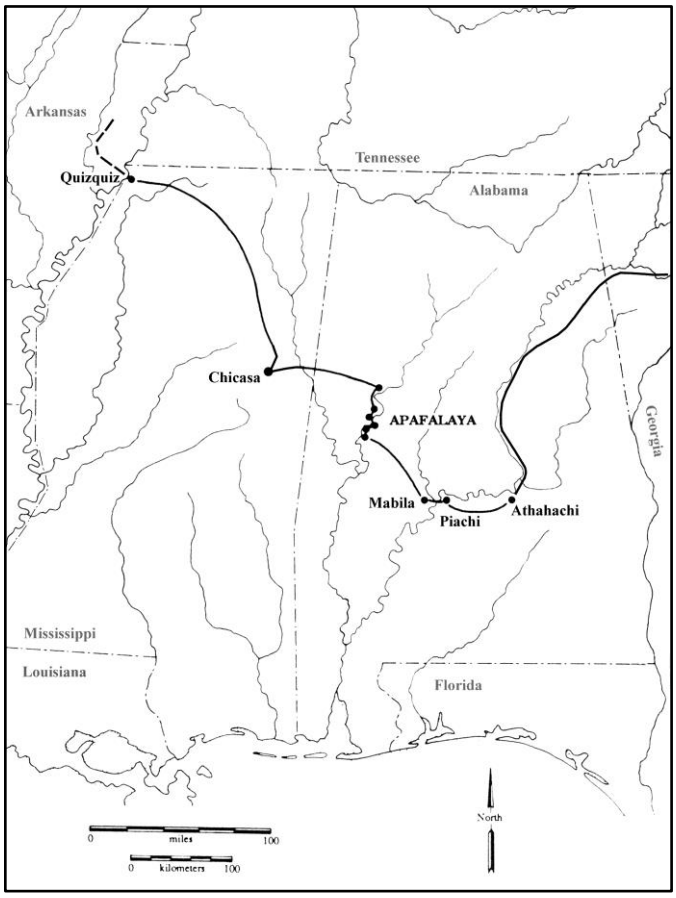

Figure 1: Proposed Route of Soto through Alabama and Mississippi.

where they fell into an ambush (Hudson 1997). This October 18th battle lasted all day. More than 20 Spaniards were killed and approximately 150 were wounded. While the army recovered from the battle at Mabila, Soto learned that his ships were waiting for him at the Bay of Ochuse on the coast (Elvas in Robertson 1993:104). Despite the great losses suffered at Mabila, Soto was not ready to give up on his quest for riches. Fearing that his army would mutiny and insist on returning to Cuba if he met up with his ships, Soto turned his diminished army of 525 men to the northwest away from the coast (Worthb 1993:236).

They spent four days crossing a "wilderness" before arriving in the province of Apafalaya on the Black Warrior River down steam from present-day Moundville, Alabama, on November 17 (Hudson 1997:250-259). Moving north along the river in the province of Apafalaya, Soto finally reached a crossing place where he had his men build a barge to use in crossing (Robertson 1993:105; Worth 1993a:296). Once across the river, Soto was able to capture the Apafalaya chief who then served as a guide (Worth 1993a:296). They remained in the province of Apafalaya until December 9, 1540, when they departed and traveled west and northwest before reaching the flooded river of Chicasa on December 14. Indians of Chicasa gathered on the west side of the river (the present-day Tombigbee) to prevent Soto's crossing, and they killed an emissary sent across the river to negotiate (Robertson 1993:105). Undeterred, Soto had his men build a barge and crossed the river on December 16. Soto and 30 mounted soldiers were among the first to cross, and once across they rode all day and "late into the night" before arriving at the main town of Chicasa (Robertson 1993:105; Worth 1993a:297).

Given that Soto and 30 mounted men rode late into the night, how far might they have gone before arriving at Chicasa? Travel distances for the army varied based on terrain, flooding of streams and swamps, and abundance of food, but Elvas (Robertson 1993:94) estimates that they "marched ordinarily five or six leagues daily when going through a peopled region, and as much as he [Soto] could through a depopulated region." Sources do not tell us if they had a guide, but it is unlikely that they would ride hard all day toward an unknown destination, so they must have had a guide or directions to Chicasa. Without knowing just what time Soto and his riders crossed the river, we can conjecture that their days' ride could have spanned ten hours (10:00 AM to 8:00PM) or even more. Even at a normal walking pace, this party could easily have covered 3 miles per hour or up to 30 miles along a trail that crossed no streams and meandered to avoid obstacles. We know that sunset on December 16, 1540, was at 4:59 PM (NOAA ESRI 2018), and that there was a 85.3 percent full moon that rose at 8:00 PM (Moonpage). This means that evening travel would have been facilitated by sufficient moonlight. However far the mounted party traveled, it seems that the rest of the army was soon able to catch up, arriving at Chicasa December 17 or soon thereafter despite the fact that the River of Chicasa, and presumably all of its feeder streams, were in flood stage. This suggests that the route that the army took to Chicasa was along high ground with minimal stream crossing. Such high ground is present on a route along the Old West Point/Old Starkville highway between Columbus and Starkville Mississippi in the divide between the Line Creek/Trim Cane Creek and Noxubee River drainages. Taking this route from a landing near Columbus to Stark Farm area would have required crossing only Catalpa Creek and Sand Creek, neither of which would have been major obstacles. Total distance along this route to Stark Farms is approximately 25 miles.

Soto found Chicasa, a town of twenty houses, deserted (Robertson 1993:105). Smith (1991:34) and Ethridge (2010:31) say that the town of Chicasa was surrounded by a palisade, but none of the extant Soto accounts mention a palisade. The rest of the army arrived at Chicasa the next day or the day following. Garcilaso (Shelby 1993:365) says that it took as many as four days though that may include arrival of stragglers. He notes that the main town of Chicasa was "situated on a level elevation extending from north to south having very little water but much timber" (Shelby 1993:365). Garcilaso (Shelby 1993:365) also says that the four days of travel to reach Chicasa were through "a level country, well populated, thought the pueblos were scattered and had few houses." Elvas (Robertson 1993:106) agrees that the province of Chicasa was "very well populated" with the population "spread out as was that of Mavilla [Mabila]." In regard to Mabila, Elvas (Robertson 1993:105) described it as having "large enclosed towns and a considerable population scattered about over the field, the houses being separated from one another one or two crossbow flights." Garcilaso (Shelby 1993:366) adds that Chicaça had two hundred houses, but that is an apparent exaggeration; he is not always dependable.

According to Elvas (Robertson 1993:106) Soto's men moved into twenty houses at Chicaça, but that most of the men were "lodged in the open field in the snow before having any place where they could build houses." Garcilaso (p. 366) adds that "they collected all the necessary provisions and brought from the outlying small pueblos much wood and straw from which to make houses." The land around Chicaça "was fertile and abounding in maize, most of this still being in the fields" noted Elvas (Robertson 1993:105). The Spaniards gathered this abundance of corn, thereby accumulating enough "for passing the winter" (Robertson 1993:105-6). Elvas (Robertson 1993:106) says that the entrada's pigs were kept "in certain houses a crossbow shot away from the camp." Garcilaso (Shelby 1993:370) indicates that the pig enclosures consisted of "a wooden pen inside the pueblo [made] by setting stakes in the ground and making a covering of straw. Horses were kept chained in stables near the camp (Robertson 1993:108; Shelby 1993:370).

Shortly after the Spanish arrived at the main town of Chicasa, the Chicasa chief came to see Soto, and thereafter he was a regular visitor (Worth 1993a:297). Relations between Soto and the chief were on good standing until March 4, 1541, when Soto was preparing to continue his journey and the Chicasa chief had promised to deliver bearers demanded by Soto (Worth 1993:298, Robertson 1993:107). That night the Indians attacked the Spanish camp at Chicasa (Robertson 1993:107), and in the ensuing battle, the Spanish lost eleven men, fifty horses, and four of their five hundred pigs (Robertson 1993:108). Biedma (Worth 1993b:237) puts

the losses at "fifty-seven horses and more than three hundred hogs and thirteen or fourteen men," while Ranjel (Worth 1993a:298) puts the losses at twelve men "killed and burned alive."

Because their camp was burned to the ground (Robertson 1993:108), the army moved to the town where the chief had been residing since the Spaniards took his main town. The chief's town was called Chicacilla, and it was in a level field about a half league to a league from the first camp (Robertson 1993:109; Worth 1993b:237; Worth 1993a:298; Shelby 1993:372). Ranjel (Worth 1993a:298) says that this new camp was in "a savannah" and "on a slope and hill." In their new camp, Soto and his men repaired their belongings and used a forge to re-temper their burned swords and to make "shields, saddles, and lances" (Robertson 1993:109; Worth 1993b:237). They had only about one week to make these repairs before the Chicasa attacked again on March 15, 1541 (Robertson 1993:109; Worth 1993b:237). This second attack was not as devastating as the first, though Soto was forced to remain for another month making more repairs and gathering supplies to continue their journey.

On April 26, the Spaniards broke camp and made their way to a "small village called Alibamu (Robertson 1993:109). Garcilaso (Shelby 1993:379) reports that the army traveled through four leagues of small villages in a "level country" and then passed a quarter league through uninhabited land before reaching Alibamu. Further, (Shelby 1993:385) Alibamu was "the last one [town] in the province of Chicaca." Biedma (Worth 1993b:237) says that they traveled northwest to get to Alibamu, but the other sources do not provide a direction of travel. Ranjel (Worth 1993a:299) says that the Spaniards encountered a well-defended barricade beyond Alibamu "in a savannah." Elvas (Robertson 1993:110) indicates that the land around the barricade for at least a crossbow shot distance was level. The battle at the barricade was heated, and in the end the Spanish had many wounded and 15 dead (Robertson 1993:110). On April 30, 1541, the army departed from Alibamu and traveled "through an uninhabited region and a bad road through forests and swamps" before reaching the first town of Quizquiz as they approached the Mississippi River (Worth 1993a:299). The march toward Quizquiz was "seven days through an unpopulated region of many swamps and thick woods, but all passable on horseback except several marshes or swamps which were crossed by swimming" (Robertson 1993:111). Biedma (p. 238) says the trek to Quizquiz took 12 days. It is likely that Soto had guides for this part of the expedition, because they took prisoners during the fight at the Alibamu barricade (Worth 1993b:237).

PREVIOUS RESEARCH

While Soto's route is one of the most contentious issues in American history and archaeology, there is a rare area of agreement on this map – most of the many published Soto routes agree that he crossed the Tombigbee River a short distance west of the current Alabama-Mississippi border, roughly east or northeast of Starkville (Morgan 1996) (Figure 1). Somewhere about a long day's ride beyond the river lay the sites of Chicasa and Chicacilla, the Chicasa (or Chickasaw) villages occupied in turn by Soto's expedition in the winter of 1540-1541. In this part of the state, finds of potentially early European material on 16th century Indigenous sites are inevitably the subjects of Soto speculation. While 16th century sites are common, contemporary European objects are very scarce. Investigations at Stark Farms may change that equation.

The critical issue, of course, is exactly where the Chickasaw were located in 1540 (Figure 2). The United States De Soto Commission placed 16th century Chicasa "in the southern part of Pontotoc County or the northern fringe of Chickasaw [County]" (Swanton 1939:222-223). Jeffrey Brain and his colleagues (Brain et al. 1977:252, Brain 1985a:101) follow Swanton's lead and put Chicasa in the vicinity of Tupelo or "some miles to the south." These locations would be in the vicinity of Troy or Houlka, Mississippi, approximately 30 miles to the southwest of Tupelo. So far as we know, no evidence of 16th century Chickasaw occupation has been found by archaeologists in that area. It is clear that the Chickasaw did not occupy the immediate vicinity of present Tupelo until after 1650 (Cegielski and Lieb 2011; Johnson et al. 2008).

James Atkinson worked extensively in northeast Mississippi, and he put forward hypothetical locations for the Chicasa, Chakchiuma, and Alibamu in the 16th century (Atkinson 1987). As part of his argument, Atkinson puts strong faith in the so-called Soto map, believed to have been created in c. 1544

(Boston 1941). Unfortunately, the accuracy of the details shown in the interior on this map are not widely accepted. In any case, Atkinson (1987:62, Figure 1) originally placed the 16th century Chickasaw north of the Tibbee/Line Creek drainage along Chuquatonchee Creek and the Chakchiuma along Tibbee/Line Creek "and in upland prairie to the south" with the Alibamu farther to the north. Once he realized that the Chuquatonchee Creek occupation dated to the 17th century, he amended his Chicakasaw location, placing their settlements "on and south of Tibbee/Line Creek" to the east of Starkville (Atkinson 1987:67). This area falls in the watersheds of Magowah Creek, Catalpa Creek, and the southern tributaries of Tibbee Creek.

Hudson and his colleagues (1990:194) tentatively accept Atkinson's location for the Chickasaw in 1540-1541, but caution that this identification will be dependent on "results of future archaeological research." Hudson (1997:262) does not provide any additional details on the Soto-era location of Chicasa, saying only that it is "thought to have been west of the Tombigbee River near present-day Columbus, Mississippi, a territory encompassing the watersheds of Magowah Creek and Catalpa Creek." Hudson chose this location despite the fact that he knew Soto and his army traveled at least 18 miles away from the river crossing to reach the Chicasa town where they camped beginning on December 16, 1540 (Hudson et al. 1990:194; Hudson 1997:260). This long travel day covering more than 18 miles would have taken them beyond the area Hudson identifies as the likely location of Chicasa. Ethridge concludes her discussion on Chicasa location by saying that "Archaeologists have not found the site of Chicaza [sic], nor any of the sites related to it" (Ethridge 2010:33). We argue that Chicasa does not fall within the limits of this "triangle," but lies further west.

As will be seen we argue that Chicasa was located to the west of Starkville, approximately 25 miles west of the Tombigbee River at Columbus. We are not the first to have considered such a possibility. James Atkinson (1979:61) identifies the "Starkville area settlement" that covers at least six square miles whose "people possessed a culture generally similar, yet quite distinct from those of these well-known major southeastern tribes." Identification of this Starkville "Complex" by James Atkinson and Richard Marshall was based on Mississippi State University archaeological survey, study of burial-associated assemblages in the hands of looters, and salvaged burials as real estate development around Starkville occurred in the 1960s and 1970s. One of the discoveries near Starkville that stirred special interest was a collection of artifacts recovered from burials in the Rolling Hills subdivision just to the north of Starkville. Atkinson (1979:64) described three burials from Rolling Hills in detail. Two of these, containing copper tinkler cones, a hawk bell, and glass beads, can be ascribed a post-Soto era date, but the third, containing only "a crude iron hatchet or adz blade, a small metal knife blade, and a knobbed shell ear pin" is of interest to the present study. The crude iron blade is actually a reworked portion of a barrel band or part of an ax. It is, in many ways, similar to pieces from Stark Farms that we discuss below. Despite the fact that the burials at Rolling Hills could span a long time period, they have all generally been lumped together and dismissed as being late 16th or early 17th century (Atkinson 1987:64; Smith 1991:35). Richard Marshall (1986:87-88), commenting on his own observations concerning the Starkville area alongside those of Atkinson (1979), concluded that "we must consider…the possibility that the [Soto] expedition wintered in the east central Mississippi locale, possibly adjacent to the Lyon's Bluff/Rolling Hills area." It has taken more than 40 years for us to come back to the Starkville area and consider it a strong possibility for the location of Soto's winter camp among the Chicasa.

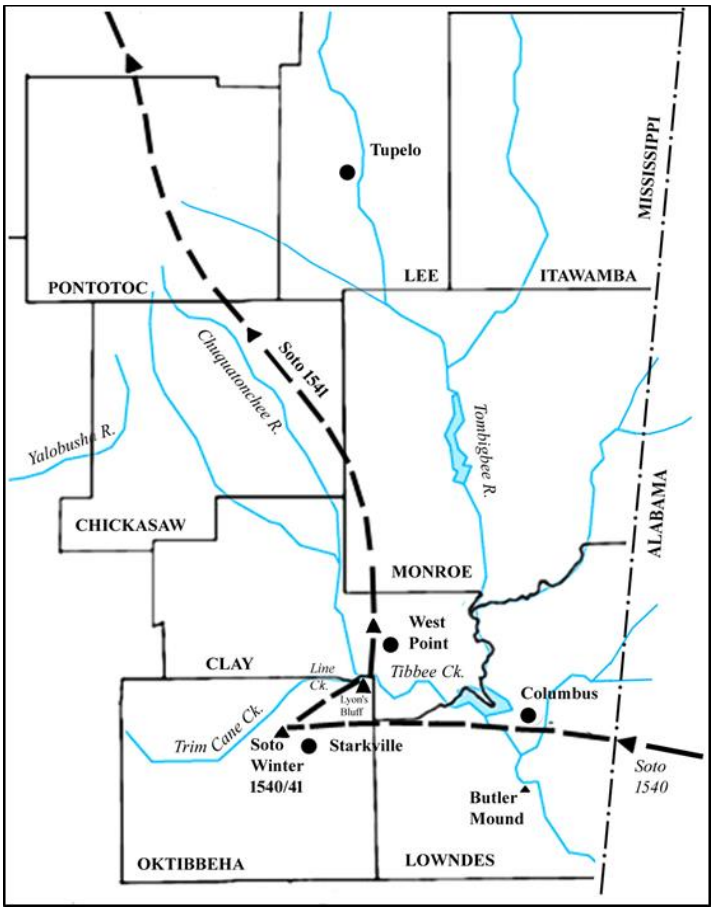

Figure 2 Proposed Soto Route to Chicasa and Beyond.

More recent work on the Starkville Complex area has produced interesting results on the extent and occupational density of the area north and west of Starkville. Patricia Galloway (1994) looked at available Oktibbeha County (where Starkville is located) site records as of 1994 when there were 424 recorded sites in that county. Of the 424 sites, 209 or nearly one half had protohistoric components. By comparison, Galloway found that Lowndes County to the east of Starkville/Oktibbeha County had eleven protohistoric sites out of 418 recorded, and Clay County to the immediate north of Oktibbeha County had one protohistoric site out of 516 recorded. Galloway (1994:48) discussed the biases and problems inherent with site file data, but nonetheless, there was clearly a protohistoric-era hotspot in Oktibbeha County.

This same concentration of Oktibbeha County protohistoric sites was confirmed in a recent study by Emily Clark (2017). Clark found that there were three site clusters in the area covered by Oktibbeha, Clay, and Lowndes Counties. These clusters were somewhat persistent between AD 1000 and 1600, although their borders changed slightly over time. The most intensively occupied of these three areas was around Starkville, and its occupation continued into the AD 1600-1650 time frame. Clark (2017:56, 61) concludes that the dense cluster of sites around Starkville (her Western Cluster) represents the remains of Chickasaw occupation of that area. The fact that this site cluster continued to be occupied up until the mid-17th century may be reflective of the fact that the Chickasaw migration north toward the Tupelo area did not begin until after mid-century Johnson (2000:Fig. 4.1).

ARCHAEOLOGY AT STARK FARMS

Our work at Stark Farm is part of a larger effort to evaluate the pre-European contact to European colonial transition among the ancestral Chickasaw of Mississippi (Boudreaux et al. 2018; Cobb et al. 2016; Cobb 2016). In the 1400s to 1500s these people occupied the ridgetops of the Black Prairie to the west of the Tombigbee River drainage (Johnson 1996, 1997; Johnson and Lehman 1996). These were largely agricultural communities, and, as with Native American towns elsewhere, Spaniards were eager to seize on their stored maize to feed their expeditions. To date we have a very limited knowledge of the internal spatial structure of the communities, or their regional organization. Our long-term goal is to address these as well as other shortcoming in our knowledge about these protohistoric communities.

Sites 22OK778 and 22OK779 on the Stark Farms property were first recorded by Richard Marshall in 1992 (RabbySmith et al. 2015:43-44). Both were described by Marshall as light scatters of artifacts dating to the Late Mississippian and Protohistoric periods over a combined area of approximately 90 by 190 m. It is these two sites on Stark Farms that are the primary subject of our research. Marshall did not recover a significant number of artifacts from these two sites, but 2014-2015 shovel testing by Brockington Associates, Inc., in the proposed Starkville Development tract recovered additional material (RabbySmith 2015:43-44). This shovel testing recovered a wide range of ceramic types spanning Late Woodland to Protohistoric time periods (A. D. 600 to 1700). In the shovel testing, sites OK778 and OK779 were combined with OK780, but for present purposes results of shovel testing in OK780 are not included in this discussion. The shovel testing survey was conducted at 30 m intervals with 15 m intervals tests excavated to delineate sites encountered during initial testing. In the open field portion of OK778/779 (that part that we later metal detected), a total of 195 shovel tests were excavated with 63, or 32.3%, being positive. On the ridgetops within the boundary of site 22OK778, a total of 68 shovel tests were excavated at 15 and 30 m intervals. Of these 68, 42 or 61.8 % were positive. It was this ridgetop portion of OK778 in which we intensively metal detected. This shovel testing data is derived from Figure 5.13 in the Brockington Inc. survey (RabbySmith et. al. 2015:50). While the shovel testing was useful in delineating sites OK778 and OK779, this procedure entirely missed an important component of the occupation of these sites.

We discovered the probable Spanish association at Stark Farms by happenstance. Having exhausted a number of other sites in the region without success via metal detecting, we opted to investigate Stark Farms because of the 16th century component indicated by the pottery assemblage (RabbySmith et. al. 2015). Soon after setting up a metal detector grid, we began to retrieve objects of 16th to 17th century vintage. These include such things as iron chisels, reworked Biscayne axes, and rolled brass beads, most reflecting intensive reworking (Legg 2016; Legg et al. 2018). We also noticed early on that we were ***not*** finding any of the sorts of European material normally found in abundance on Southeastern Native American sites dating from the late 17th through the early 19th centuries. Missing were familiar later colonial materials such as trade gun parts, buttons, buckles, thimbles, kettle parts, clasp knives and trade silver items.

Figure 3 shows the distribution of 84 artifacts of likely 16th to 17th century European origin recovered from the site in three one-week metal detecting seasons over the course of the past four years. Note that we have not yet exhaustively covered all of the knolls in this locality where protohistoric pottery has been recovered. This scatter also maps closely onto the distribution of positive shovel tests, suggesting that metal objects were strewn throughout the habitation area of the site. However, given that most of these items were recovered from the plowzone, we are at a loss as to their original contexts.

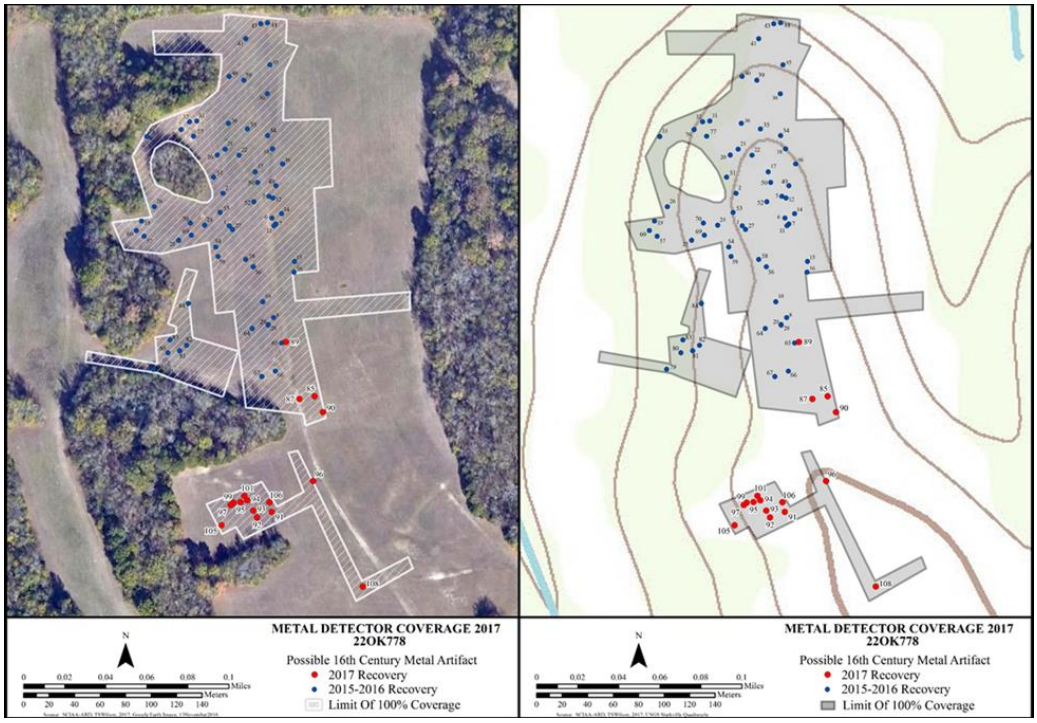

Figure 3 Plan of the 100% metal detector collection areas at Stark Farms as of October 2017.

Conventional excavation has been concurrent with our metal detecting coverage (Boudreaux et al. 2017). So far, we have recovered the remains of only one structure. This is a single-post building of some size. That, along with this extremely unusual cross-shaped hearth, suggests that it may have been a special-use structure of some sort—perhaps a public building. Most of our non-metal artifacts and ecofacts derive from extremely large pits. These measure three to four meters in diameter and about half a meter deep below the plow zone. They were

presumably excavated to extract clay to daub structures, a practice described for the historic-period Chickasaw (Adair 2005). They were then filled by the original inhabitants with a dense array of pottery, lithics, and floral and faunal remains. To date, only two metal objects have been recovered from what appear to have been their original depositional contexts: an iron celt bit located in a post feature in the structure, and an iron bead from one of the large pits. The bead seems to be unique in the Southeast.

THE METAL ARTIFACT ASSEMBLAGE

The Stark Farms European artifact assemblage is dominated by heavily re-worked metal, especially in the category of iron tools (Legg 2016). The parent objects include, at least, barrel bands, axe heads, and horse shoes. Several tools appear to have been made from barrel band stock, including a carefully ground celt that is very similar to an unfinished example recovered from a burial at the nearby Rolling Hills site (Figure 4). Evidence from other 16th-century sites in the Southeast (DePratter and Smith 1980:74-76; Hally and Smith 2011:55-60) suggests that Spanish expeditions may have used barrel band stock itself as an exchange good. Several objects were reworked from Biscayan-style axe heads, utilizing both the blades and the eyes. There are several celt-like tools that appear to have been made from axe eye panel fragments altered by flattening, battering and grinding (Figure 5). The collection includes three examples of axe blades with various degrees of battering and grinding on the broken edges where the eyes were removed (Figure 6). Several horseshoe fragments have evidence of Indigenous modification, including one celt form and two fragments that show deliberate breaking and grinding. The horseshoe attributes that remain are consistent with broad, flat late

Medieval examples. Several tools and tool fragments have no obvious parent objects, including a finely made celt that was apparently formed from oblong stock by laborious grinding, in the manner of a stone celt (Figure 7). No other specimens of this remarkable hybrid of technologies were recovered in our investigations.

In addition to these examples, we have a suite of the usual suspects of 16th century unworked artifacts, such as three fairly classic Spanish nails, unworked barrel band stock, and a crudely wrought harness ring. There are also numerous pieces of worked copper alloy and lead scrap. Among the ornamental or decorative goods are sheet brass pendants, tube beads and tinkler cones. Tinkler cones are widely considered a later artifact type, but there is no solid information that excludes them from 16th century manufacture. They do occur on the Berry Site in North Carolina in mid-16th century contexts (Beck et al. 2016:330).

Thus far the small sample of military artifacts lacks a classic 16th-century diagnostic such as a cross-bow quarrel tip. There are several lead shot of uncertain antiquity, but also a brass ramrod tip of a very early type, easily for a 16th century arquebus or musket (Figure 8). Finally, there is a small iron cannon ball that may have originated with one of the light artillery pieces that DeSoto still retained in 1541 (Smith and Legg 2017).

Clearly we do not yet fully understand what we are dealing with here. There is certainly an assemblage of heavily re-worked metal that dates to before the establishment of regular European trade into the interior lower South. On the basis of diagnostic pottery, the occupation of the site appears to include the mid-16th century. Our AMS assays from these contexts date to the 1400 to early 1600s. If one wanted to make a Soto association, then it would most likely be indirect rather than direct. In the Soto accounts Chicasa is described as containing around 20 houses. As described earlier, the Native American attack on the village led to considerable

Figure 4 Left: Celts made on flat stock, possibly barrel band, Stark Farms. Right, unfinished example, Rolling Hills.

Figure 5 Celts made from flattened axe eye panels, Stark Farms.

Figure 6 Biscayan axe blades from Stark Farms.

Figure 7 Ground iron celt from Stark Farms.

burning and the loss of a significant number of horses and pigs, in addition to weapons, equipment and so on. Both our investigations and those of survey archaeologists have found no evidence of burnt houses, nor of any kind of dense occupation. If our material is related to the DeSoto entrada, then it is likely that the inhabitants of

Figure 8 Brass arquebus or musket ramrod tip from Stark Farms.

Stark Farms were either mining Chicasa at another location for metal objects after the Spanish evacuation; or else were the recipients in a trade network involving these items taken from Chicasa after its abandonment. These scenarios would suggest that Chicasa is in the immediate neighborhood.

CONCLUSION

As we have argued in a recent publication (Legg et al. 2018), whether or not we are on Chicasa proper, the metal assemblage casts a somewhat different light on traditional models of the circulation of European objects in the Southeast. Most such items have been recovered from burial contexts, are relatively modest in number, and are usually attributed to gifting. The abundance of metal artifacts from Stark Farm overshadows the number recovered from most contemporary sites of European contact. Clearly, sites of conflict must be given more attention as sources of some of the most valued objects in Native American exchange systems in the 16th and 17th centuries. For those who do not work in the Southeast, we should point out that metal detecting of 16th century sites has been very rare, and this may be one reason why the bulk of European recovered objects from this era traditionally derive from burial contexts. Quite simply, people aren't looking in the right places with the right methodologies. In the upcoming months we will be returning to northern Mississippi to try and assess whether Stark Farms is an unusual case, or was one of many communities sharing in the bounty of Soto's military disaster at Chicasa.

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Westerplatte: the Symbol, History and Remembrance

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1: Head of archaeologists, 2: Archaeologist, 3: Archaeologist

Polish soldiers in front of Westerplatte train station, 1931

Westerplatte, a peninsula in the north of Poland, is a symbol dear to all the Poles but also part of European and world heritage. It is here that on 1st September 1939, the IIWW began in Europe, a global conflict of an unprecedented scale. For European and worldwide public opinion it is primarily remembered on account of 220 Polish soldiers who for seven days, outgunned and outnumbered, valiantly defied overwhelmingly superior German forces.

The history of the Polish Military Transit depot at Westerplatte begins after WWI. In 1918, Poland wins back its independence. The 1919 Versailles Treaty grants Poland the narrow strip of sea-coast with no sea ports, however. Gdansk becomes The Free City of Danzig, a quasi-independent city-state, under predominantly German influence. But the compromise concerning Danzig satisfies neither Poland nor Germany.

With lessons learned from Polish-Bolshevik war of 1920, where logistical problems with supplying the Polish army with imported military materiel were rife and with the port of Gdynia in its early stages of construction, Poland desperately needs access to the sea. In 1924 The League of Nations grants Poland Westerplatte for shipping, unloading and storage of military supplies. While the German authorities try to impose numerous hindrances on transit of Polish goods via the Free City of Danzig, Westerplatte becomes Polish Military Transit Depot, a tiny piece of Poland surrounded by hostile German population of Danzig and a thorn in the side of the Danzig Senate.

In the late 1930s anti-Polish protests escalate, Nazi fanaticism rages in Gdansk. „Danzig is a German city and wants to rejoin Germany," opines Adolf Hitler in The Reichstag in April 1939. The war seems imminent. In the meantime, Westerplatte is secretly being strenghtened. Modern fortifications and barracks are erected, along with the defensive ring of six fortified guardhouses and a system of fortified trenches and fox-holes. From 1933 to 1934, five guardhouses were built on Westerplatte. In secret, additional efforts are made to arm and reinforce them. From 1934 to 1936, a modern barracks is constructed to house the crew. Shortly before the outbreak of the war, an additional chain of defensive posts and foxholes is erected at the guardhouses' forefront. Soldiers, arms and ammunition are constantly smuggled into the Depot by land and sea in anticipation of the German attack. The cat and mouse game between the German police and the Depot's crew goes on until the very last minutes of 31st August 1939.

On 1st September 1939 the Polish Garrison on Westerplatte is ca. 220 men strong. On 25th of August battleship Schleswig-Holstein arrives in Gdansk to pay a courteous visit and anchors in the canal opposite Westerplatte. The Germans in Danzig cheer. On 1st of September 1939, at 4:48 in the morning Schlezwig-Holstain begins shelling Westerplatte and the Depot is attacked by elite German troops and Danzig Police, with a devastating Luftwaffe air raid on 2nd September. Westerplatte is flooded by hail of steel and fire and IIWW breaks out all across Poland.

German infantry during the attack on Westerplatte

At Westerplatte, the Poles, physically and psychologically exhausted, surrender the Depot after a seven-day siege. The Germans are in awe – they had never expected to come up against such fierce resistance on such a narrow strip of land. Later Westerplatte begins to be called „Polish Thermopylae." Miraculously, some of the Depots buildings escape undamaged in the bombing. The commanders of the depot, Mjr. Henryk Sucharski and his deputy, Cpt. Franciszek Dabrowski, stand up to the challenge, the latter refusing to capitulate despite no chances for victory.

Just hours after the fighting ceases, on 8th September, Polish civilian prisoners, under the supervision of German soldiers, begin to dismantle most of the Depot's buildings. They also bury the bodies and clear the land mines. The bricks and timber are shipped to what is soon to become an infamous Stutthof German concentration camp. Most of these prisoners later perish in Stutthof.

Damaged Officers' Villa after the battle

After the war, Westerplatte becomes an instrument of communist propaganda. It is gradually deteriorating and over the years changes beyond recognition. Tonnes of soil are moved across Westerplatte, burying what's left of the heroic defense.

Archeological Research on Westerplatte – Season One

The breakthrough moment comes in 2016. As a prologue for a wider reconstruction project to build a battlefield museum at Westerplatte, the very first in the post-war history broad-scale archeological excavations begin on Westerplatte. Overall, they yield an exceptional range of artefacts – over 4000 items, also those related to earlier periods, are found and documented.

Polish shells from Guardhouse 5

The research began on 10th October 2016 as part of the first stage of a multi-season Archeological Mission at Westerplatte. Filip Kuczma, Head of Archeological Department emphasized that the first stage objective was to reveal the foundations of the Officers' Villa and recover relicts from Guardhouse No. 5. Based on the results of the archeological research, a plan for the permanent preservation of the excavated foundations and their possible exposition was developed. The commencement of the wide-ranging excavation project was preceded by ground-penetrating radar and metal detecting examinations. The excavation work covered an area of 7,977 m².

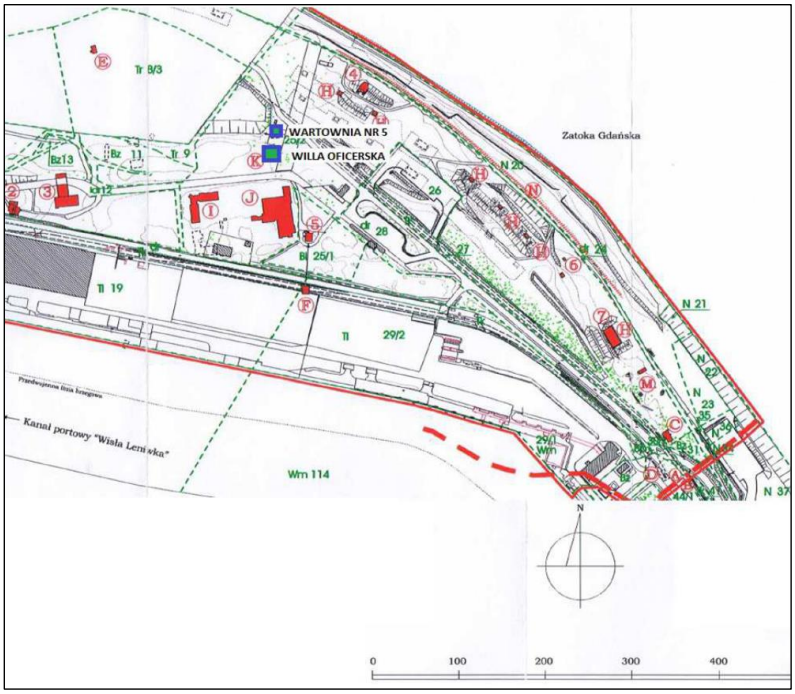

Figure 1. A fragment of an attachment to the record in the register of historic buildings, registration number: A-1724, decision of the PWKZ in Gdańsk of 17 May 2001 with marked approximate locations of the research objects – the Officers' Villa and Guardhouse No. 5.

The excavation site was divided into three research areas: the "Guardhouse," the "Villa" and the "Forest." The archeological excavation under research was spread over the area of 160 m². All work was supervised by resident sappers to ensure absolute safety on the site.

The objective of the research in the "Villa" was to reveal the foundations of the Officers' Villa, a former resort building and after 1926 the officers' quarters of the Polish Guard Units. The excavation works over a total area of 101 m² lead to the documentation of the building's external wall layout, including some of the dividing walls.

Keys from the Officers' Villa

The total excavation area of the "Guardhouse," situated north of the Cemetery of the Defenders of Westerplatte, totaled 40 m². During the archeological works, the southern edge of a 250 kg German bomb crater was found. The bomb was dropped during the air raid on 2nd September by a Stuka Ju-87 German dive bomber. The magnitude of the explosion caused the damage of the nearby Guardhouse No.5. Many valuable artefacts linked to Guardhouse No.5, including Polish ammunition shells, which exploded the moment the Guardhouse was hit, were recovered from the crater and its vicinity. Relics of the eastern wall and remnants of the lower storey flooring of Guardhouse No. 5 were discovered several meters south of the crater, in test pit No. 8. This pit was extended a few meters only towards the west since the exposure of all the relics of the building would require demolition of a significant part of the Cemetery of the Defenders of Westerplatte.

Sappers examining the area prior to the excavations found an iron window frame with remnants of its glass panes reinforced with a wire mesh. This find was described as an element originating from the upper storey of Guardhouse No.5. In the proximity of the window, relics of the fencing built by a crew of the Military Transit Depot were also found. The fence reached Guardhouse No. 5 from the north. The fencing construction was sturdy since fragments of train rails were fixed in concrete foundations. A monolith chain-link mesh (so called the "Ledóchowski wire mesh") was spread between the rails. The fence served as a structure similar to an anti-tank barrier.

The "Forest" area totaling 7,800 m² was examined with metal detectors. In total, seven test pits were established in this section. In one of the excavation pits objects were discovered originating from the Officers' Villa that had been removed and thrown into the pit when the building was demolished. In addition to Polish medicine bottles and Polish-manufactured fighter aircraft ammunition, an epaulet and uniform decorations of a 2nd Lieutenant of the Polish Naval Forces were also dug out. This find may be associated with either Borys Mohuczy or Józef Czechowicz, who in 1926-1931 were commanders of the Military Transit Depot in Westerplatte, both with the rank of 2nd Lieutenant.

Epaulet and uniform decorations of a 2nd Lieutenant of the Polish Naval Forces

During the archeological research in 2016, a total of 4,126 artefacts were recovered, including 1,516 historical items that were recorded in the field inventory register. The most interesting objects included an eagle (pattern 1919) worn on garrison peaked cap (no. 35). The peaked cap eagle crest is among the most precious, most heart-breaking artefacts with a strong emotional context – it belonged to one of the defenders and was damaged when the soldier died under the rubble.

Eagle pattern 1919

The artefacts are a tangible trace of the past, a missing piece of a puzzle in Westerplatte's history, a unique record of the life, the struggle and the death of the Polish heroes. A railwayman's uniform button is also among the most precious finds – in contrast to dozens of military Polish army's buttons found, the railwayman' s button is only one.

Railwayman's uniform button

In the vicinity of Guardhouse No. 5, the above-mentioned shells of Polish rifle ammunition recovered from the relict area of Guardhouse No.5, (still bearing distinct traces of explosion which occurred in the Guardhouse on 2 September 1939), Polish uniform buttons used both in 1920s and 1930s, as well as multiple items originating from the Napoleonic times and the holiday resort times were also found (musket bullets, coins, watches, toys, glass and ceramic dishes).

The excavation works in 2016 were only the beginning of the Archeological excavations in the area of the Military Transit Depot. The second stage of the research carried out in 2017 examined further objects connected with the Military Transit Depot and documented the relics of the Administration Building, Old Military Barracks, the other part of the bomb crater which was identified in the 2016 research, a fragment of the washroom used by the Depot's personnel. In total, 9.686 artefacts were recovered, including 4.235 items recorded in the field register.

Currently, the third stage of the archeological research is being carried out at Westerplatte, whose objective is to study the relics of the NCO's Mess and another air raid bomb crater situated near the Old Military Barracks. According to Wojciech Samól, archeologist from the Museum of Westerplatte Archeological Department, "continuation of archeological research is one of the essential elements in the development of a detailed project of the revaluation of the Historical Monument - Site of the Battle of Westerplatte, further research and documentation of the history of Westerplatte, preservation of the remaining historical objects of the Military Transit Depot, and the recovery of possibly the largest collection of historical items associated with the Depot."

Many of the above-mentioned relics were displayed during the temporary exhibition Seven looks at Westerplatte – Presentation of the findings of the first stage of the archeological research at Westerplatte. The exhibition presented over 200 exhibits arranged in 7 topics associated with the sites covered under the first Stage of the Archeological Mission. The exhibits were presented in the temporary exhibitions hall in the Museum of the Second World War in Gdańsk from 1st Sept. 2017 to 1st Oct. 2018.

All photographs: Museum of the Second World War in Gdańsk

Conflict Archaeology, Material Culture, and the Role of Validation Studies in Interpreting the Past

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INTRODUCTION

Experimental archaeology has emerged as a rigorous approach to the study of material reflections of human behavior. This is an increasingly refined field that lets archaeologists develop insights and methods for making behavioral interpretations of things in the archeological record. To study firearms, archaeologists need to design and carry out appropriate experiments and draw on technical methods developed by firearm examiners, engineers, and physicists. Recent battlefield archaeological investigations have given new impetuous to identifying the rifling characteristics of historic rifled firearms, the external ballistic capability of such firearms, and the combat efficiency of such arms. The goal of this study was to collect information on the ballistic capability of late eighteenth smoothbore firearms.

The live fire experiments were designed to capture information on flintlock firearm performance and capabilities that will benefit goal audiences in their understanding and interpretation of archaeologically recovered spherical lead balls. To achieve these objectives, we designed the experiments to collect data on:

1) the velocity, range, and ballistic performance of common spherical lead balls of the type used in the Colonial era.

2) factors that could cause variation in ball impact, and

3) how deformation of lead balls can be linked to velocity, impact range, and target media.

Components of the Live Fire Experiment

The live fire experiment used common types of French and Indian War and Revolutionary War flintlock firearms. Other components of the experiment included the firing range, consideration of the black gunpowder used as a propellant, standardization of the lead balls, the construction of authentic style cartridges, and the methods of data collection.

Firearms Used in the Experiment

Seven flintlock shoulder fired firearms were used in the live fire experiment. The seven are a reasonable representation of guns commonly used in the French and Indian Wars and the Revolutionary War. They are all custom-made replicas of actual Revolutionary War flintlock firearms. One Colonial fowler, a copy of the .580-caliber Thomas Earle Fowler represents the type of weapon used by Colonial militias and minute man companies. Two British Long Land Pattern Brown Bess guns, the 1742 pattern and 1756 pattern in .76-caliber, represent the standard British infantry firearm used in the French and Indian War as well as the American Revolution. Another common British gun of the era is the Artillery Carbine in .65-caliber, which also represents the British Officers Fusil and the British Sergeants Carbine. Two French patterns, 1728/41 and

1763/66 were also fired. The pattern 1728/41 has a slightly oval bore, as does the original from which it was copied. The bore in .70-.71-caliber. The French 1728/41 musket was also used in the French and Indian Wars as well as by Revolutionary War militia companies and militiamen. The pattern 1763/66 has a .68-caliber bore. The seventh gun was a replica 1740 Potsdam musket, .73-caliber, of the type often carried by Hessian units recruited by the British.

Firing Range

For this study a 100-yard range was constructed to contain or concentrate the fired projectiles in a safe and manageable way. At 100 yards a 7.5-foot high palisade wall was constructed from freshly cut oak and pine logs. Directly in front of the palisade wall a sand backstop 5.5-foot high by 10-foot wide was mechanically piled using fine clean sands. These media were chosen to replicate soil impacts and wood impacts of various types to add to the data of the study. In addition to the palisade and sand backstop a shooting bench was constructed to provide a stable base for consistent shooting. While demonstrating accuracy was not the goal of the live fire experiment, the bench and target provided a stable aiming point for all shots. The range was established with safety as the priority.

Figure 1. The firearms used in the live fire experiment. Top to bottom, British Artillery Carbine, British 1742 Long Land Pattern musket, British 1756 Long Land Pattern musket, French 1728/41 musket, French 1763/66 musket, Thomas Earle fowler, and a Potsdam 1740 musket.

The palisade wall was constructed to provide additional data on impacts of projectiles on selected wood species. The trees selected; live oak (Quercus virginiana), loblolly pine (Pinus taeda), and red maple (Acer rubrum) were all about four-inches in diameter. Each is a common species found along the east coast, which allowed for a reasonably accurate recreation of a Colonial block house palisade wall. Constructed with two 25-foot long 6-inch truss supports screwed in place with 10-inch screws, the log palings were placed between two living oaks that were 20-feet apart. These acted as addition supports for the palisade line. Each 4-inch post was placed in a 12-inch deep post hole and backfilled after wood post placed. After placement, baling wire was utilized as lashing to secure the post in place. After all posts were in place they were trimmed to the same length. It was not the intention for the palisade to act as a backstop but rather to add data on bullet impact and deformation. Because of the chance of projectiles passing though the gaps or wood post, a tarpaulin was placed on the backside of the palisade to track projectile trajectory.

The sand backstop in front of the palisade wall not only provided a backstop for projectiles but also offered soil impact data. For this, clean loose sands were chosen to minimize escapement or deflection. After

each firing a metal detector sweep of the backstop was conducted to expedite the locating of the fired projectile and to keep the sand free of potential hazards. Just to the front of the sand backstop a target stand with a silhouette target provided a defined aiming point. The target frame was constructed of 4x4 inch treated pine lumber with a sheet of fiberboard as a target backing. A man-sized head and torso standard paper silhouette target was affixed to the fiberboard.

Figure 2. Charles Haecker and Corinne Rose standing on either side of the target frame. Note the sand backstop behind the target and the palisade wall behind the backstop. The stake in front of the target is at 94 yards from the shooting bench, with the palisade at 100 yards from the bench location.

In this study, we used Swiss FFg black gunpowder as the priming and propellant charge in all weapons. Only the charge weight was varied among the guns fired and for purposes of achieving lower velocities for shooting into tissue simulant.

The spherical balls used in the live fire experiment are commercially cast soft lead bullets. The experimental spherical ball weights show a minimum of 1.5 grain (0.1-gram) to a maximum of 4.6 grain (0.3-gram) weight variation in the 20% sample weighed. The measured ball diameter also showed very little variation, being about 0.001 to 0.003 inch among all the balls measured. They have far less variation in weight and diameter than any of the published historical ball diameters or archaeological specimens reported. Typically, balls were less than bore sized to allow ease of loading, especially after multiple rounds were fired which caused black powder fouling in the bore. The common term for this is windage.

Figure 3. Unfired cast lead balls used in the experimental firing. L to R, .315 buckshot, .282 buckshot, .520 ball, .580 ball, .626 ball, .663 ball, and .69 ball.

Cartridges and Cartridge Paper

Prior to the live fire experiments Corinne and William Rose rolled a series of cartridges in each of the calibers to be used following eighteenth century guides on cartridge construction. Proper weight laid paper in a trapezoid shape was rolled around a wood former. A ball or a ball and three buckshot were placed in one end, the top twisted closed and the former removed. The appropriate powder charge for the caliber was then poured into the other end of the cartridge, twisted closed and the excess laid paper folded over to form a tail. Linen twine was then wetted and tied below the ball or ball and buck to hold the bullet in place. Finally, a ball point pen was used to mark the completed cartridge with the type and ball diameter.

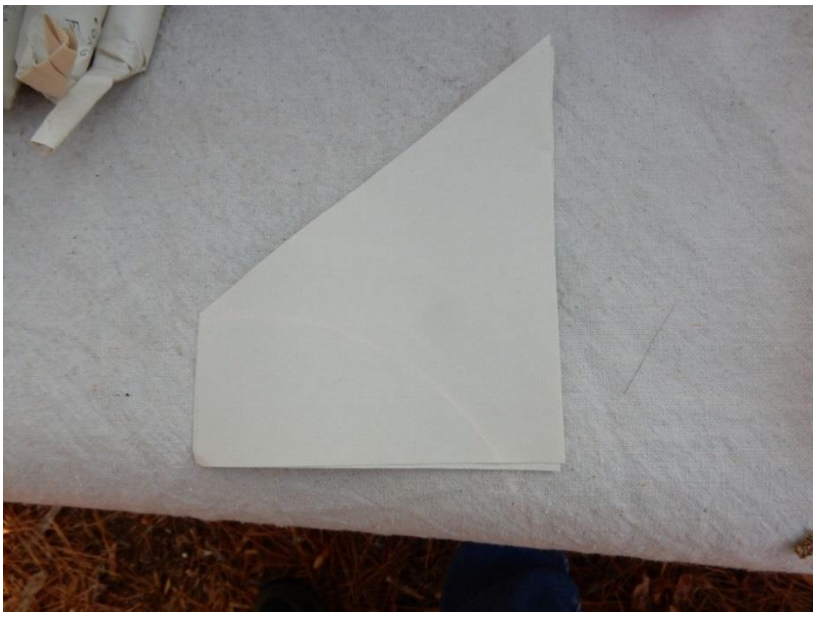

Figure 4. Laid cartridge paper cut to standard form and ready for rolling cartridges.

Figure 5. Corinne and William Rose rolling cartridges in preparation for the experimental firing.

Figure 6. Completed cartridges with notes on the laid paper body denoting ball size and intended firearm.

To determine what happens when large-caliber lead balls were used in combat or hunting we observed impacts of experimentally fired balls into ballistic gelatin, an accepted tissue simulant with end coverings to simulate clothing of the era, and into a sand backstop. We also used a wooden palisade made up of dry loblolly pine, green loblolly pine, live oak, and maple palings to obtain bullet impact information. Projectile deformation associated with varied ranges were catalogued. The results of these experiments will permit archaeologists to better interpret recovered projectiles. We employed a "clean range" and recovered each fired bullet immediately after it was fired (recovery was by metal detecting and was around 80% - a few got away).

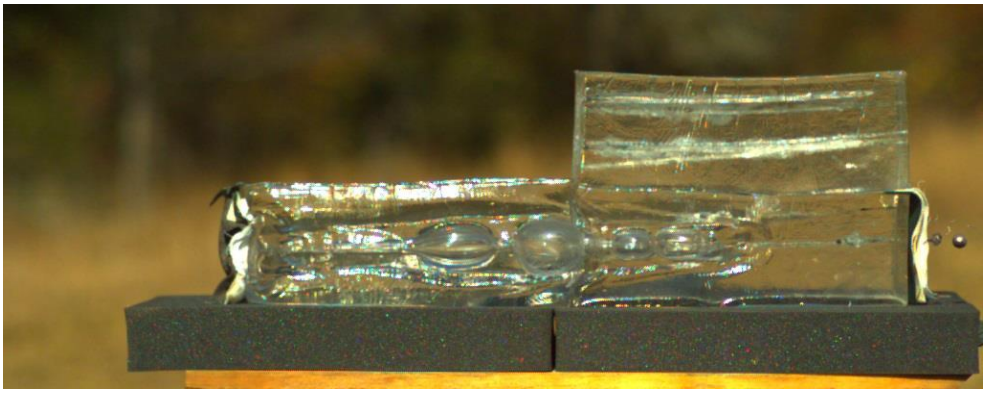

Figure 7. A .69 diameter ball fired from a British 1756 Long Land Pattern musket exiting 32 inches of gelatin. Note the initial wound cavity, bits of cloth in the wound cavity on the right and a larger piece of cloth exiting the block behind the ball.

Figure 8. A fabric impressed .69 diameter ball fired from the British 1756 Long Land Pattern musket with 75 grains of powder at 25 yards. The fabric impressions resulted from passing through the simulated uniform clothing.

The live fire experiment resulted in the firing of 74 spherical balls and 63 buckshot. The breakdown for each caliber fired by number of shots fired with recoveries noted, and total number of balls recovered per caliber.

12 - .520 balls were fired – 6 known shot sequence recoveries – 2 unknown attribution – total 8=75%

19 - .580 balls were fired – 9 known shot sequence recoveries – 1 unknown attribution – total 10=52%

23 - .626 balls were fired – 10 known shot sequence recoveries – 9 with unknown attributions – total 19=82%

20 - .69 balls were fired – 5 known shot sequence recoveries - 6 unknown attribution – total 11=55%

63 .282 and .315 buckshot were fired in 18 separate shots – 2 known shot sequence recoveries - 8 with unknown attribution- total 10=16%

Total ball and buck fired 137 - Total known recoveries 32=23% Total unknown recoveries 26=19%. Total recovered 58=42.3%

Figure 9. Metal detecting underway to recover a ball after a shot at the 94-yard range.

Ball Deformation and Determination of Original Caliber

The deformed pure or soft lead spherical ball is particularly noted for being difficult to determine its original nominal caliber in archaeological contexts due to impact. Several formulae have been advanced that use the weight of the deformed spherical ball to calculate its approximate original diameter. Arrowood and Berglund (1980) developed one formula that gave a 99.5% level of confidence when at ± three standard deviations. Daniel Sivilich devised a similar formula (1996; 2009) with only one standard degree of error which has proved quite reliable and replicable. Branstner (2006) attempted to improve the Sivilich formula by recalculating the density of lead and reformulating the Sivilich formula. Sivilich (2016:25-27) subsequently revised his formula and included new data on lead density to more accurately determine an original caliber, with only one degree of standard error.

We tested the revised Sivilich formula against the recovered fired balls from the live fire experiment. We knew the original ball diameter weight before firing and we weighed the fired balls as well as calculated the fired ball weight loss by caliber and average weight loss for each ball diameter. The weight of the recovered balls was used to test the 2016 Sivilich formula.

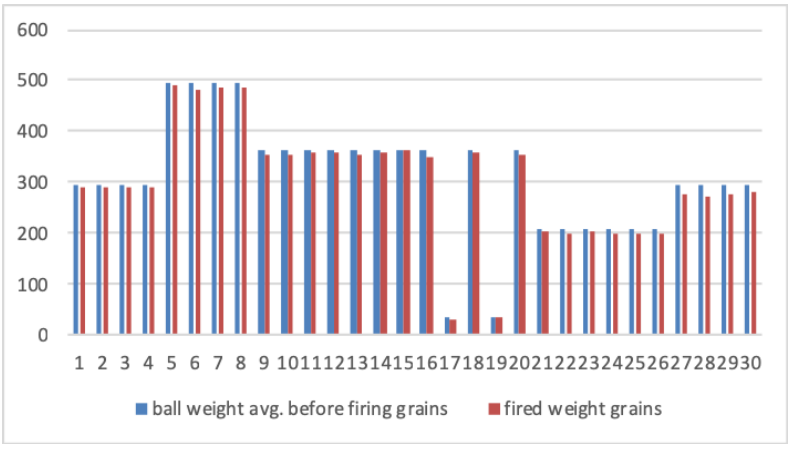

Figure 10. Ball weight before firing compared to weight loss with recovered balls. Note that items 1-4 are .580 balls, 5-8 are .69 balls, 9-16, 18, and 20 are .626 balls, 17 and 19 represent .282 buckshot balls, 21-26 are .520 balls, and 27-30 are .580 balls. The overall average weight loss of fired balls is 2.4%, although this generally increases as velocity increases ranging from 0.4 to 7.5%.

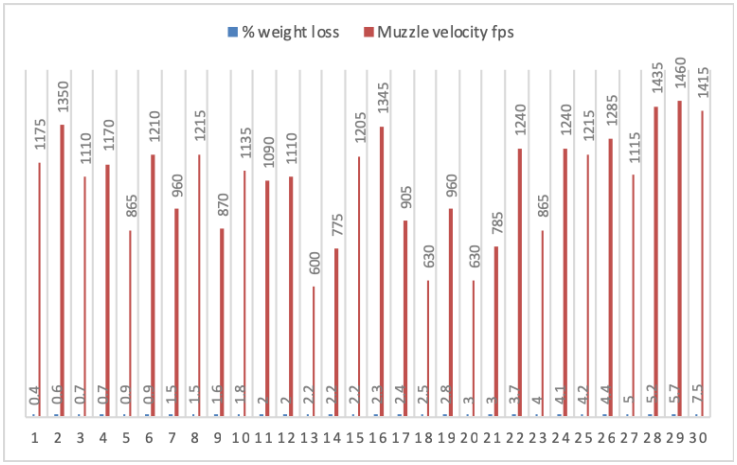

Figure 11. The percent of fired ball weight loss compared to muzzle velocity. The weight loss range is from 0.4 to 7.5%. To some degree the fired ball weight loss is partially dependent on the hardness of the media it struck when the ball's flight terminated.

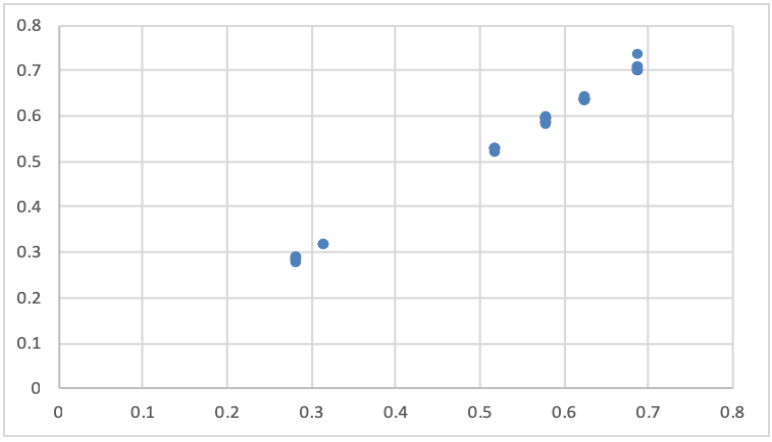

Figure 12. The measured ball diameter compared to the calculated ball diameter using the Sivilich Formula (2016). The differences are well within one standard deviation with an R value of .998.

The revised Sivilich Formula proved exceptionally reliable and accurate. A regression correlation was run comparing the two data sets. Sivilich's Formula tends to overestimate the ball diameter from a few thousandths of an inch to about one-hundredth of an inch. The R value was calculated to be .998 with less than one standard error of deviation. The R value is near ideal and proves the Sivilich Formula to be accurate and reliable for calculating the original ball diameter using weight or mass from recovered archaeological specimens.

Lead Bullet Deformation Index

Another valuable lesson derived from the live fire experiments is the validation of bullet deformation and a general correlation with velocity. Deformation seen in the lead balls fired in the various guns in the current experiment largely mimic the results reported by MacPherson (1994:126-130). Balls fired into tissue simulant, the loose sand backstop, dry soft woods, and wet pine, showed the least deformation. The smaller balls, .520-caliber and .580-caliber showed the least deformation and the larger balls, .69-caliber, showed the largest deformation at any given velocity, which is consistent with metal yielding functions correlated to the bullet's sectional density (MacPherson 1994:142-143).

Figure 13. Unfired buckshot and bullet examples as used in the live fire experiments. l to r – 0.28-inch buckshot, 0.31-inch buckshot, 0.520-inch ball, 0.580-inch ball, 0.626-inch ball, 0.662-inch ball, and 0.69-inch ball.

Figure 14. Unfired. 0.69-inch ball, 0.69 ball fired at 600 f/s that struck ground surface at 100 yards, 0.69 ball fired at 630 f/s that struck a wood table, foam, and ballistic gel at 25 yards and was collected laying on the foam at the back of 32 inches of ballistic gel, and a 0.69 ball fired at 630 f/s that was captured in the ballistic gel at 25 yards after passing through 28 inches of gel. Note fabric impression on second and fourth balls.

Figure 15. Unfired 0.626- inch ball, 0.626 ball fired at 775 f/s recovered from a soil and sand backstop at 100 yards and a 0.626 ball fired at 785 f/s and captured in ballistic gel at 25 yards after passing through 30 inches of gel. Note ramrod mark on second ball and fabric impressions on third ball.

Figure 16. Top row: Unfired 0.282-inch buckshot and fired 0.282-inch buckshot at 865 f/s. Second row: Unfired 0.626-inch ball and fired 0.626-inch ball at 865 f/s. Third row: Unfired 0.69-inch ball and fired 0.69-inch ball at 870 f/s. Note each recovered in the sand and soil backstop at 100 yards.

Figure 17. Unfired 0.626-inch ball, fired balls l to r fired at 905 f/s, 960 f/s, 960 f/s, and 1090 f/s. All balls recovered at 100 yards in sand and soil backstop. Note third ball from the left passed through a pine 4x4 target frame upright and the fourth ball from left also struck the edge of the pine target frame before embedding in the backstop.

Figure 18. Left column, unfired 0.626-inch ball, fired 0.626 balls at 1110 f/s and 1175 f/s, both found in sand and soil backstop. Second column, unfired 0.282 buckshot and fired 0.282 buckshot at 1110 f/s found in sand and soil backstop. Third column, unfired .580-inch ball and fired 0.580 ball at 1135 f/s found in sand and soil backstop. Fourth column, 0.580 ball fired at 1155 f/s, and Fifth column, 0.580 ball fired at 1170 f/s and found in soil and sand backstop. All balls recovered at 100 yards.

Figure 19. Top row, Unfired 0.626-inch ball, fired 0.626 ball at 1205 f/s and found in sand and soil backstop, fired 0.626 ball at 1215 f/s which nicked the target frame post and was found in the sand and soil backstop. Bottom row, Unfired 0.520-inch ball, fired 0.520 ball at 1215 f/s that hit oak palisade paling and ricocheted back into sand and soil backstop, fired 0.520 ball at 1250 f/s which hit a pine palisade paling and ricocheted back into sand and soil backstop, 0.520 ball at 1240 f/s that struck an oak palisade paling and fell to the ground below the fence, and 0.520 ball fired at 1285 f/s that went through a 4x4 pine target frame upright and was recovered in the sand and soil backstop. All balls found at 100 yards.

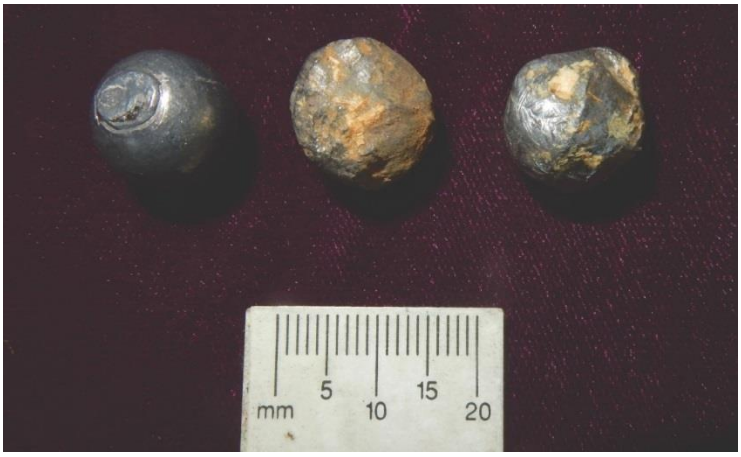

Figure 20. Unfired 0.520-inch ball and two fired 0.520 balls, center fired at 1345 f/s and hit pine target frame and right fired at 1350 f/s and hit pine target frame. Both found in sand and soil backstop at 100 yards. Note banding on last ball from being upset in firing from the musket.

Figure 21. Unfired 0.580-inch ball and fired balls, second – fired at 1415 f/s and struck oak palisade paling and found in sand and soil backstop below fence, third – fired at 1435 f/s and found in sand and soil backstop, fourth – fired at 1480 f/s and found in sand and soil backstop. All balls recovered at 100 yards.

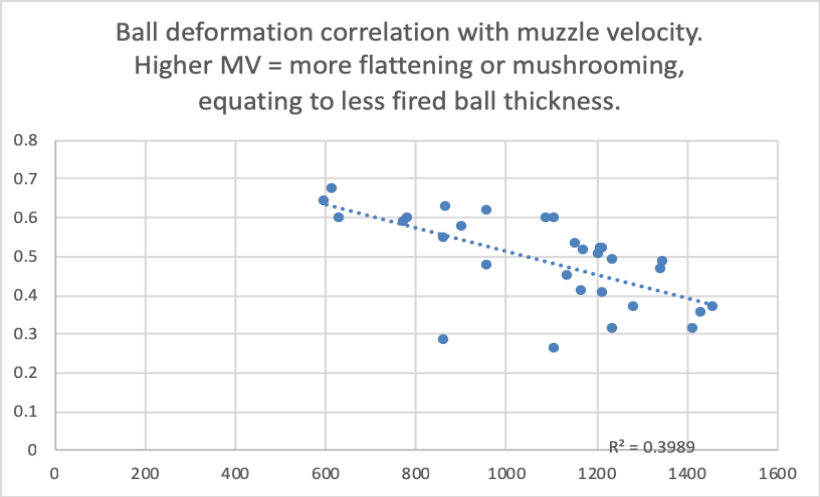

Figure 22. Muzzle velocity compared to thickness or flattening of fired balls. The fired ball thickness is in tenths of inches on the left and muzzle velocity is shown on the bottom as feet per second. There is general agreement that balls flatten at higher velocities, but the linear regression trendline indicates the relationship is only about 40%. This further reinforces the fact that the nature of the media the ball strikes at the end of its flight as well as remaining velocity and kinetic energy are significant factors in deformation.

A Lead Bullet Deformation Index was developed that we believe many archaeologists will find useful. The LBDI we present requires additional testing and validation, but we believe that it has utility as an independent ordinal scale to assess impact deformation on conflict sites. The LBDI assessment can be of use in determining possible firing line distances on battlefields which will expand the archaeological interpretative potential of bullet datasets.

For more than 30 years an intuitive scale based on personal experience with shooting muzzle loading weapons has been used to assign value to impact deformed bullets. The scale is descriptive using Low, Medium, and High Velocity Impact terms as a means of defining impact deformation (e.g. Scott et al. 1989). The current live fire experiments where bullets fired at known velocities were recovered allows a new more quantitative-base index scale to be suggested. While this scale has recognized weaknesses, it does refine and replace the even less precise Low, Medium, and High Velocity Impact scale that is in common use (e.g. Scott et al. 1989).

Using the ball deformation data acquired during the live fire experiment we created an ordinal or nominal bullet deformation rating scale to equate to an approximate velocity range. We emphasize that the **Lead Bullet Deformation Index** scale we propose cannot be used as a one-to-one correlate to absolute velocity and the amount of deformation, rather it is intended to give the user an approximation of the relationship between velocity and deformation. Using the ordinal rating scale model results in a number that can be tested using ANOVA, Regression, or Chi-square tests.

We define the **Lead Bullet Deformation Index** to be:

Based on a mixed qualitative and quantitative set of observations of the fired bullet a rating scale number can be determined. Measurements should include the maximum diameter (diameter A), the thickness or amount of flattening (diameter B), and the minimum diameter that is not in the plane of deformation (diameter C). These data can be plotted and trendlines applied through scatter plots and various statistical regression procedures to observe and refine trends. Qualitative observations range from the amount of impact scarring present from minimal to extreme as to the degree of impact flattening (commonly called mushrooming) the bullet exhibits.

The ordinal scale is:

1. Likely velocity is less than 800 f/s based on little or no visible scarring or flattening. Diameter measurements are essentially consistent for the three measured points on the ball.

2. Likely velocity is between 800 and 1100 f/s based on slight to moderate visible impact scarring, possibly some imbedded residue or negative impressions (sand or rock inclusions or impressions), and some impact flattening that is less than half the diameter of the ball. Diameter measurements show flattening to less than one half the ball's original diameter or caliber.

3. Likely velocity is greater than 1100 f/s based on significant impact scarring and flattening of ball to becoming totally mushroomed. Measurements should reflect the thickness of the flattening relative to the measured diameter as extreme.

We suggest when there is a question of whether a ball falls in one ordinal range or another that it is appropriate to use an 0.5 number. An example is that a ball shows some minimal impact scarring and some moderate flattening would be assigned a 1. However, the measurements in the A and C axes are essentially the same, but the thickness or flattening measurement is notable and could be assigned a 2. We suggest assigning it a 1.5 rating. That data can be used to refine any statistical analysis. We do not endorse any finer intermediate resolution between the numbers as this will only be pure speculation and confuse any statistical analysis.

OTHER OBSERVATIONS

The microscopic examination of unfired and fired lead balls revealed changes in the microstructure of the balls' surface that are observable and clear. We have not yet examined the effect of patination on the observability of those surface changes in archaeological samples, but knowing they do and did exist on fresh lead bullets offers another line of investigation and interpretation to determine if a ball has been fired or not.

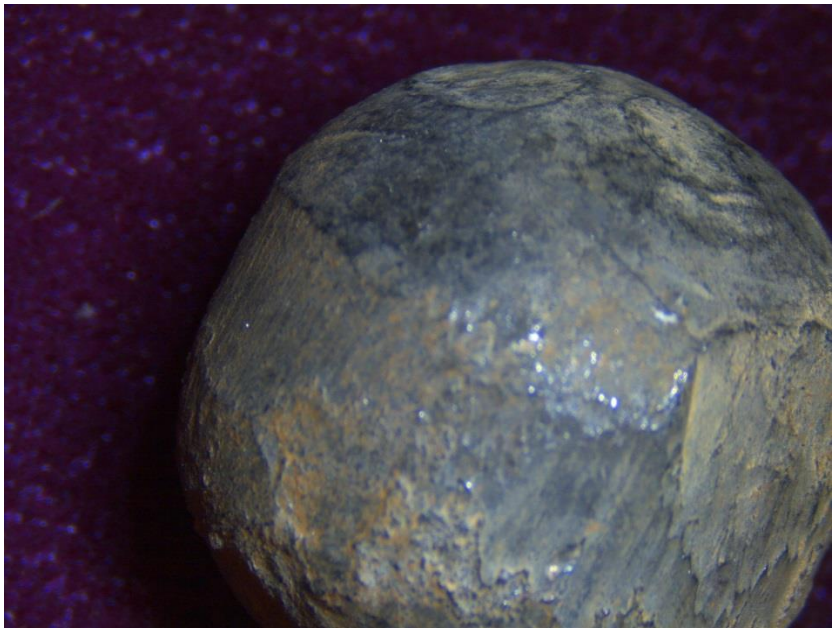

Figure 23. A 40x magnification of the bore band seen on balls fired in smooth bore guns. Note the micro striations run parallel to the line of the bore. This ball also has buckshot dimpling on the upper right surface.

Microscopic examination of fired balls can often reveal several other micro characteristics that may aid in identifying the media in which the ball imbedded or passed through. Traces or impressions of wood, soil

(e.g., sand or gravel), fabric impressions or fabric adhering to the ball surface, or even bone embedded in the ball aid in the interpretation of the shooting incident under investigation.

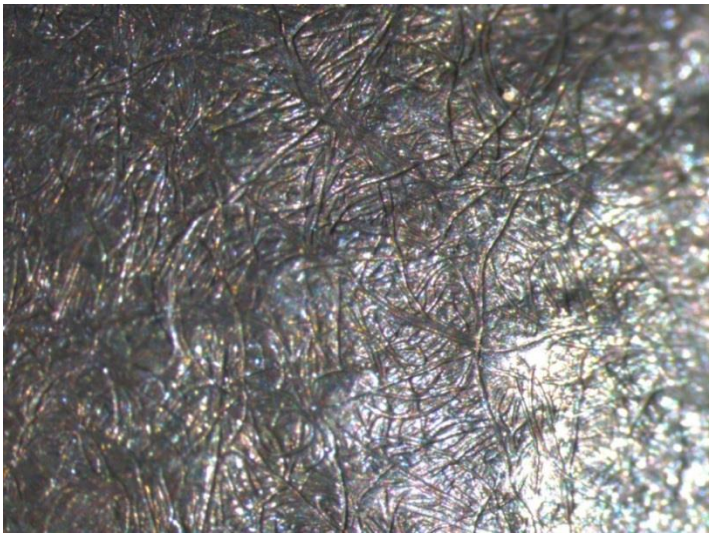

Figure 24. A 75x magnification of the surface of an unfired lead ball. The lines are a result of the differential cooling at a micro scale of the lead ball when it was cast in a mold. Mold lines and these microscopic cooling lines are indicative of a cast ball. These microscopic cooling lines are largely obscured when a ball is fired.

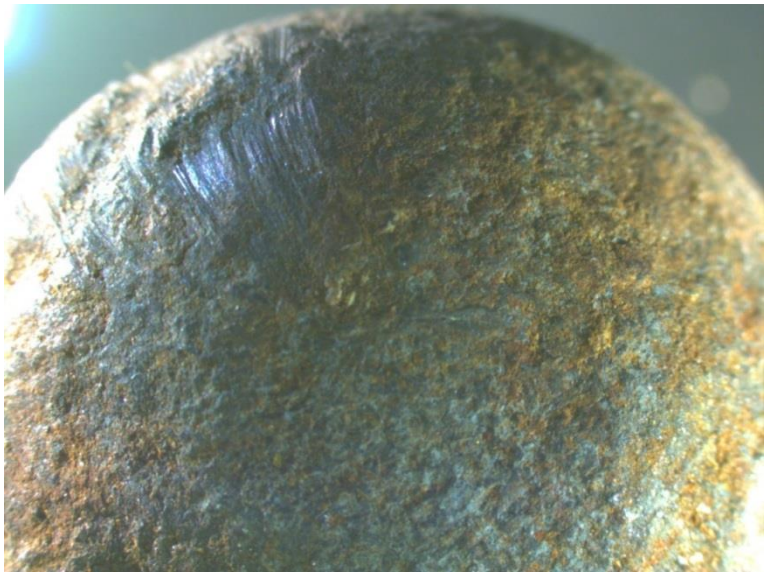

Figure 25. A 60x magnification of a ball fired in the 1728/41 French musket at 870 f/s that hit the sand backstop. Some slight impact scarring is seen in the upper portion of the image and the fine sand particles impressed on the ball as it struck the backstop.

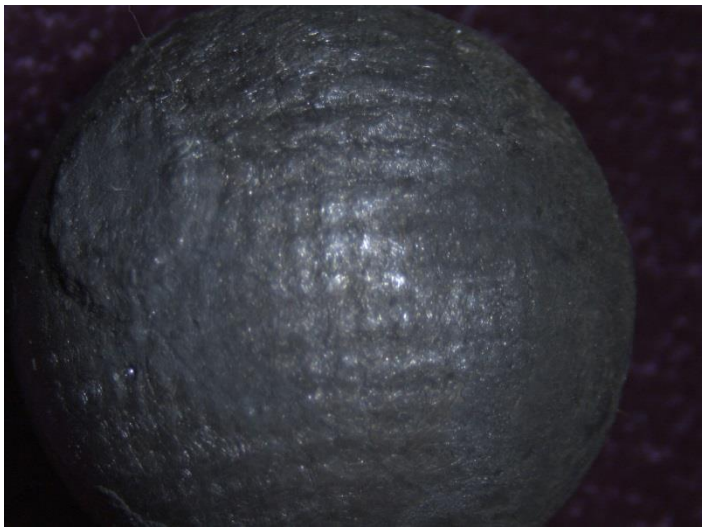

Figure 26. A 40x magnification of a ball fired from the British 1756 Long Land Pattern musket that passed through the simulated uniform cloth and gelatin blocks. The fabric impressed its weave on the ball providing a textile analyst data for interpretation. The raised circular area on the left of the ball is a sprue from casting the bullet in a mold.

CONCLUSIONS

Much of the work we undertook was designed to aid archaeologists in better understanding of the potential information that can be gained from bullet analysis from archaeological sites. We have focused on conflict sites specifically and the role bullet analysis has in yielding information that expands and enhances their interpretive value. An additional intent in conducting the live fire experiments is to provide well controlled and defined data to forensic firearm examiners so they may use the information to identity historic firearm types involved in law enforcement cases either by inclusion or exclusion.

Our data exhibits excellent correspondence with ballistic performance models, further validating those models and allowing us to compare our data findings with various data sets. A particularly valuable finding is that the approximate original caliber of fired and deformed lead balls can be accurately determined using the Sivilich Revised Formula. This validation of the Sivilich Formula is of real value to archaeological investigations.

Our live fire experiments were designed to determine Colonial era musket and fowler bullet performance. Accuracy was not a major component of the study; however, general shot accuracy was noted. The least accurate firearms were the British Long Land pattern muskets. Regardless of range the shots did hit the man-size torso target or were near misses, but had a very wide spread, often exceeding 30 inches. The 1740 Potsdam musket never struck the target at 100 yards. In part this may have been a function of the shooter's experience level but given the range of shooter experience in the eighteenth century this is not unrealistic. The British Artillery Carbine and the French pattern muskets achieved good target hits at all ranges at about 75% of the shots fired. The Thomas Earle Fowler had an exceptional record for accuracy. Regardless of shooter experience, and nearly every shooter fired the fowler at least once, over 85% of the shots hit the target at all ranges. This led several of the shooters to observe they would rather have been Minute Men or Colonial Militia than British or Hessian troops during the Revolutionary War. Firearms had an enormous impact on the European settlement and conquest of the western hemisphere. We see this study as the first step in creating a wide-ranging data base on effectiveness and external ballistic performance of firearms in general, and in this specific study of Colonial era muskets and fowlers specifically. We also see this study as the first step in creating a data base on bullet performance of firearms that were used in the New World after 1492.

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Castles, Conflict and Social Theory – Introducing a Native Welsh Narrative to the Archaeological Record of Twelfth-Century Gwynedd – a Landscape Approach

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ABSTRACT

The endemic challenges present in the study of many colonial native conflicts are also extant in the native Welsh and Anglo-Norman conflicts of the mid-twelfth century. These include the absence of Welsh agency from the medieval archaeological record and an Anglo-Norman bias in contemporary chronologies which led to a proliferation of modern misunderstandings and over-simplifications of the native Welsh experience. The culmination of this has had lasting effects on the conceptualization and creation of modern identities. The methodological toolbox of battlefield archaeology has the ability to overcome many of these challenges, often reinstating a native narrative in the archaeological or historical context. This paper explores theoretical outlets for conflict scholarship, building on the application of landscape studies and the sociology of warfare. The research presented will seek to demonstrate the importance of constructing a cross-cultural conflict archaeology theoretical framework that moves beyond the description of events to explain the significance of the actions for the role they played in agency, social structural change and modern identity. This will be demonstrated using a case study of the colonial conflicts of Owain Gwynedd and Henry II during the mid-twelfth century, giving due consideration to the role of the castle as an indicator of social change in the medieval Welsh theater of war.

Key Words: Medieval Wales, Castles, Theory, Landscape, Behaviorism, Frontier

1. INTRODUCTION

In 1095 William Rufus led an army into Wales; this royally sponsored campaign was preceded by earlier conflicts between the Anglo-Norman marcher barons and the Welsh, with the first documented incident taking place on the banks of the River Rhymi in 1070. These Anglo-Norman incursions into native Wales marked the beginning of a legacy of conflict that would define medieval Wales until the conclusion of the Edwardian Conquest in 1283. This prolonged era of conflict triggered elements of social change, the legacies of which endured to contribute to the conceptualization of modern identities.

Anglo-Norman biases and over-simplifications of the Welsh experience in past scholarly literature, coupled with a dearth of archaeological investigation, have led to the absence of a
Welsh narrative from the Anglo-Norman Conquest. These deficiencies were addressed by the author's earlier research summarized in this paper, which at a fundamental level, demonstrates the Welsh reaction to the attempted and failed Anglo-Norman conquest of the Welsh Principality of Gwynedd in the mid-twelfth century. This was accomplished through the analysis of archaeological signatures of Welsh and Anglo-Norman battlefields using methods and techniques such as reverse KOCOA; and by contextualizing them within their broader conflict landscape. This research specifically focused on the often overlooked conflicts associated with the reigns of Owain ap Gruffudd, better known as Owain Gwynedd (1137-1170) and King Henry II (1154-1189), concentrating on the 1157 Coastal Campaign and the 1165 Berwyn Mountain

Campaign. The goal of this research is to expand knowledge of these specific campaigns and the broader conflict landscapes associated with the Anglo-Norman conquest and Welsh resistance, and place them within a wider historical and cultural context.

This paper explores how landscape theory and behaviorism provide a sound theoretical vehicle for approaching social structural change resulting from events of armed conflict, by contextualizing them within a broader sociology of medieval warfare. The methods of battlefield archaeology, namely those employed in the gross and dynamic pattern analyses of data resulting from various elements of military terrain analyses, highlight the agency of both the group and individual combatants; the profiling of which is significant for native forces for whom agentic actions are often absent in the historical narrative. This invaluable data can be employed to greater result and understanding, by contextualizing the agency within a landscape of conflict theoretical milieu.[1] This will be demonstrated in this paper by using a case study of the mid-twelfth century campaigns of Henry II and Owain Gwynedd.

2. HISTORICAL CONTEXT

Wales was largely ignored by the English Crown during the civil war resulting from the 'Anarchy' that consumed King Stephen's reign (1135-1154). This enabled the Welsh to strengthen their borders and reclaim territory lost to the English during the reign of Henry I. Many Welsh princes also capitalized on the power vacuum created during the Anarchy in the Welsh Marches, expanding their territories to the east into the highly contested frontier zone.[2] The reclamation and expansion of territory led to competition and created friction between neighboring Welsh principalities.

Prince Owain ap Gruffudd, better known as Owain Gwynedd came to power in Gwynedd in 1137, following the death of his father, Gruffudd ap Cynan. He spent the first two decades of his reign strengthening his kingdom and expanding its borders to the east. Due to the turbulence caused by the 'Anarchy', the first twenty years of Owain's reign were relatively free from Anglo-Norman intervention.

Powys, Gwynedd's Welsh neighbor to the east and southeast, was attempting to expand their influence into the same region of the Welsh Marches as Gwynedd, the commote of Tegeingl (see figure 1 below). In 1146 the Anglo-Norman contingent at Mold challenged the Powysian conquest of the marcher territory of Maelor Saesneg at the Battle of Wich near Whitchurch.[3] Owain Gwynedd, taking advantage of their distraction successfully besieged and claimed Mold Castle. In doing so he was able to securely establish himself in this contested region and in one shrewd maneuver was able to abolish Anglo-Norman control of the area and annex part of northern Powys to Gwynedd's dominion. To further secure his annexation of Mold and northern Powys, Owain built the timber motte castle of Iâl (popularly identified with either Tomen y Rhodwydd or Tomen y Faerdre), in 1149. In the meantime Oswestry Castle, an early Anglo-Norman construction appearing in *Domesday* (*c*. 1086), was taken by Madog ap Maredudd of Powys, either in 1147 or 1148. Oswestry did not stay under Welsh control for long, as it was used by Henry II as an operations base prior to setting out on the 1165 campaign.[4]

[1] D. Scott, L. Babits and C. Haecker, 'Introduction' *Fields of Conflict Battlefield Archaeology from the Roman Empire to the Korean War* (Washington D.C.: Potomoc Books Inc, 2009), 1.
[2] R.R. Davies, *The Age of Conquest, Wales 1063-1415* (Oxford: Oxford University Press, 1987), 45-7; D. Crouch, 'The March and the Welsh Kings' *The Anarchy of King Stephen's Reign* (Oxford: Clarendon Press, 1994).
[3] *Brut Pen. 20*, 54-5; NPRN 404862
[4] *Brut Pen. 20*, 57; F. Suppe, *Military Institutions on the Welsh Marches: Shropshire, 1066-1300* (Woodbridge: The Boydell Press, 1994).

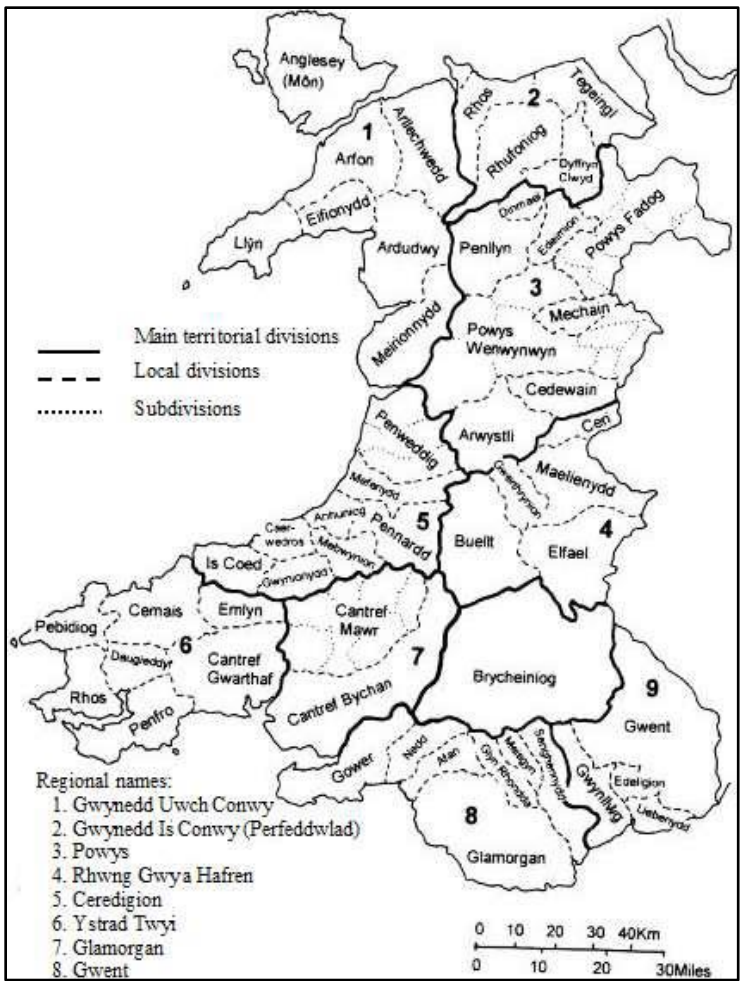

Figure 1: Map of Medieval Welsh Territories, (after Map 1. Territorial divisions of twelfth and thirteenth-century Wales in Pryce 2005).[5]

Owain's conquest of northern Powys did not go unchallenged. In 1150 Madog ap Maredudd of Powys contested Owain Gwynedd's claim to northern Powys at the Battle of Coleshill. 'In that year Madog ap Maredudd, king of Powys, thought with the help of Ranulf, earl of Chester, to rise up against Owain. And after the host of his supporters had been slain at Coleshill they fled.'[6] The allied Welsh and Anglo-Norman contingent from Powys and Chester were unable to subdue Owain in battle and his claim to the region remained unchallenged until Henry II's Coastal Campaign against Gwynedd in 1157.[7]

3. 1157 COASTAL CAMPAIGN AND THE BATTLE OF COLESHILL, AN OVERVIEW

Prior to 1157, discord arose between Owain Gwynedd and his brother Cadwaldr in which 'Owain had ejected his brother Cadwaladr' and proclaimed himself the sole ruler of Gwynedd.[8] *Cyfran,* the Welsh system of partible inheritance meant that kingdoms were frequently divided amongst siblings. Due to this, conflict between siblings was common, as they sought to reclaim territory that had belonged to their father. Cadwaldr, disgruntled by the loss of his claim, reportedly sought the assistance of King Henry II. Undoubtedly Henry was delighted with Cadwaladr's request, 'since its fulfilment would involve a division of Owain's authority and a

[5] H. Pryce, The Acts of Welsh Rulers 1120-1283 (Cardiff: University of Wales Press, 2005).
[6] *Brut Pen. 20,* 57
[7] *ibid*
[8] D.J.C. King, 'Henry II and the Fight at Coleshill' *Welsh History Review* (1965), 369

legitimate reason to invade Gwynedd.'[9] However, given that Owain had already seized marcher territory, namely the cantref of Tegeingl, as well as the Powysian commote of Iâl it was unlikely that Henry needed any further excuse to wage war against Gwynedd.

Figure 2: View of Hen Blas ravine in the vicinity of the Battle of Coleshill from the northern face of the slope (photo by the author).

In 1157 Henry II gathered a large force near Chester; some of the manuscripts indicate that Madog ap Maredudd of Powys assisted the king on this expedition, as at this point Powys was allied with England. From Chester, Henry led his troops up the coastal Roman road to where Owain Gwynedd and his Welsh forces were encamped at Basingwerk. At an undisclosed distance from Basingwerk Henry divided his forces into two contingents. One group continued along the coastal road, while the other turned aside into the forest with the intention of looping around, in order to assault the Welsh forces from the front and rear. Unfortunately for Henry, Owain anticipated this maneuver and had strategically stationed his sons, Cynan and Dafydd, in an attempt to prevent any such advance. At the ravine on Coleshill adjacent to Hen Blas Castle, Cynan and Dafydd led a force that ambushed Henry with devastating effects to the Anglo-Norman troops, who suffered heavy casualties. Although that ambush proved damaging for the Anglo-Norman contingent they were able to regroup and continue towards where the bulk of Owain's force remained encamped at Basingwerk. Aware that he was about to be surrounded, Owain retreated. Henry did not pursue Owain; instead he gathered his forces and continued to Rhuddlan Castle. While encamped at Rhuddlan the king endured a series of raids by the Welsh forces of Owain.[10]

[9] *ibid*
[10] *Brut Pen. 20*, 59-60; *BS* 159, *Brut RBH* 135, *AC* 87

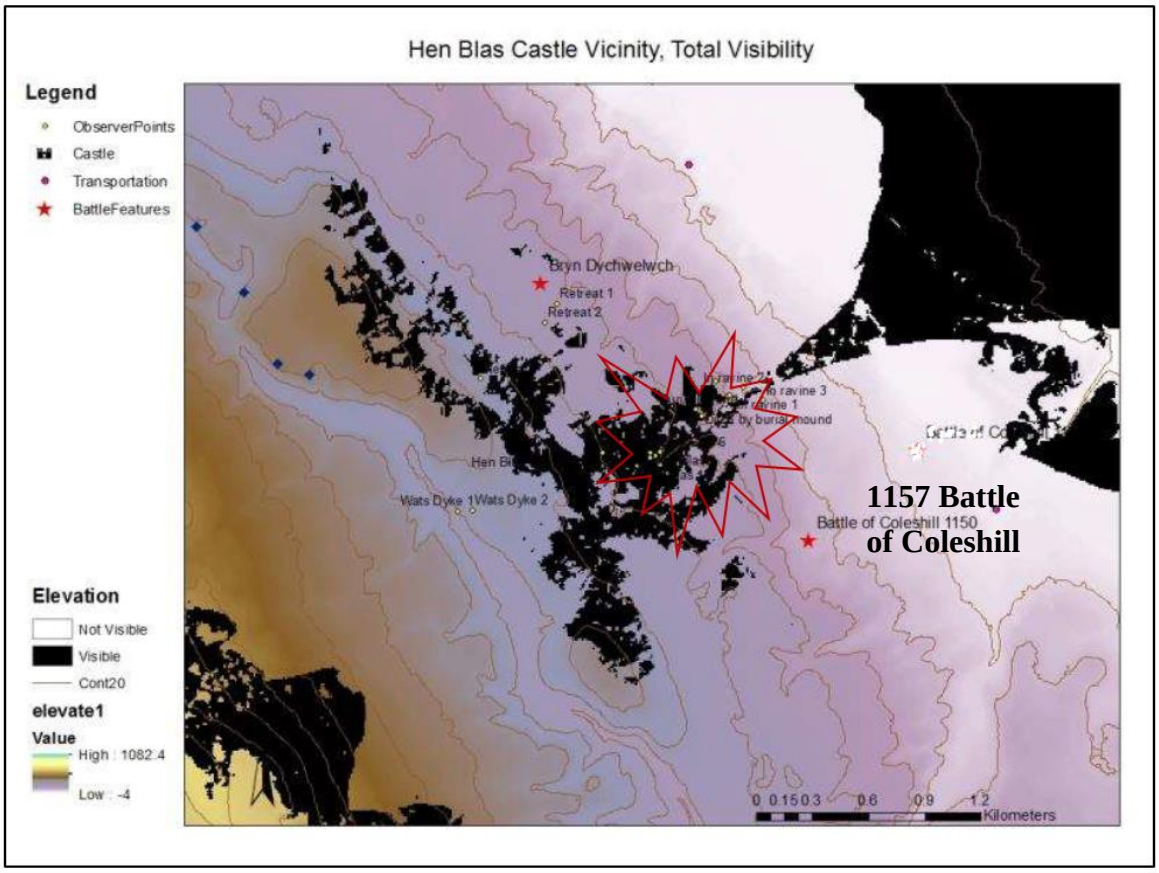

Figure 3: 1157 Battle of Coleshill Environs near Hen Blas Castle area total visibility (viewshed map by the author).

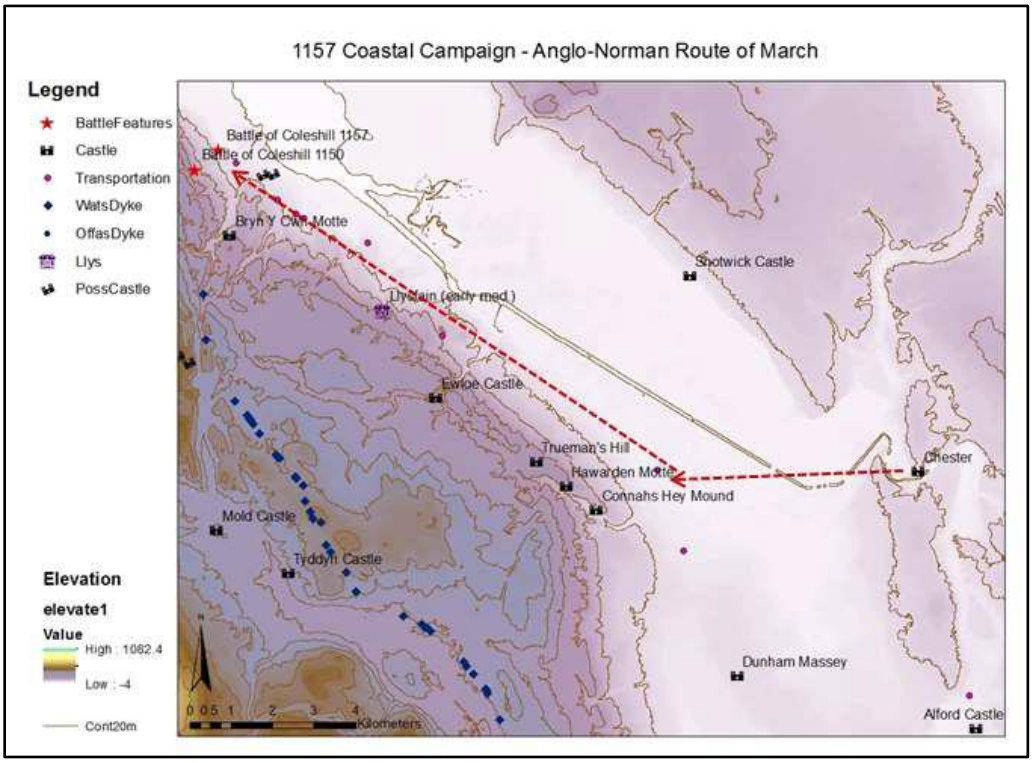

Figure 4: Anglo-Norman route of march from Chester (map by the author).

At the same time these events were transpiring a naval contingent sent by Henry was arriving at the Isle of Anglesey, the heartland of Gwynedd. The order of battle on Anglesey is less certain; however it is clear that after pillaging several of the island's churches the Anglo-Normans were met in battle by the men of Anglesey, probably led by Owain's younger son Hywel, and were driven back to sea in a crushing defeat. Due to the prolonged impasse at Rhuddlan and the defeat on Anglesey, Henry and Owain entered into negotiations and arrived at a settlement whereby Henry would leave Gwynedd in exchange for Welsh hostages and the return of the territory that Owain had acquired in Powys and the marches.[11] Traditionally historians have regarded the conclusion to these events as a crushing defeat for Owain Gwynedd. However, the conflict archaeology landscape analysis methodology used in this research to understand this event has challenged these oversimplified and Anglo-centric assumptions and reinstated a native Welsh narrative (Warren 1973; Hosler2004; Duffy 2007).[12]

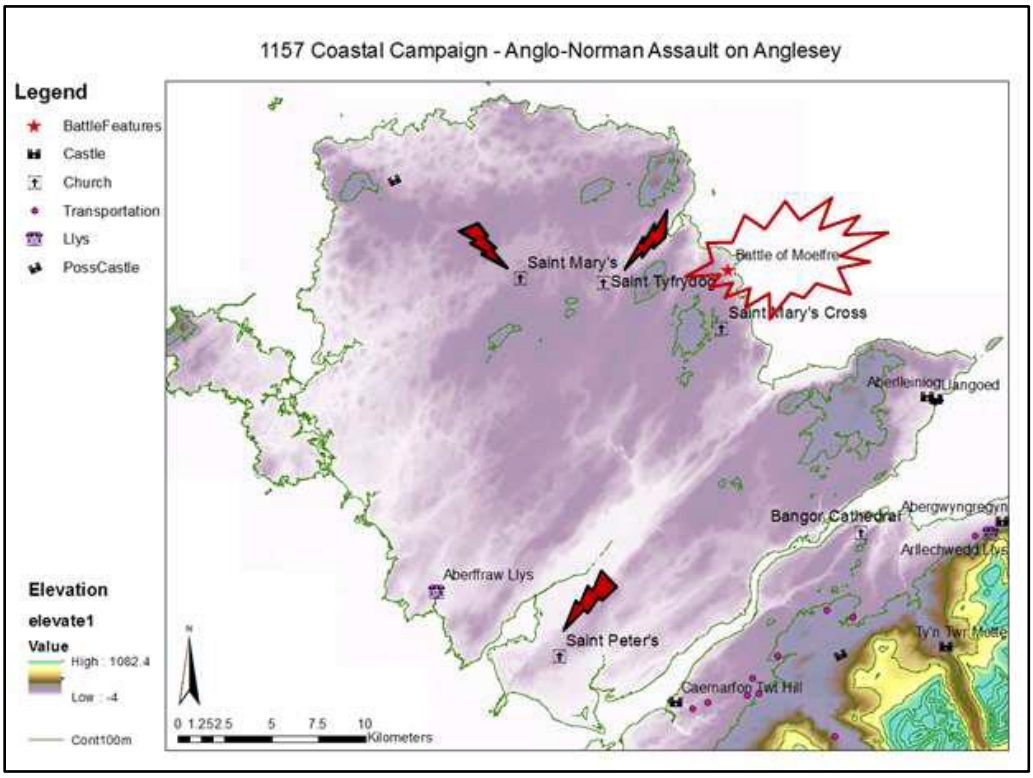

Figure 5: Detail of assault on Anglesey (the Battle of Moelfre) included the churches that were pillaged by the Anglo-Normans (map by the author).

Following the failure of the amphibious assault on Anglesey (at the Battle of Moelfre, see figure 5 above), and due to the losses he had suffered at Coleshill, Henry was forced to seek peace terms with Owain. In return for being left in peace, Owain agreed to relinquish Tegeingl and Iâl. Cadwaladr's estates were returned as well.[13] These were frontier territories that had arguably been disputed since the construction of Offa's and Wat's Dykes by the Anglo-Saxon kingdom of Mercia in the eight century. Therefore, by relinquishing control of these territories as part of the terms of piece, Owain was not relinquishing part of the ancestral medieval principality of Gwynedd. Owain also agreed to pay homage to Henry, indicating that he

[11] *ibid*
[12] W.L. Warren, *Henry II* (London: Butler &Tanner Ltd., 1973); J.D. Hosler, 'Henry II's Military Campaigns in Wales, 1157 and 1165', *The Journal of Medieval History* Vol. II (2004); S. Duffy, 'Henry II and England's Insular Neighbours', *Henry II New Intepretations* (Woodbridge: The Boydell Press, 2007).
[13] *AC B text*, 87

had entered into a client-kingdom relationship with the king. However, the nature of Welsh clientship (discussed below), would suggest that this would not have been regarded as a binding relationship by Owain, and would not have represented defeat or surrender.[14] The outcome of the 1157 Coastal Campaign enabled Gwynedd to endure as an independent native Welsh kingdom. However, the peace of 1157 did not last, in 1165 Owain once again sought to extend the limits of his kingdom, this coupled with similar acts by other Welsh principalities, as well as the power vacuum created by death of Madog ap Maredudd of Powys, Henry's notable Welsh ally, led to the 1165 Berwyn Mountain Campaign and the Battle of Crogen.

4. 1165 BERWYN MOUNTAIN CAMPAIGN AND THE BATTLE OF CROGEN, AN OVERVIEW

Figure 6: 'The Gate of the Dead', adjacent to the Crogen Battlefield (photo by the author). Local tradition states that after the battle, the dead were 'buried in the fosse of Offa's Dyke', known as *Adwy'r Beddau* or the 'Gap of the Graves.' The oak tree pictured in figure 6 is said to mark the entrance to the pass of the graves and is called the gates of the dead. Legend has it that this oak, which is believed to be nearly 1200 years old, was spared by Henry's army as they were cutting down trees, due to its substantial size. It would have been nearly 350 years old in 1165. The age of the tree suggests that it took root soon after the construction of Offa's Dyke at the close of the eighth century.[15]

In the summer of 1165 Henry II organized a campaign whose purpose was to subdue the Welsh in totality. This campaign came to fruition as a result of the stalemate from the 1157 campaign against Gwynedd and in response to the escalating Welsh raids in the frontier zone (Brut Pen. 20: 64-5). Wales united under the leadership of Owain Gwynedd, allied with Rhys ap Gruffudd (the Lord Rhys) of Deheubarth, the powerful southern Welsh principality, along with various minor princes from Powys, amassed a large force at Corwen to prevent Henry II's advance into Wales and protect Welsh independence.

The importance and magnitude of this conflict is not to be underestimated; the Anglo-Norman force that threatened Wales in 1165 did not have an equal in manpower or expense until the campaigns of Edward I during the last quarter of the thirteenth century. The occasion of the Welsh principalities uniting to stand

[14] W. Davies, *Patterns of Power in Early Wales* (Oxford: Clarendon Press, 1990).
[15] T. Nicholas, *Annals and Antiquities from the Counties and County Families of Wales* (London: Longmans, Green, Reader and Co., 1872), 405; T. Pennant, *A Tour in Wales* (London: Henry Hughes, 1778), 268; D. Powel, *A Tour In Wales* (London: Henry Hughes, 1584), 187; BBC News 2010; BBC News 2013; C. Fox, *Offa's Dyke* (Oxford: Oxford University Press, 1955).

against the threat from England would set a precedent for consensual unification, under the reigns of Llywelyn ap Iorwerth, also known as Llywelyn the Great (c. 1216-1240) and Llywelyn ap Gruffudd (c. 1250-1282). The outcome of the Berwyn Mountain campaign was so economically and psychologically damaging to Henry II – and in turn the Angevin Empire – that Henry abandoned his efforts in Wales in entirety turning his attentions instead to Ireland and the Continent. There would not be another royally sponsored campaign attempted for nearly fifty years, until the failed campaigns of King John in the early thirteenth century.[16]

When Henry II returned to England from an expedition in Normandy in early 1164 he found Wales in a state of open rebellion. Undoubtedly Henry was exasperated by the renewed conflict in the Welsh Marches, given that it followed the 1163 settlement at the Council of Woodstock, which was meant to bring peace and the subjugation of the Welsh principalities through the arrangement of a client-kingdom relationship, one from which Henry expected total suzerainty. However, the Welsh princes did not adhere to the same structure of clientship as their Anglo-Norman adversaries.

In 1164 Henry held a council at Northampton and began preparations for a campaign against the Welsh. Unlike the 1157 Coastal Campaign which was targeted solely at Gwynedd, the 1165 campaign's objective was the submission and subjugation of all Wales. Whether this was Henry's original objective is unclear, but it may have quickly became that once he realized that all of Wales had united against him. The scope of this operation was so immense that it is understandable why the medieval chronicles state that his intent was to annihilate all Welshmen. An exact number of troops are not known, though it was probably in the tens of thousands, based on the massive amount of funds raised for the hiring of mercenaries and for food and supplies, as is evidenced in the *Pipe Rolls*.[17]

Henry assembled his forces at Oswestry. In August, after having waited to see if the Welsh would make the first foray, Henry decided to take his army into Wales. His route of march took him northwest to what is now the parish of Chirk in the modern county of Wrexham (originally within in bounds of Denbighshire), from there he turned his forces west where he planned to march along the Ceiriog valley, following the Ceiriog River into the heartland of north Wales.

At the ancient border between England and Wales, demarked by Offa's Dyke, Henry was faced with his first obstacle. He encountered dense woodland in the Ceiriog river valley, probably in the vicinity of Offa's Dyke, which in itself was an obstacle for the army. Well aware of the danger that forests could conceal, providing the perfect environment to conceal an ambushing force, Henry ordered the wood to be cut down. Evidently he had learned from his experience in the Welsh ambush of the 1157 Coastal Campaign, which took place in a heavily wooded ravine, not too different from the environment in which he now found himself. Henry's fears were realized when a contingent of Welsh forces stationed in advance of the encampment at Corwen ambushed Henry's army as they were at work cutting down trees. The fighting was fierce and there were many casualties on both sides. This ambush was the event that is now referred to as the Battle of Crogen.[18]

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[16] P. Latimer, 'Henry II's Campaign Against the Welsh in 1165' *The Welsh History Review* Vol. 14 (1989); Duffy, 'Henry II and England's Insular Neighbours', 137.
[17] Latimer, 'Henry II's Campaign Against the Welsh in 1165', 531; *Brut Pen. 20*, 63; *Pipe Roll Series in*: Latimer, 'Henry II's Campaign Against the Welsh in 1165', 545.
[18] *Brut Pen. 20*, 63; *Brut RBH*, 147.

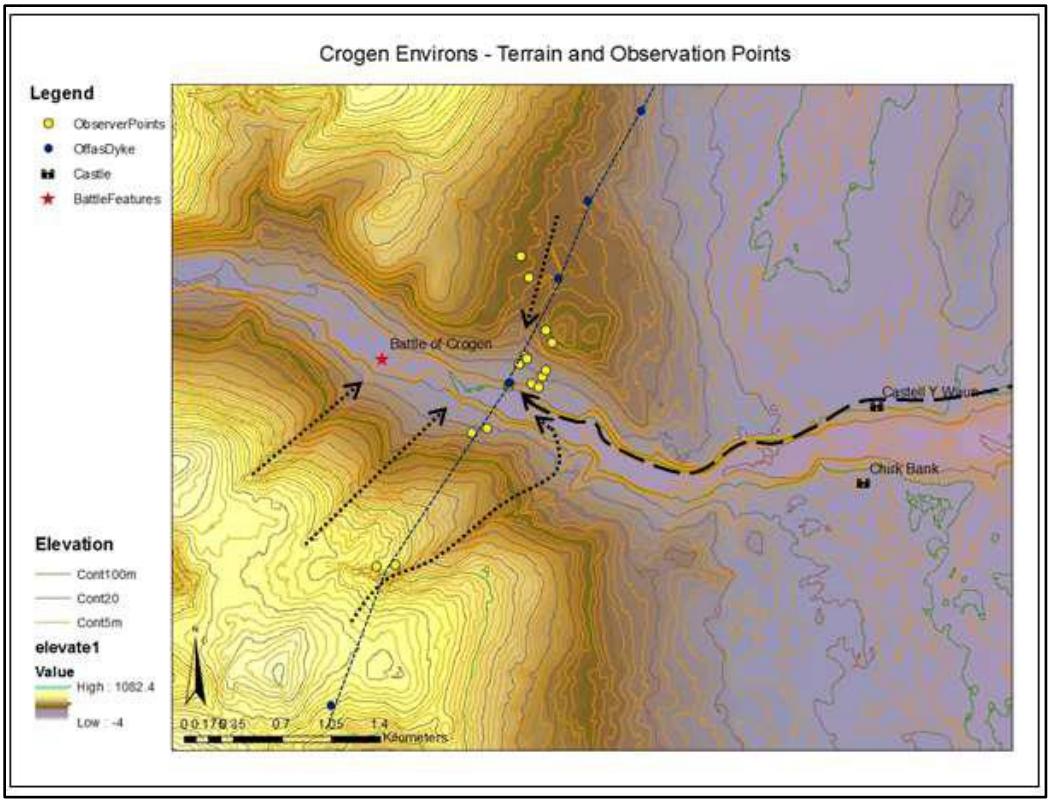

Figure 7: Battlefield elements and observer points for the Battle of Crogen.
Key: Dotted blue line = course of Offa's Dyke
Large black hash marks = suggested Anglo-Norman avenue of approach
Small black dotted line = suggested Welsh avenues of approach (2 possibilities)
(Map by the author).

Although weakened Henry was not deterred for he continued to advance along the Ceiriog valley up onto the Berwyn Mountains where he set up an encampment. Once there he may have reused the defenses of the Iron Age hillfort Cerrig Gwynion for his camp, and there he waited, for neither side seemed inclined to make the first move. While in this holding-pattern Gerald of Wales states that some of Henry's troops occupied themselves with pillaging and burning several of the local churches and villages.[19]

[19] *Brut Pen. 20*, 63; *Journey* Book II Ch. 12, 202

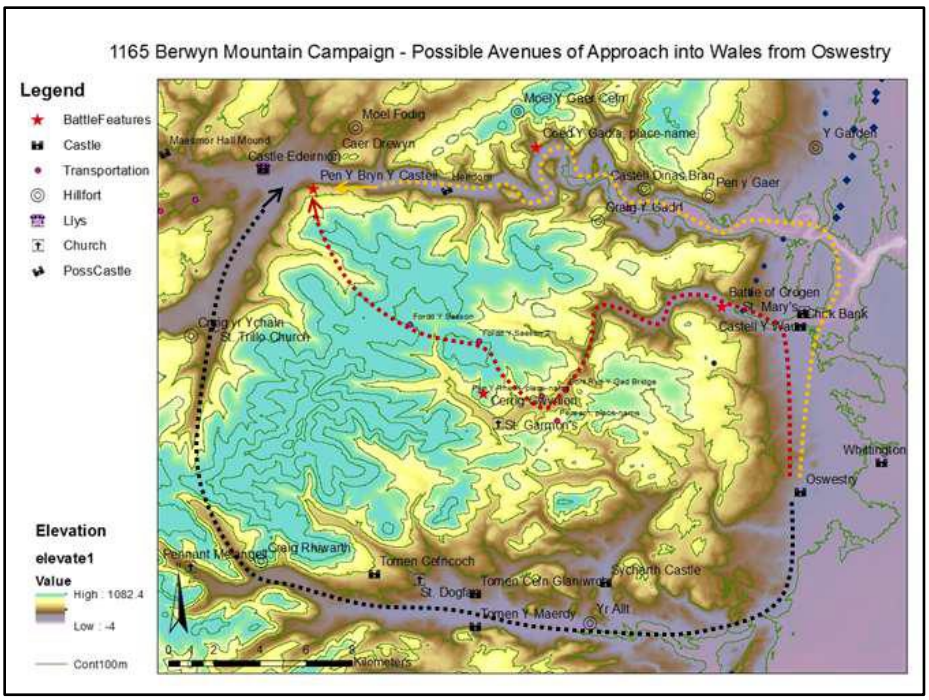

Figure 8: Map detailing possible avenues of approach into Wales from Oswestry. Yellow: Dee river valley, red: Ceiriog river valley, black: Tanat river valley (map by the author).

In the end Henry's indecision on whether to continue his advance on the Welsh was settled when bad weather descended over the Berwyn Mountains. The unseasonable wet and cold conditions took its toll on his men, faced with the possibility of starvation as supplies began to run low or were damaged by the wet weather. Frustrated and infuriated Henry retreated to England. In a final effort he went to Chester in an attempt to enlist an Irish mercenary fleet, perhaps hoping to launch an assault on the Welsh from the sea. As it was, the numbers of ships were insufficient and he turned away from Wales once and for all.[20]

5. TECHNOLOGICAL ADAPTATIONS IN WARFARE AS A MARKER OF SOCIAL STRUCTURAL CHANGE

Behavioral patterns of conflict, particularly for Gwynedd, have been highlighted in the 1157 and 1165 campaigns. The proximity of both Coleshill and Crogen to Wat's and Offa's Dykes and the importance of the dykes in the battle is suggestive of remembered boundaries. By choosing to place his encampment at the terminus of Wat's Dyke, in the case of the 1157 Campaign, and ambushing Henry's forces at Offa's Dyke during the Battle of Crogen, Owain was embracing a more concrete interpretation of boundaries, in place of the more abstract and fluid definition that applied to the pre-Norman, non-Vegetian era of Welsh warfare (see discussion below). The importance and the exploitation of the physical landscape has also been revealed. In both campaigns the Welsh used the natural slope of the terrain to their advantage which allowed for a more effective ambush.

The data presented in this study also indicates that Gwynedd had a unique warfare tradition when compared to other Welsh principalities and conflicts. The willingness of the leaders of Gwynedd to engage in battle with their opponents (something that was rare in the Middle Ages) can be traced back to the Battle of Rhyd y Groes (in which the Welsh were led by Gruffudd ap Llywelyn of Gwynedd against Edward the Confessor), and is again echoed in the campaigns of Gruffudd ap Cynan, Llywelyn ap Iorwerth and Llywelyn ap Gruffudd. In the case of both the Battle of Coleshill and the Battle of Crogen, battle was forced on the

[20] *Brut RBH*, 147; *Brut Pen. 20*, 64

Anglo-Normans by surprising them in an ambush. This aggressiveness undoubtedly contributed to the stability of Gwynedd and ultimately assisted to their rise to power and their ability to withstand Anglo-Norman conquest efforts. This organized aggression in response to the Anglo-Norman Conquest is indicative of a Welsh alteration in attitudes towards warfare. Also of significance is that Welsh were quick to adopt castle building technology. Both Hen Blas Castle, adjacent to the site of the Battle of Coleshill and Castell y Waun, where Henry II's troops crossed into Wales during the 1165 campaign, were constructed are a result of these engagements. It is noteworthy that both were later replaced by the monumental masonry edifices of Edward I; Flint Castle and Chirk Castle respectively (see figure 9 below). The following section considers how the actions documented in these campaigns and their aftermath contributed to elements of social change, particularly for the native Welsh, contextualized within a broader sociology of medieval warfare.

Figure 9: clockwise from top left, Castell y Waun, Hen Blas, Flint Castle, Chirk Castle (photos by the author).

5.1 Welsh Social Systems

Much of Welsh culture and their social-political organization remains an enigma, particularly when compared to the relative detail with which we have come to understand the Anglo-Saxon, Norman and Anglo-Norman societies. Some scholars have sought to rectify this bias and 'reject the limiting 'celto-nostalgic' narrative that [has] driven Wales for so long and to introduce a sophisticated medieval landscape that paralleled the trajectory of the rest of medieval Europe'.[21] Most of what we know, particularly of the pre-Norman era, is drawn from a few surviving ecclesiastical and administrative doctrines as well as from Welsh poetry. However, there are innate discrepancies and corruptions in these texts and the value of archaeology in furthering our understanding of medieval Wales cannot be stressed enough.[22]

Few historians have sought to understand Welsh social systems within their own geo-political context, outside of the Anglo-Norman world. It is important to view medieval Wales not as a kingdom torn apart by war into smaller principalities, but as a collection of independent principalities that were sometimes united by war. In other words the concept of an undivided territorial Wales is modern and it should not be applied in a medieval context. The theory that the eventual Welsh downfall was caused by inter-Welsh disunity, is in some respects a self-fulfilling prophecy that provides a convenient and simple explanation for the subjugation of the native Celtic population at the hands of the Anglo-Normans.

[21] J. Bezant, *Medieval Welsh Settlement and Territory, Archaeological Evidence from a Teifi Valley Landscape, BAR British Series 487* (Oxford: Hadrain Books Ltd., 2009), 8.
[22] Davies, *Patterns of Power in Early Wales,* 4.

The Welsh sphere of rule or *gwlad* was an abstract concept which was not determined by set territorial boundaries or groups of people; rather it was 'the changeable, expandable, contractible sphere of any ruler's power',[23] an ideology that supports non- Vegetian warfare in a pre-Norman context. This variability was intensified by the absence of primogeniture in Wales. This often meant that the death of a Welsh prince would lead to a period of political turmoil, hallmarked by the intense fighting between brothers. 'Consequently, the twin elements of territorial fluidity and political fragility predominated, so that political unity was invariable, transient and ephemeral, achieved by military might alone'.[24]

Welsh principalities had no centralized government because their social systems did not require it, political security was instead derived from social institutions and tribal and kin-based relationships which allowed Welsh leaders to engage in political *laissez-faire*. Interestingly, it was not until the early twelfth century that the *cyfran*, the custom of partible inheritance, which had traditionally been applied to lordship, was applied to land. It is argued that this adaptation was a direct result of the Anglo-Norman conquest which compelled the Welsh to embrace an Anglo-Norman ideology of land ownership.[25]

A pointed contrast between Welsh and Anglo-Norman military culture was in how each perceived terms of peace, homage and fealty. While the Welsh embraced a system of clientship, they did not have an institution of vassalage. Clientship in Wales was based on a relationship of mutual support, however, client relationships were not permanent and arrangements were often 'short-termed and flexible.' Perhaps most important for the context of this research, was that client relationships were not territorialized and clients retained 'freedom of action, presumably some legal capacity, and clearly some independent military power, clientship, then, was largely to do with the patterns of mutual support among a military aristocracy'.[26] This explains why Owain and other Welsh princes willingly agreed to do homage to Henry II at the 1163 Council of Woodstock and also why they did not hesitate to dismiss the arrangement in 1165.[27]

5.2 Western European Warfare, Myth and Reality

The 1157 and 1165 campaigns have not been considered within the wider context of medieval warfare. Indeed, Welsh warfare, and to a lesser extent Anglo-Norman warfare, have generally been studied in isolation of a larger medieval European context, leading to many misconceptions about the reality of warfare in these cultures. Past and present, historians have often dismissed native Welsh military tactics and technology as tribal and primitive, in reference to their preference for raiding and guerrilla style warfare. This misconception was in no small part propagated by contemporary twelfth-century cleric and historian Gerald of Wales' depiction of the Welshman as a 'noble savage.' For example, he states that soldiers went barefoot (see figure 10 below) and that they did not employ a code of chivalry, which has led more often than not to the idea of Welshmen as barbarians.[28]

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[23] *ibid*, 17.
[24] R. Turvey, *The Welsh Princes 1063-1286* (London: Pearson Educations Ltd., 2002), 3.
[25] Warren, *Henry II*, 151-2; G.J.R. Jones, 'The Tribal System in Wales', *Welsh History Review* Vol. 1 No. 2 (1961), 128-9.
[26] Davies, *Patterns of Power in Early Wales*, 22-24.
[27] D. Moore, 'Gruffudd ap Cynan and the mediaeval Welsh Polity', *Gruffudd ap Cynan, a Collaborative Biography* (Woodbridge: The Boydell Press, 2007), 77.
[28] S. Davies, *Welsh Military Institutions 633-1283* (Cardiff: University of Wales Press, 2004), 2-4; J.R. Kenyon, 'Fluctuating Frontiers: Normanno-Welsh Castle Warfare c. 1075-1240', *Ghateau Gaillard, Etudes de Castellologie Medieval* Vol. 17 (1996), 126; *Description* Book I Ch. 8, 234; *Expugnatio Hibernica* in: J.F. Verbruggen, *The Art of Warfare in Western Europe during the Middle Ages, from the Eight Century to 1340* (Woodbridge: The Boydell Press, 1997), 204; Suppe, *Military Institutions on the Welsh Marches: Shropshire, 1066-1300*, 209.

Figure 10: Illustrations of Welsh soldiers from the *Littere Wallie* c. 1282-1292.[29]

In comparison, their Anglo-Norman opponents are often portrayed as being on the cutting-edge of European military tactics and weapons technology. At the forefront of this mistaken superiority was the Anglo-Normans' supposed preference for the deployment of infantry and particularly cavalry in formal battle array in set battles. While it must be conceded that the Welsh had a penchant for raids and ambushes, and that the Anglo-Normans did on occasion give their opponents formal battle, these tactical preferences are nonetheless over-simplified and incorrect. The reality was quite the opposite, in medieval Europe the most common forms of war were the raid and the siege. This is what the military historian Contamine refers to as the *guerre guerroyante*, essentially a warfare strategy dominated by raids, pillaging, ambushes and sieges. This is not to say that pitched battle did not have an important role to play, but it was not the norm.[30]

Figure 11: Illuminated manuscript depicting a cavalry engagement during a battle from the Second Baron's War *c.* 1263-4, possibly depicting the Battle of Lewes 14 May 1264.[31]

[29] *Public Record Office ref. E36 / 274.*

[30] L.H. Nelson, *The Normans in South Wales, 1070-1171* (Austin: University of Texas Press, 1966), 12 and 115; J. Gillingham, 'An Age of Expansion c. 1020-1204', *Medieval Warfare A History* (Oxford: Oxford University Press, 1999), 67-8; P. Contamine, *War in the Middle Ages* (Oxford: Blackwell Ltd., 1984), 219.

[31] *Artist: Mahiet, Master of the Cambrai Missal, early fourteenth century, from the French Manuscript Chroniques de France ou de St Denis. ©The British Library Board, Royal 16 G VI f. 427v.*

The noted military historian Verbruggen states that aside from where battles were forced, in connection with a siege, or in the case of the 1157 and 1165 campaigns, by an ambush, 'battles were fought only when both sides wanted to, and thought they had a chance of winning. Most campaigns took place without any battles at all'.[32] Indeed it is now widely accepted by the medieval military history community that the 'principal strategy of medieval commanders was to lay waste to the countryside'.[33] In a British context this can easily be evidenced in the more than 2,000 wasted manors and the 1,000 square miles of 'ruined' countryside as recorded in *Domesday Book*. A large proportion of this waste was located in the Welsh Marches. However, it should be noted that wastes as recorded in *Domesday* were not always the result of military devastation. The military tactics of raids and pillaging used by the Anglo-Normans is further evidenced by the pervasive looting of churches by soldiers, including knights, which is surprising given the code of chivalry they were thought to have upheld. The *Brut y Tywysogyon* (The Chronicle of the Princes) and Gerald of Wales document that the Anglo-Norman army of Henry II pillaged churches in both the 1157 and 1165 campaigns.[34]

5.3 Battle Seeking, battle avoiding and the Vegetian art of war

De Re Militari (Concerning Military Matters) was a Roman treatise on the art of warfare written by Vegetius in the fourth century A.D. and was one of the most copied texts of the Middle Ages. Vegetius states that battle was an enterprise fraught with risk, many of which could be considered unnecessary as 'more certain victories could be won by attacking an enemy's logistics'.[35] The implication here is that Vegetian strategy favored pillaging, raiding and sieges as the preferred warfare tactics. Adding to this is the concept that pitched battles when fought were often decisive, particularly in frontier zones; however, campaigns that took place in frontiers, such as the Marches of Wales, Scotland and Saxony were relatively battle free. It has been theorized that Henry II, trained in the Vegetian art of warfare, avoided battle as 'victories provided only limited gains, [whereas] battlefield defeats could be utterly disastrous'.[36] It has also been suggested that the circumstances of medieval warfare required both sides to ascent to battle, in order for an engagement to take place. Although, an ambush could force battle and did not require both factions to 'agree'.[37]

Often where a defender had sufficient defenses whether built or natural they could successfully avoid battle and be victorious. This was a particularly effective tactic in conflicts that centered on the disputed control of territory, which accounts for the majority of Anglo-Norman and Welsh armed conflict in the twelfth century. Additionally, the lack of battle did not determine campaign or commander success, Henry II 'never fought a single general action in his long reign, though he was described by the contemporary poet Jordan Fantosme as the greatest conqueror since Charlemagne'.[38] The actions fought during the 1157 Battle of Coleshill and the 1165 Battle of Crogen are clearly being dismissed as minor engagements, if anything it should instead be suggested that the only battles that Henry fought in, during his entire military career were during the 1157 and 1165 campaigns .[39]

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[32] Verbruggen, *The Art of Warfare in Western Europe during the Middle Ages*, 329

[33] J. Palmer, 'War and Domesday Waste', *Armies, Chivalry and Warfare in Medieval Britain and France* (Cardiff: University of Wales Press, 2005), 256; M. Strickland, *War and Chivalry: the Conduct and Perception of War in England and Normandy, 1066-1217* (Cambridge: Cambridge University Press, 1996).

[34] Palmer, 'War and Domesday Waste', 257; D.M. Palliser, 'Domesday Book and the 'Harrying of the North'', *Northern History* Vol. XXIX (1993); Strickland, *War and Chivalry*, 81-3.

[35] C.J. Rogers, 'The Vegetian 'Science of Warfare' in the Middle Ages', *The Journal of Medieval History* Vol. 1 (2002), 2-3.

[36] *ibid* 5

[37] . Contamine, *War in the Middle Ages*; S. Morillo, 'Battle Seeking: The Contexts and Limits of Vegetian Strategy', *The Journal of Medieval Military History* Vol 1 (2002), 24; Gillingham, 'An Age of Expansion', 70; Verbruggen, *The Art of Warfare in Western Europe during the Middle Ages*, 329.

[38] Rogers, 'The Vegetian 'Science of Warfare' in the Middle Ages', 2.

[39] Hosler, 'Henry II's Military Campaigns in Wales, 1157 and 1165', 62.

Not all medieval warfare was Vegetian. The Vegetian strategy is a socially and culturally constructed system, and therefore only functions in societies that meet the pre-requisites for which Vegetian strategy was fashioned – namely, a system of built defenses such as forts or castles and a sedentary agricultural society. Wales it could be argued, prior to the construction of native Welsh built castles – the first documented instance of which was in *c.* 1116 with Cymer Castle in Merioneth, which is part of Gwynedd – lacked the necessary built strongholds from which to successfully defend its territory. The traditional Welsh administrative centers, the *llysoedd* in use during the early medieval and medieval periods, were only lightly defended. *Llysoedd* were elite settlements surrounded by a wooden palisade often built on top of a low earthen or stone embankment. Non-Vegetian strategy has been defined as: armed conflict where the objective is not directly about control of territory; instead it is about 'prestige, hierarchy, or elimination of rivals. Indirectly, such norms and rules could make possession of territory contingent not upon occupation protected by fortification, but upon legal or moral title conferred by some central authority'.[40]

Vegetian strategy had no role to play in polities such as medieval Gwynedd, which had established rules and laws that governed armed conflict. Additionally, Vegetian strategy requires a sedentary political elite that did not have the option of fleeing or seeking refuge from an invading force. Wales at the outset of the Anglo-Norman Conquest had no such geopolitical context and the seeking of refuge in the mountains of Snowdonia was a common practice in both pre and post-conquest Gwynedd. This non-Vegetian tactic initially proved effective in defying Anglo-Norman conquest attempts, as in order to subdue or conquer a population, that population must first be present. The Anglo-Normans compensated by building castles to stake a territorial claim, something the Welsh were quick to adopt. It can be argued that the establishment of the castle and in turn the onset of siege warfare forced the Welsh into adopting a more Vegetian style of waging war. By establishing castles, no matter how impermanent the actual structure might be, the Welsh had to adapt their philosophical and applied tactics to counter the Anglo-Norman aggression.[41]

5.4 The Castle in the Conflict Landscape

By the mid-twelfth-century castle building had become a prolific enterprise in the Marches of Wales. Apart from a few notable excavations, including Hen Domen in Montgomeryshire and Rhuddlan in Denbighshire, many of these early earth and timber castles are still poorly understood. It has been argued that castles in Wales did not have the ability to control the conflict landscape in totality until the construction of the large masonry castles and fortified towns by Edward I in the late thirteenth and early fourteenth centuries.[42]

Welsh built castles and the Welsh reuse of captured Anglo-Norman castles became more prevalent towards the middle of the twelfth century. During this period it can be argued that Welsh perceptions of territory and spheres of rule were also adapting from the earlier pre-Norman fluid and abstract definition of territorial boundaries, to a more defined and concrete boundary. This is evident in the use of castles to claim territory, which in turn led to a Vegetian system of defense, in which seeking refuge in the natural fortress of the Welsh mountains was no longer the viable option that it had once been. This shift in behavioral patterns was displayed by Owain Gwynedd in both the 1157 and 1165 campaigns. At least two castles were constructed as a consequence of the conflicts, these were Hen Blas and Castell Y Waun; the control of both

[40] Morillo, 'Battle Seeking: The Contexts and Limits of Vegetian Strategy', 23-29 and 31; J.R. Kenyon, 'Castles', *The Buildings of Wales* (New Haven: Yale University Press, 2009), 26; N. Johnstone, *Llys and Maerdref, an Investigation into the Location of the Royal Courts of the Princes of Gwynedd* (Gwynedd Archaeological Trust Report No. 167, prepared for Cadw, Welsh Historic Monuments, 1995), Earwood and Townsend, *Medieval Settlement and Landscape* (CPAD, n.d.).

[41] Morillo, 'Battle Seeking: The Contexts and Limits of Vegetian Strategy', 31; Verbruggen, *The Art of Warfare in Western Europe during the Middle Ages*, 117; Davies, *Welsh Military Institutions*.

[42] R. Higham and P. Barker, *Hen Domen Montgomery, A Timber Castle on the English-Welsh Border* (Exeter: Exeter University Press, 2000); H. Quinnel, *et al, Excavations at Rhuddlan, Clwyd: 1969-73 Mesolithic to Medieval* (York: Council for British Archaeology, 1994); C.J. Spurgeon, 'Mottes and castle-ringworks in Wales', *Castles in Wales and the Marches* (Cambridge: D.S. Brewer, 1987), 175; M. Lieberman, *The Medieval March of Wales, the Creation and perception of a Frontier, 1066-1283* (Cambridge: Cambridge University Press, 2010), 138.

shifted between the Anglo-Normans and the Welsh until they were replaced by the Edwardian masonry constructions of Flint and Chirk Castles. In fact the majority of the great Edwardian castles, were located in Gwynedd, with many of these built on or near the sites of battles. Castles were also constructed near important route-ways, controlling mobility and access. For example, five castles were constructed along an eight kilometer stretch of the coastal roman road where it crosses from England into Wales. Between 1066 and 1272 a total of 127 castles had been built in Gwynedd, out of these at least 30 were of native Welsh construction; 59 of these castles saw conflict, compared to 22 open-field engagements. Only after a frontier-zone became more secure could a castle be capable of adopting more traditional roles, of administrative center and military defense, with any permanence. What is certain, as stated above, is that the arrival of the castle caused the Welsh to adopt a more Vegetian style of warfare which in turn had a marked impact on their socio-political system.

6. CONCLUSION

For the Welsh, the adaptation to the Vegetian style of warfare is a marker of social change, as was the application of *cyfran*, or partible inheritance, to land. Prior to the Anglo-Norman conquest, the Welsh embraced a non-Vegetian form of warfare, governed by its own rules and laws. The non-Vegetian style of Welsh warfare was a reflection of Welsh social systems in which the idea of governance, land ownership and territorial boundaries was fluid and changeable. In order to protect their territory against the Anglo-Norman insurgence, they had to adopt the Vegetian style of warfare which notably included the building of castles. This led to the establishment of a sedentary polity, which undoubtedly had trickle down effects on Welsh society at large. The social flexibility of the Welsh to adopt new social norms and military technology contributed to their overall campaign success and allowed them to preserve Welsh independence until the late thirteenth century. The absence of this native Welsh narrative from both the historical and archaeological records and their portrayal as inferior and savage has transpired through time, impacting the social consciousness and identity of local communities. For example, an information placard erected by the British government's heritage agency, Historic England, at Oswestry Castle states that 'Henry II is said to have camped in Oswestry before defeating the Welsh Prince, Llewellyn.' Clearly this statement is rife with inaccuracies, not only was it Owain not Llywelyn who was Henry's opponent, but it was Henry, not Owain, who was defeated. It is remarkable that such contention and bias exists to this day over events that transpired nearly 850 years ago. The ability of past conflict – including the memorialized landscapes of conflict – to contribute to the conceptualization and creation modern identity is a powerful argument for the relevance and continuation of the study of the archaeology of conflict and the protection of these important sites.

ABBREVIATIONS

AC ……Annales Cambriae

BS……Brenhinedd y Saesson or The Kings of the Saxons

Brut Pen. 20…… .Brut Y Tywysogyon or The Chronicle of the Princes, Peniarth MS. 20

Brut RBH…….. Brut y Twysogyon or The Chronicle of the Princes, the Red Book of Hergest version

Description……The Description of Wales

Journey……..The Journey Through Wales

NPRN……National Preservation Record Number

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