Archaeology of Internment at the Morrissey WWI Camp

by

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Abstract

To date, very little is known archaeologically about First World War-era internment camps, especially in Canada, where this history was actively erased through the destruction of the Federal Internment records in the 1950s. Archaeologists can play a fundamental role in contributing knowledge where oral and documentary evidence is lacking. This can be undertaken through a triangulation of data sets commonly used by conflict archaeologists. This thesis focuses on one of Canada's twenty-four WWI internment camps: the Morrissey Internment Camp. Through GPR survey and excavation, archival records retrieval, and oral histories, a critical theoretical lens was applied to the stories of the internees—immigrants from the multinational Austro-Hungarian, German, and Ottoman Empires—and their guards at the Morrissey Internment Camp. The material record adds a new line of evidence, contributing to a more nuanced perspective that aids in reducing the gaps in this dark facet of Canadian history.

Keywords: modern conflict archaeology; civilian internees; internment archaeology; archaeology of confinement; Morrissey; PoWs; WWI; immigrants; multinational; Austro-Hungarian; German; Ottoman Empire; Ukrainian Canadians; First World War; Canada; War Measures Act; Canadian First World War Internment Recognition Fund

To my children—Kamran, Sophia, and Ava—who will inherit this world and make it a much better place.

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Chapter 1.

Introduction

The broad goal of this study is to contribute to both growing research on World War One (WWI) internment camps (Demuth 2009; Francis 2008; Roy 2000) and investigations into the origins of modern internment. Specifically, I am interested in examining key issues of confinement at the Morrissey Internment Camp in Morrissey, British Columbia, to reconstruct the internment history at the site via a comparison of narratives and materiality. While historians are typically limited to archival records and oral histories, archaeologists are uniquely positioned to add physical evidence from the archaeological record of a given site (Demuth 2009; Early 2013; Thomas 2011). Consequently, archaeologists can contribute information that may be lacking in the fragmented historical record (Casella 2007; Medin 2007; Myers and Moshenska 2011, 2013); specifically, material analysis can reveal the circumstance of life in subaltern roles, such as prisoners (Samford 1996).

Due to shifting political and social landscapes, the majority of internment archaeological research in Canada has focused on World War Two (WWII) internment camps (Myers and Moshenska 2013). To date, only three Canadian WWI internment camps have been studied, and this limited research highlights the paucity of knowledge regarding WWI internment sites (Myers and Moshenska 2013). This work has resulted in Parks Canada archaeological reports from Mt. Revelstoke, British Columbia (Francis 2008) and Castle Camp, Alberta (Steve Malins, personal communication 2015), as well as an archaeological excavation at Spirit Lake Internment Camp, Québec (Roy 2000). While archaeological reports focus on documenting and recording the sites for conservation purposes, academic research also emphasizes the anthropological perspective—the activities that took place at the site. In addition, site reports from Parks Canada are not shared with the public, further limiting our archaeological knowledge about Canada's WWI internment operations. The knowledge and skills developed from research at WWII sites can easily be transferred to WWI internment research, providing critical information about the origins of modern internment camps. By filling in these gaps, archaeologists can play a primary role in counteracting a devastating corollary of

erasure—the rewriting of history (Casella 2007; Medin 2007; Myers and Moshenska 2011). My research helps to better understand the history of the Morrissey Internment Camp and also sets an example for investigations at other Canadian WWI internment sites where the federal documentary record is deficient.

In 1954, due to privacy issues and lack of space, the Canadian government destroyed the Custodian of Enemy Alien files and personnel files pertaining to Canada's first national internment operations 1914-1920 (Kordan 2002; Bohdan Kordan, personal communication 2014; Laycock 1994; Luciuk 2006; Norton 1998). Surviving records come from Prime Minister Robert Borden's diaries; the diaries of the head of internment operations, Major-General Sir William Otter; a few national and provincial reports; and the records of the few internees and guards who, after the camp's closure, spoke about their ordeals. Many of the internees were ashamed of their internment history and refused to speak about it with family members once they were released. Because of this, only general statements are possible about the internment camp operations as a whole and some particulars of specific camps where internees and guards provided information. Hence, information about the individuals—nationality, age, cause of arrest, funds seized, and monies earned—is no longer available. Today, there are no survivors of Canada's first national internment operations. Hence, the emphasis has shifted toward the social memory of the descendant community (Winter 2009), since it is no longer possible to seek direct oral testimony from those affected by internment.

In 2008, a $10 million fund, known as the Canadian First World War Internment Recognition Fund (CFWWIRF), was established to "commemorate and educate Canadians about Canada's first national internment operations of 1914 to 1920" (CFWWIRF 2019). The CFWWIRF supports projects that bring to light and commemorate the experiences of the communities affected by Canada's first national internment operations. The negotiations that led to the establishment of this endowment fund took place between the Government of Canada and the Ukrainian Canadian community, represented by the Ukrainian Canadian Civil Liberties Association (UCCLA), the Ukrainian Canadian Foundation of Taras Shevchenko (UCFTS), and the Ukrainian Canadian Congress (UCC). The signing ceremony took place on May 9, 2008 at the Stanley Barracks in Toronto, Ontario. The Hon. Jason Kenney, Minister of Citizenship, Immigration, and Multiculturalism, represented the Canadian government, while the Ukrainian Canadian community was represented by Dr. Lubomyr Luciuk (UCCLA), Mr.

Andrew Hladyshevsky Q.C. (UCFTS), and Mr. Paul Grod (UCC). The generous support provided by a grant from the CFWWIRF has allowed my own PhD research to come to fruition.

My research at the Morrissey internment camp began during my master's degree with a preliminary reconnaissance of the Morrissey cemetery, located 1.2 km away from the internment camp proper. I had been invited by the CFWWIRF to meet with Tipi Mountain Eco-Cultural Services and map the boundaries of the cemetery, to provide recommendations for the cemetery's protection to the B.C. Archaeology branch. After first setting foot in the cemetery, and examining the four demarcated PoW graves, I realized there was a bigger story that needed to be told. My master's research involved using ground penetrating radar (GPR) to survey for additional unmarked graves in the cemetery, where twenty subsurface anomalies (likely graves) were detected. Morrissey's internment history constitutes a great social injustice, and researching the cemetery could only be a starting point. Hence, a proposal to excavate the internment camp itself as part of my doctoral research became a logical next step in further uncovering the greater story of the PoWs, whose lives were so direly affected by internment, and of their guards.

Morrissey is located in the Elk Valley of southeastern British Columbia. The internment camp was in operation from September 28, 1915 to October 21, 1918 and was one of 24 internment camps that housed 8,579 immigrants from the multinational Austro-Hungarian, German, and Ottoman empires, as prisoners of war (PoWs) on Canadian soil during WWI (Kordan 2002; Laycock 1994; Luciuk 2006; Norton 1998). This research took place between 2015 and 2018 and used the excavations at the Morrissey Internment Camp to not only fill in the gaps in the fragmented historical record but also create awareness, foster dialogue and healing, and commemorate this dark part of our Canadian past. These objectives were met through excavation and analysis of the material culture record, guided tours and interviews with the local community and descendants of the internees, and finally, a memorial service commemorating those interred in the Morrissey cemetery.

Focusing the archaeological research not only on the internees but also their guards has helped to shed light on the daily lives and differences within and between this disenfranchised group and their oppressors. The material remains have placed

greater focus on physical health through evidence of camp diet, prison economies as reflected in traded goods and contraband, acts of resistance indicated by vandalism, punishment through solitary confinement cells, and finally, escape. The last refers not only to physical escape but also to mental escape by way of coping mechanisms such as arts and crafts, education, sports, drugs, alcohol, and even suicide (Casella 2007; Myers and Moshenska 2011; Mytum 2012).

This thesis is made up of four papers (Chapters 2 through 5), each intended as a standalone paper to be submitted to a peer-reviewed journal. As such, each includes an introduction and conclusion that are deliberately repetitive in situating the research for the reader.

Article 1: "Applications of Critical Theory within Modern Conflict Archaeology of the 20th and 21st Centuries" sheds light on the relatively new subdiscipline of modern conflict archaeology and provides a literature review of the potential applications of critical theory within that subdiscipline. This article examines the burden placed on the archaeologist to follow an ethical approach when excavating, since the research results most often affect the survivor and descendant communities of contemporary conflicts. It sets the tone for an ethical, critical lens that I apply to my own research at the Morrissey camp. Article 2: *"*The Materiality of Mental Health at the Morrissey WWI Internment Camp*"* offers a unique approach to examining PoW mental health through the study of the material culture record. This article provides insight into the various coping mechanisms adopted by the Morrissey prisoners to help mitigate mental health issues resulting from confinement. Article 3: "The Prisoner of War Diet: A Material and Faunal Analysis of the Morrissey WWI Internment Camp" examines the material culture record and the foodway patterns of the Morrissey prisoners in an effort to investigate whether the prisoners were fed as poorly as some had claimed. Article 4: "Examining Acts of Resistance at the Morrissey WWI Internment Camp" uses historical records as a point of access and compares these to the material culture to further develop an understanding of the numerous resistance activities that took place in Morrissey and to counter historical inaccuracies.

Photographs and faunal reports will remain as part of the pdf of the final thesis freely available online from the SFU Summit server, offering other researchers access to these data. Supplementary tables will be posted to the Summit website at SFU for

permanent online curation, in Excel format, so that future researchers are able to download these as a spreadsheet and undertake their own analyses of the complete artefact data from the site.

Historians have been working for many years to compile the history of Canada's internment operations. Given the scant amount of extant documentary records, there are many gaps in the historical record to date, which some historians feel may never be resolved. Archaeology at the Morrissey Internment Camp not only combines and analyzes material culture, archival reports, and oral histories but also fills in some of those historical gaps. In addition, the research contributes pertinent information that sheds light on the intentional erasure of not only the Morrissey camp's but also Canada's fragmented internment camp record. This is the first excavation of its kind relating to WWI sites in Canada and will lead to future work at other Canadian camps. Internationally, information emerging from this study will contribute to our understanding of the origins and nature of modern internment.

This is an exciting opportunity for research, as the anniversary of World War I occurred last year, providing a platform to educate Canadians about this dark part of our nation's history. Ukrainians, Germans, and other Europeans from the Austro-Hungarian Empire were actively recruited by immigration officials to homestead along the Canadian Western Frontier, and due to their misfortune of being from enemy countries at the start of the Great War, many were arrested and interned. The overarching intent of this research is to create awareness so as to avoid similar regrettable actions in the future.

Chapter 2.

Applications of Critical Theory within Modern Conflict Archaeology of the 20th and 21st Centuries

The field of modern conflict archaeology (MCA) is regarded as a sub-discipline within archaeology (Moshenska 2013: 351; Saunders 2004: 1-3; Schofield et al. 2003) that embraces all conflict of the 20th and 21st centuries. Modern conflict archaeologists regard World War I (WWI) as a defining moment in warfare that delineates the start of "modern" conflict due to the industrialized intensity of the war and the global scale of total economic mobilization (Saunders and Cornish 2017: iii). Although some historians (Bell 2007; Broers 2008) would regard total economic mobilization as occurring with the first total war during the Napoleonic era, modern conflict archaeologists consider the impacts of modern technological advances such as the first widespread use of aircraft, tanks, chemical weapons and machine guns as having significant impact on modern warfare (Moshenska 2008; 2013; Saunders 2012; Schofield 2004).

The subject matter not only deals with the material legacies of war but also the technological, social, cultural, and psychological aspects of present conflicts (Moshenska 2013: 352-353; Schofield 2009: 1-4). Importantly, MCA is also concerned with the resultant aftermath of conflict (social, economic, political) since conflict and its aftermath endure beyond the battle-zones where objects and memories continue to exist within urban landscapes (Saunders 2012: xi - xiv). Modern conflict archaeologists study the experience and aftermath of conflict, for all parties affected by conflict, through an examination of the landscapes, material culture record, and memories that are sustained beyond the conflict-zones and exist within urban landscapes, museums, homes, architecture and public memorials (Crossland 2000: 146; Moshenska 2013: 353; Ross 2012: 9-10; Saunders 2004: 193; Schofield et al. 2003: 2-5).

Archaeological investigations in the field of MCA are often initiated by local governing bodies and other stakeholder communities who hold varying interests and outcomes that do not always "result in a full disclosure of the objective factual circumstances surrounding these offences" (Theune 2018: 24). Creating an ethically engaged archaeology that avoids top-down models and places the needs of the victims,

local and descendant communities first has opened significant dialogue in recent years (Gonzalez-Ruibal et al. 2015; McGuire 2008; Moshenska 2010; Theune 2018). Although there has been considerable research and discourse pertaining to the sensitive nature of contemporary work in MCA, as well as the need to apply a strict ethical code of conduct (Theune 2018), there is very little recognition within the literature that MCA archaeologists follow a critical theoretical approach. This is especially important since there often remain living survivors of 20th and 21st century conflict and archaeologists share a responsibility not only to uncover the criminal acts of the perpetrators and bring justice to the victims but also to call to public attention such atrocities. This study applies a critical lens to recent work conducted in MCA.

2.1. Critical Theory

Critical theory is a philosophical approach with the dual objectives of (1) exposing any ideology that falsely justifies oppression, and further, (2) engendering a commitment from the practitioner to taking action against oppression, once it has been exposed. Foundational to the principals of critical theory is the realization that ideology is the primary obstacle to liberation (Geuss 1981). These critical philosophical approaches are therefore emancipatory, as they seek to provide insight to an individual or group regarding the root causes of social and economic oppression (Koltonski 2014). Critical archaeologists thus take part in an emancipatory archaeology to serve marginalized societal groups and challenge the dominant class. This is done by garnering knowledge and critique through research and then taking action.

Critical theory in archaeology lends itself well to MCA since it examines all conflict and its aftermath in the 20th and 21st centuries (Saunders 2012; Schofied 2006). MCA has an interdisciplinary, anthropologically informed perspective that examines both the political and nationalist influences of war (Saunders 2011: 41). Often exploring events within living memory, MCA requires sensitivity in research methods and dissemination (Moshenska 2008, 2010). MCA involves attunement to ethics, politics, memory, heritage and commemoration, since praxis works best when there is a contemporary group that shares a marginalized historical narrative with an oppressed group in the archaeological record.

Critical theory provides an essential framework, or critical lens, for researchers in the social sciences to examine the acts and symbols of a society. Researchers engaged in critical social science consciously attempt to combine theory and action, through praxis, in an effort to change oppressive practices in daily life. This framework is necessary in order to shed light upon the circumstances that lead to the oppression of specific subgroups within a population: gender and queer oppression, racism, colonialism and nativism (Koltonski 2014; Rush 2004). According to Horkheimer, critical theories seek to "liberate human beings from all circumstances that enslave them" (Horkheimer 1972: 215). Through the application of critical theory, researchers gain an understanding of how certain groups have become exploited. This understanding allows the researcher to use this knowledge and critique gained through research to strive to end such oppressive forces. Hence, researchers seek research questions that oppose the dominant order of society: the "emancipation from coercion, including coercion that is self-imposed" (Leone et al. 1987: 284). To do so, researchers stress the importance of reflexive thought, "by acknowledging one's position in the world – economically, socially, culturally, geographically" in order for the researcher to appreciate the impact of how this shapes one's thoughts and thus what is projected onto the research (Wylie 2002: 158). Horkheimer (1993: 21) further stipulates that a critical theory can only succeed if three criteria are concurrently met: it must be informative, practical and normative. Hence, the theory should explain the faults within current society that lead to the oppression of certain subgroups, identify the social actors who can effect change, offer clear norms for criticism and provide attainable goals to then transform society.

2.1.1. Ideology

Ideology is the *taken for granted* aspects of daily life that mask exploitation by naturalizing it – the false consciousness of society (Horkheimer 1972: 214). Critical theories seek to expose ideology since ideology is used to rationalize the relationship between the social and political constructs of produced knowledge (Horkheimer 2002 [1968]: 198). Leone notes, "an ideology is what taints our perception of reality; it is a historically contingent, culturally and socially specific screen to perceptions that 'reproduce society intact' by making acceptable or rationalizing or hiding social inequalities, frustrations, frictions and the like" (Leone et al. 1987: 284). Knowledge of

ideology, or at least its recognition, thus leads to emancipation by identifying the root cause of oppression (Horkheimer 2002 [1968]: 200-201).

"Vulgar" ideology relates to the most blatant forms of ideology such as flag-waving, patriotism and advertising (Marx and Engels 1970 [1846]: 104). However, the more subtle forms of ideology have become the central focus for critical theorists, since these hide in plain sight and thus allow inequality to propagate due to a naturalization process that prevents resistance, violence and revolts. In the form of ceremonies, symbols, monuments and writing systems, ideology can become integrated into a set of shared values and beliefs. These shared values and belief systems become the culture of a society that can be communicated to a greater audience – the broader population (DeMarrais et al. 1996). For archaeologists, reflexive thought allows for ideology to have two foci: examining ideology "in the past" to understand how dominance and oppression were legitimized, and also examining how "current" ideologies cloud our view of historic societies (Wylie 2002: 155). Reflexive thought is essential in helping researchers create a check and balance, remaining cognizant of the subjective nature of their research.

2.1.2. Praxis: An Activist Approach to Archaeology

Critical theory strives for emancipation by freeing humanity from all binding circumstances and informs researchers that knowledge is power. Therefore, comprehending the factors that result in the oppression of specific groups allows researchers to diminish or end such forces (Horkheimer 2002 [1968]: 196). Engaging in praxis in emancipatory archaeology (activism) serves the marginalized and challenges the dominant class (McGuire et al. 2002). It is praxis that separates all critical archaeological approaches from non-critical approaches (McGuire et a. 2005). Saita (2007: 267) notes, "Emancipatory (activist) archaeology aims, through its conceptual frameworks and public outreach initiatives, to foster critical thought about the determinants of contemporary lived experience in hopes of impelling positive social change."

Acknowledging the situated nature of archaeological knowledge along with its potential to do harm or good has shaped the focus of critical archaeological research endeavors since the 1980s (Atalay et al. 2014; Greenberg 2012; Leone 1986; McGuire 2008; Meskell and Pels 2005). For some, recognizing the political nature of research is

of utmost importance since stakeholder communities have the potential to remove power from affected communities and place it in the hands of governments, nation states, universities and museums (Atalay et al. 2014: 11-12; Gonzalez-Ruibal 2012; McGuire 2008: 51-55). Critical archaeology can also be used as a form of activism, for example, through commemorative excavations such as 'Operation Let's Dig' that took place at the site of the Gestapo headquarters at the Prinz Albrecht-Strasse (Baker 1988; Moshenska 2008, 2010). An attempt to give voice back to previously silenced communities occurs through community engagement and archaeology (Atalay 2006; Little 2002; McGuire 2008). One must also be cognizant that excavations can disrupt peace and re-introduce violence such as with efforts to locate missing individuals from the Spanish Civil War (Gonzalez-Ruibal 2012) or while excavating post-genocide graves in Rwanda (Bolin 2013).

2.2. Applications of Critical Theory within Modern Conflict Archaeology

MCA focuses on both intergroup and intragroup conflict and is not restricted to battlefields or large-scale wars between nations, since conflict leaves its mark in many different places. According to Saunders (2012: xi), modern conflict "is not restricted to battlefields, nor to large-scale wars between nations, but embraces any kind of armed conflict (and its wider social and cultural correlates), at any level, within a single nation, or between nations." Moshenska (2013: 353) further stipulates that these types of armed conflict include but are not limited to: war, genocide, race riots, state terror, disappearances, torture, strikes, and labour struggles. The physical remnants of conflict – the material culture record – play host to multiple meanings, the implications of which may change over time, and differ for soldiers and civilians alike.

This field of research examines all conflict with particular regard to social and cultural legacies. MCA emphasizes an interdisciplinary archaeological and anthropologically-informed perspective, exploring the political and nationalist influences on the manifestations of war. Hence, a partnership with anthropologists who first began research within the same field in the 1950s and regard conflict within the context of general ethnographic accounts is fitting (Kyrou and Rubinstein 2008; LeVine 1961; Schmidt and Schroder 2001). It should be noted that the anthropologically informed-perspective discussed above specifically refers to its applications within MCA. Sites of

conflict contain and perform diverse roles: becoming “sites of memory” or ‘lieu de memoire” (Nora 1989: 7), containing human remains, or evolving into places of political and economic significance through cultural heritage, tourism and dark tourism platforms (Moshenska 2010; Sharpley & Stone 2009; Theune 2018). Crossing a number of disciplinary boundaries, modern conflict archaeology creates partnerships with anthropologists, historians, archivists, oral historians, forensic investigators and criminologists (Agosin 2008; Carr 2010; Congram 2016; Crossland 2000; Gonzalez-Ruibal et al. 2015; Saunders 2004: 1-21). Navigating between knowledge and critique toward taking action within MCA is necessary in order to effect positive change within affected communities. This activism is central to the application of critical theory.

2.2.1. Cultural Heritage

Conflict between international and government agencies and the specific needs of local communities poses practical challenges, since neutrality is a luxury that archaeologists are not afforded and they cannot be apolitical in the face of politics. Generally speaking, in sites of ongoing conflict, the goal of archaeologists is to reduce the impact of war as it pertains to cultural heritage (Perring and Van Der Linde 2009; Rowlands and Butler 2007). “Safeguarding archaeological sites and cultural sites is a matter of risk and disaster planning: recommending and undertaking actions to be taken before, during and after conflict aimed at documenting, protecting and salvaging archives, finds and sites” (Bernbeck 2003; Hamilakis 2009; Perring and Van Der Linde 2009: 200). Partnerships with government agencies, the military and civilian organizations holding positions of authority are often used in order to maintain the safety of those involved. Archaeologists understand that it would be naive to think that archaeology will bring about peace where conflict has not been resolved. However, there is also a general awareness that a responsibility exists for taking action to mitigate the impacts of war by providing advice on resource management issues and by contributing to a dialogue that makes known that destructive conflict is unacceptable (Bernbeck 2003; Hamilakis 2003, 2009; Stone 2009).

2.2.2. Cultural Heritage: Registering Cultural Sites with Non-Government Organizations (NGOs) During Times of Conflict

Cultural heritage sites are often the targets of destruction by belligerent states that blatantly ignore the 1954 convention for the protection of cultural property in the event of armed conflict (1954 Hague Convention; UNESCO 1954). During the conflict in former Yugoslavia, Croatian archaeologists sent a list of important cultural heritage sites to UNESCO in order to ensure their protection. However, in an effort to demoralize the Croatian psyche, opposition forces used the list to destroy every one of these sites including the World Heritage Site of Dubrovnik (Stone 2009: 320-322). In retaliation, the Croatians destroyed the 16th-century medieval bridge at Mostar, one of the most recognizable landmarks in Bosnia. This is merely one example among many: the destruction of the Bamiyan Buddha's in Afghanistan by the Taliban (Meskell 2002), the the Babri Mosque in India during riots (Bernbeck and Pollock 1996), the destruction of Palestinian heritage under the auspice of salvage excavations by Israeli archaeologists in occupied territory (Rjoob 2009), the destruction of cultural heritage in Iraq during the Gulf War (Hamilakis 2003, 2009; Stone 2009) and in Syria during the ongoing civil war (Danti 2015). The destruction of archaeological and cultural heritage sites is too-often a political objective during times of conflict (Ascherson 2006; Stone 2009). Although well intentioned, archaeologists need to be cognizant of the risks of registering significant cultural sites.

2.2.3. Cultural Heritage: Registering Cultural Sites with the Military During Times of Conflict

Although archaeologists provide input to NGOs such as UNESCO pertaining to conservation of threatened sites, concerns have been raised whether providing the same input to governments and military powers is ethical. This type of dialogue not only has the potential to place archaeologists at risk, but also potentially elevates the needs of the cultural material over the living culture (Curtis 2009; Perring and Van Der Linde 2009; Starzman 2008). In light of this, a resolution was passed at a session of the sixth World Archaeology Congress that urged:

> …all archaeologists and heritage professionals to resist any attempts by the military and governments to be co-opted in any planned military operation, for example by providing advice and expertise to the military on

> archaeological and cultural heritage matters. Such advice would provide cultural credibility and respectability to the military action (Hamilakis 2009: 58).

However, this issue remains divisive since many archaeologists feel that “giving advice is not necessarily wrong any more than it is necessarily effective” (Perring and Van Der Linde 2009: 202). In addition, when there is no easy way of knowing whom the good or bad guys are, it becomes more difficult to sit back in such an extreme stance on war.

During World War II (WWII), a specialized team composed of 345 men and women from fourteen nations served in the newly created Monuments, Fine Arts and Archives team (MFAA). The group consisted of museum professionals, art historians, architects, archaeologists, cultural heritage experts and educators (Monuments Men Foundation 2019). The team was tasked with recording significant European cultural heritage sites on military maps so that the allied militaries and pilots could avoid destruction of these sites during the war (Wegener and Otter 2017). During the Gulf War, both American and British archaeologists provided similar coordinates to their respective militaries to prevent the destruction of important heritage sites. Hamilakis (2003: 104) was extremely critical of those who used their professional positions to place the need for conservation of artefacts and cultural heritage sites over the lives of the Iraqi people.

Hamilakis had two main points of critique with regard to the way many archaeologists responded to the looting in Iraq. First, archaeologists continuously equated Iraq with the “cradle of civilization” (Hamilakis 2003: 105). This was done to make Iraq’s antiquities relatable and create an emotional, moral and financial investment amongst Westerners. However in doing so, this tactic allowed the West to appropriate Iraq’s antiquities, all the while ignoring the more recent Muslim and Arabic heritage and relegating this to ‘their’ past and therefore rendering it irrelevant. It also brings into question the nebulously defined boundaries that academics place on heritage (Bernbeck 2003: 115). Second, archaeologists used their positions as professionals and experts to garner public awareness through newspaper and radio to defend cultural heritage, and neglected their plight as critical thinkers to question the “regimes of truth” (Bernbeck 2003:115). They made no reference during their public outcries to the “misery, destruction and death” that the war on Iraq caused the Iraqi people (Bernbeck 2003;

Hamilakis 2003: 106). “No epic Sumerian cuneiform tablet, majestic Neo-Assyrian lamassu sculpture, or any other Mesopotamian artifact is worth a human life, be it Iraqi, American, British or other” (Hamilakis 2003:111).

2.2.4. Politics and Agendas

Whether the intent of the archaeologist or not, the research and findings of conflict archaeologists often contribute to local and national politics. For example, researching and recovering human remains from missing victims of the Spanish Civil War can cause civil unrest between the victims’ and the oppressors’ relatives both of whom continue to live within the same communities where the atrocities took place (Gonzalez-Ruibal et al. 2015: 113- 136). At times, politics can be used to extend an olive branch intended to bring about peace, when a belligerent country cooperates with an excavation at a site of conflict (Moshenska 2008: 159-175). At other times, research and excavation can re-open old animosities along the original cleave, dividing archaeologists, communities and governments (Gonzalez-Ruibal et al. 2015). In the case of MCA, socially aware archaeologists see the potential to examine the original conflict in conjunction with modern issues. For example, Neil Faulkner’s Great War Archaeology Group, a group of professional, academic and independent archaeologists specialized in the field of WWI archaeology, has a mission statement whose aim is, “to undertake field research and intervene in debate and interpretation from an anti-imperialist and anti-war perspective” (Moshenska 2008: 168). Their research is not intended to sensationalize the act of war but instead create awareness in an attempt to prevent future wars.

2.2.5. Effects of Archaeological Work on Sites of Current and Past-Conflict

The professional skills of archaeologists and forensic anthropologists are increasingly called upon in an examination of the material culture record of war crimes and mass graves (Blau and Skinner 205: 449-463; Congram 2015: 7-10; Gonzalez-Ruibal et al. 2015). Evidence is gathered for varying purposes; such as retributive justice, reconciliation, commemoration, and to counter efforts at denial and historical revisionism (Perring and Van Der Linde 2009: 204). An examination of the needs of contemporary generations in the face of conflict cannot be ignored when confronting

issues of cultural heritage protection. The question of how critical conservation of culturally significant sites can take place in the aftermath of war becomes a complex issue when the needs of victims of war – the displaced, disempowered, destitute and deceased – have not been addressed (Hamilakis 2003, 2009; Perring and Van Der Linde 2009: 198; Rjoob 2009).

Unfortunately, international and government agencies involved in conservation have a tendency to approach with top-down models that alienate the needs and values of the local communities that inhabit the sites. This poses a particular challenge with recording and conserving important heritage sites. Currently, there is no international standard with regards to codes of conduct or best practice, however, many archaeological associations share similar codes of conduct. For example in North America, archaeologists acknowledge an ethical vow to do no harm (Society for American Archaeology 2012) and their "actions must be judged by their impact on the communities in which they work" (Perring and Van Der Linde 2009: 198).

The presence of witnesses and survivors to forensic investigations is a unique feature of MCA. This poses an "ethically hazardous element" to the archaeology of modern conflict (Luce 2012; Moshenska 2008: 164). Memory narratives associated with the site of conflict can be extremely useful, though memory is not always reliable as testimony. In addition, the emotional well being of witnesses while being interviewed should always be of utmost importance to the researcher, especially since emotional, and often visceral responses to the excavation may occur (Moshenska 2008; Pringle 2009). Importantly, a critical approach does not necessarily entail a singular approach to archaeological excavations since each community may hold varying cultural and moral values, needs and interests. Hence, archaeologists are obligated to acknowledge and consider the concerns of all stakeholders involved and integrate these concerns, especially those of the victims, into their work (Theune 2018: 24).

By default, excavations on sites of conflict often organically evolve into community archaeology projects, providing oversight and authority to the witnesses and survivors. This can also lead to the prevention of an excavation from taking place. This occurred in Argentina, with the Madres de la Plaza de Mayo, where families refused to allow the excavation and recovery of their deceased family members in an effort to keep

the political struggle alive, since ‘therapeutic closure can also mean political closure (Gonzalez-Ruibal 2008: 262).

The need to excavate the atrocities that took place at Nazi extermination camps has also required sensitive negotiations since Jewish rabbinical law prohibits the disturbance of gravesites (Colls 2015b; Svoboda 2016). In order to honor the Jewish community’s wishes and ensure that unnecessary excavation and site disturbances did not occur, a series of dialogues and mediation transpired. For example at Treblinka, archaeologist Caroline Sturdy Colls applied non-invasive technologies such as Lidar, Ground Penetrating Radar, low-altitude-weather-balloon technology and global positioning systems to mitigate the issue of disturbing graves (Colls 2015a,b; Svoboda 2016). At the site of the German extermination camp Mauthausen in Austria, a program of augering was applied to delineate the location of the ash dumps related to mass graves. In this case, permission was granted by the Mauthausen committee prior to the commencement of the excavation. A similar excavation took place at the Sachsenhausen memorial site in Germany. In this case, the Jewish community supported the excavation with the caveat that the collected ash be immediately reburied after the construction of the new memorial site was complete (Theune 2018; 24, 25).

2.2.6. The Detritus of War

Both civilians and archaeologists often uncover undisturbed artefacts in areas where the landscape has experienced little site disturbance since the end of a war. However in other areas, archaeological investigation and conservation are necessary when building development and other site disturbances are imminent. MCA moves beyond battlefield and military sites archaeology, which has focused on the material legacies of the battle trenches of the Western Front. MCA includes the aftermath of war and expands upon battlefield archaeology to include sites of naval action, aerial combat, such as crash sites of planes and sunken battleships, each of which hold a global footprint. Excavations taking place on the islands between North America and Asia on the southern edge of the North Pacific Bering Sea have focused their research on fortified Japanese bases (Theune 2018). Internment camps are also a more recent research endeavor (Myers and Moshenska 2013). The forced labour camp on Watom Island in Papua New Guinea has focused on the extensive tunnel system dug by American PoWs. The survey uncovered the tunnel’s multiple room functions which

included hospital rooms, stores, and housing for gun emplacements and submarine and ship pens (Petchey 2015). Large-scale field monuments such as the Western and Atlantic Walls, and more recently the Berlin wall have also been excavated, along with tank traps and bunker systems (Theune 2018).

Health and safety is of paramount concern not only for archaeologists excavating in areas affected by modern conflict but also for local community members whose homes and livelihoods reside within the same locations. Often, land-mines, munitions, mortar and artillery rounds remain live long after the battles have ended. In France and Belgium, agricultural workers continue to die on an annual basis from live munitions (Fraser & Brown 2007; Moshenska 2008). When focusing on forensic investigations, at times, slain individuals are buried with live grenades with the intent to maim future forensic teams investigating war crimes. Other times, due to regime change, the security personnel protecting forensic investigators may have actually participated in, or been accomplices to the crimes being investigated, putting into question the forensic team's safety (Tidball-Binz & Hofmeister 2015).

2.2.7. Commemoration

In referencing sites of conflict with landscapes devastated from bombings, air raids or war in general, archaeologists metaphorically use the words "wound and injure" in order to place an emotional emphasis on the conflict and resultant destruction (Ballbe et al. 2007; Login 2013; Moshenska 2009: 49). The city and its populations represent the human body politic, and in essence, as the sites are restored, such as with Frauenkirche (James 2006; Moshenska 2015b), the wounds from human trauma and memory can also heal. This can be viewed as a process of forgetting and forgiving, or in some cases, a purposeful erasure enforced by the dominant party with the intent of creating social amnesia (Wilson 2011). The reverse, however, also occurs when sites of destruction are purposely conserved in a state of ruin in an effort to evoke raw emotions that will not allow one to forget their history. In Rwanda for instance, human remains from the Tutsi genocide are displayed in both mummified and skull and bone form, on the tables and floors of the former classrooms of the Murambi Technical School. This visceral display is meant to draw attention from an international audience (Bolin 2013; Giblin 2015). Conflict sites can also become sites of commemoration (Moshenska 2009: 51), while excavations can have the duel effect of either healing (Moshenska 2008, 2009) or re-

wounding (Elkin 2006). On one hand, re-wounding denies the traumatized the opportunity to forget, while on the other, the same artefacts can bring about a cathartic dialogue (Elkin 2006; Saunders 2004).

Operation Let's Dig!

Operation Let's Dig! is an example of a guerilla excavation project intended to bring to light the history of the Prinz-Albrecht-Strasse in Berlin. Between 1933-1945, this location was the home and offices of the Gestapo, the Security Service and the SS Reich leadership where the Nazi programs of persecution, oppression, forced labour and genocide were administered. The basement of the building contained cells where political prisoners and other state enemies were imprisoned, interrogated and tortured by the Gestapo (Bernbeck and Pollock 2007; Moshenska 2008, 2010: 41-43). In 1945, the Allied bombs and Red Army shells greatly damaged the area where many of the buildings were eventually demolished in the 1950's. Although the structural integrity of the buildings was the official excuse used to condemn many of these buildings for demolition, others with less dark histories and similar structural integrity were spared. This led to the subsequent dominant historical narrative of social amnesia imposed on the landscape. In 1957, redevelopment proposals were put forward to reinstate Berlin as a modern international city, but were quickly muted by the construction of the Berlin Wall in 1961 (Moshenska, 2010: 42). Again in 1982, the Social Democratic Party proposed an architectural competition to design a memorial to the victims of fascism on this site, however, in 1984 the new right-wing Christian Democratic Mayor cancelled the commemoration project (Moshenska, 2010: 42).

Operation Let's Dig! took place on May 5, 1985, when a group of frustrated protesters removed turf, topsoil and rubble from the site of the Gestapo prison buildings. Although trained archaeologists were not present, the protestors included former prisoners of the Gestapo held in these buildings. The dig deliberately took place at 11 am on the 40th anniversary of the Russian conquest of Berlin. The premise for the protest and subsequent dig operated under the slogan "Grass Must Never Be allowed To Grow Over It" and "The Wound Must Stay Open" (Moshenska 2010: 42). The following year, an authorized excavation took place, the Gestapo detention cells were uncovered, and an interpretive centre was built to host the exhibition, entitled *The Topography of Terror* (Bernbeck and Pollock 2007; Moshenska 2015a: 77).

2.2.8. Curated Ruins of Clean and Dirty Sites

There exists an unusual category in conflict heritage in which the memorials are presented in “clean or dirty” states. Clean sites have the rubble and debris from disaster cleared away, whereas the dirty sites do not – they are conserved as is. Dirty sites are intentionally maintained in a *freshly ruined state* (Moshenska 2015b: 78-81). The decision to conserve a site as “clean or dirty” is largely dependent on the conservators, or more specifically the stakeholder community’s political message (Meskell 2002; Moshenska 2015a:78; Uzzell and Ballantyne 2007). Two examples will be discussed below.

Oradour-sur-Glane

Oradour-sur-Glane, a town in France where 642 townsfolk were massacred by the Waffen-SS as punishment for resistance activity during WWII is an example of a dirty site. The men were taken into barns, shot in the legs to immobilize them and then burned alive. The women and children were locked in the town’s church and burned alive. The town was left *as is* and never rebuilt by the few surviving inhabitants who later constructed a new town nearby (Polomares 2015; Stone 2004: 131-144). A memorial was erected next to the town’s cemetery that incorporated some of the burnt remains of the victims. The town site was largely left intact and swiftly became a national memorial site after the war. The Gaullist parties, for both political demonstrations and rallies, used the site to remind France of the brutality that the German occupation inflicted on its French citizens (Moshenska 2015b: 85-87).

Discrete plaques were erected outside of various homes offering insight into the deceased occupant’s names and livelihoods and a small museum was also erected to display the more fragile personal items. In 1999, with continuing erosion and decay, calls for a new memorial began. A new memorial centre was built and the site was conserved *to the best possible state of ruin*. The walls of heritage buildings were repaired and stabilized, but not dramatically altered. For example, blood stains on the walls were left in order to retain the visceral and emotionally charged experience that struck the surviving inhabitants as they returned home on that dark day (Moshenska 2015b: 85-87; Stone 2004).

Frauenkirche

At the end of WWII, Allied forces dropped thousands of tonnes of explosives and bombs around the city of Dresden killing 20,000-30,000 in their wake. Frauenkirche, the church, has since become the symbolic representation of the bombing of Dresden (James 2006: 244-249). As the political narrative of Germany evolved, so did the state of Frauenkirche. For many years it was conserved as a dirty site and later reconstructed as a clean site. It was initially considered a “dirty ruin,” as the site was purposely kept in its original state of disrepair by the government, to remind its citizens of the brutality induced by the capitalist allies – Britain and the United States (U.S.). However, the 1990’s brought re-unification and with it, the reconstruction of monuments began as a symbol of the new German identity. Frauenkirche became the central focus and the country’s most profiled monument. Fundraising efforts began and donations came from supporters in Britain and the U.S. A U.S. Airman involved in the air strike made a generous donation, while the son of an RAF pilot created and donated the cross that would later sit atop the newly restored church. This rejuvenation placed a political focus on the post-nationalist perspective of a “new” Germany – a nation that could once again be proud of its identity (Moshenska 2015b: 82-85).

2.2.9. Counter Monuments

Victors build monuments to commemorate their conquests while victims build monuments to commemorate their suffering. Unique to contemporary discussions are monuments erected by the perpetrators – the *mea (memorial) culpa* built in an effort to recognize past atrocities. These events would include the genocide of the First Nations in North America, the abuse of Africans during the world slave trade, and Holodomor where Ukrainians were starved to death (Bach 2009). In Germany, national, government sponsored Holocaust memorials are built in almost every city in an effort to acknowledge their dark history (Young 1992). On the surface, monuments are intended to symbolize or memorialize historical events, but their true meaning is contingent on the intent of the stakeholder community. The stakeholder community can help a community acknowledge and forget, portray an alternate narrative for future generations, or neutralize and white-wash an event from history (Moshenska 2010b).

It is argued by many that monuments displace memory. “In shouldering the memory-work, monuments may relieve viewers of their memory burden” (Young 1992: 273). Hence, building monuments may have the opposite effect intended by memorializing events, they erase and allow one to forget. In addition, the monument’s design may guide the viewer’s contemplations on a predestined course, often intended to foster amnesia and allowing the perpetrators behind the monument’s creation to move forward into newly defused territory. Since monuments do our memory-work for us (Young 1992: 274), counter monuments accomplish the opposite; they should promote dialogue and force communities to continue to recollect past traumas in an effort to never repeat such atrocities.

Germany today, erects memorials to acknowledge its past atrocities and remember the victims of the crimes that occurred at its hand and thus, monument competitions have become commonplace in an effort to create open dialogue involving the general public. Consequently, anti-fascist and Holocaust memorials have faced immense scrutiny pertaining to their artistic, historic and ethical portrayals.

In June 1989, Gerz and Shalev-Gerz were contracted to create a counter-monument against Fascism in Harburg, Germany (Young 1992). The intent with the anti-Fascist counter monument was to not only distinguish the current generation from the Nazi soldiers of recent history, but also to create a monument that forced one to remember by opposing the original intent of a monument; to dictate what one should learn from the monument. The city offered a park setting for their monument; however, they declined and instead opted for a more central location within the city to build their “eyesore” (Cols 2015; Young 1992: 274). The counter monument was a twelve-meter high, one-meter square pillar built out of hollow aluminum and plated with a thin layer of lead. A steel-pointed stylus was attached at each corner of the structure to autograph one’s name. After one and a half meters of monument were filled with signatures, the monument would incrementally descend into the ground. The more active the participation and the more signatures acquired, the quicker the monument would descend. The monument reads:

> We invite the citizens of Harburg and visitors to the town, to add their names here to ours. In doing so, we commit ourselves to remain vigilant. As more and more names cover this 12-meter tall lead column, it will gradually be lowered into the ground. One day, it will have disappeared

> completely and the site of the Harburg monument against fascism will be empty. In the end, it is only we ourselves who can rise up against injustice [Young 1992: 274].

After the gradual lowering of the monument over a period of four to five years, only the top surface of the counter monument would remain with the inscription, "Harburg's Monument against Fascism" (Young 1992: 276), the idea being that once the monument has disappeared, the local population and visitors would once again be forced to remember and take up the plight from memory again.

Gerz and Shalev-Gerz' counter monument goes against every convention intended by mainstream monumental commemorations. It is not intended to "console but to provoke" (Young 1992: 277). It will not remain a permanent fixture on the landscape, nor does it sit camouflaged from visitors, but forces interaction. And most importantly, it does not retain the memories of, and neutralize the evil, from Germany's past atrocities. Instead, it "throw's it back at the town's feet" for the public to once again deal with (Young 1992: 276).

2.2.10. The Archaeology of Neutrality

Until recently, modern conflict archaeology has focused on belligerent states and places of conflict. Neutrality is an important concept "in the political landscape of global conflict and acknowledges that neutral countries have different rights and obligations in relation to belligerent nations, when properly observed should result in a different experience of global war" (Ross 2012: 11). At the turn of the twentieth century Sweden introduced a policy of neutrality (Axelsson et al. 2018) followed by Belgium (WWI), Holland and Denmark (WWII) and Switzerland (both WWI and WWII). However, due to attacks on Belgium, Holland and Denmark, Switzerland maintained a defensive strategy of "*armed* neutrality" during both wars (Hallbrook 1998).

Resistance is a concept that can be examined through an archaeological lens. This is especially true since declaring one's neutrality is only a necessity where a nation risks being drawn into conflict. Ross' thesis on the archaeology of neutrality, focused on the landscape of Switzerland's armed neutrality and proposed that the examination of the material culture record should not be limited to sites of conflict from belligerent states and can extend beyond this to include battle free zones. Her thesis provides insight into

the human experience of conflict within the idea of armed neutrality (Ross 2012). In a similar vein, archaeologists in Sweden contributed to the nation's heritage dialogue and added a new dimension to Sweden's Cold War history by examining the former air force command center, *Command Centre Bjorn*. The center was a military installation constructed as part of Sweden's defence efforts during the Cold War (Axelsson et al. 2018).

2.2.11. Archaeology of Perpetrators

Bernbeck and Pollock (2007: 219) take a unique approach in which they put forward several issues with an identity-based archaeology: the archaeology of the oppressed or disenfranchised. First, focusing on the disenfranchised in the archaeological record is an often-paternalistic endeavor, since "giving voice" lends itself to "speaking for" an already silenced group. Second, focusing on identity in the archaeological record emphasizes the stability of a group through time when in actuality, a group's identity is never static. Third, the use of identity archaeology can be abused in an effort to oppress a group in the present with justifications stemming from the oppression of another group in the past. Finally, archaeology used for identity claims allows it to fall into the trap of commodification since "the past can be owned" (Bernbeck and Pollock 2007: 219; Comaroff 2009). Furthermore, Bernbeck and Pollock inculpate activist archaeologists of being one sided, while ignoring the sites, material remains, and stories of the oppressors, the perpetrators. By ignoring the material cultural remains of the oppressors, their specifics become forgotten. Hence, they propose that an archaeology of perpetrators should complement the archaeology of the disenfranchised by bringing attention to the tyrannical acts of the dominant class.

Bernbeck and Pollock (2007: 221-224) delve further into the *Operation Let's Dig!* excavation and note that the guerilla excavation and subsequent exhibit, the "Topography of Terror," have focused on the perpetrators and not the victims. The excavation and exhibit have done so by displaying documentation that spurs independent thought in lieu of emotionally appealing to, and instructing the reader as to what they should learn about the victims. The intent of the exhibit is to shame the persecutors. In addition, the buildings have been left *as is* and have not been rebuilt since the post war razing, consequently leaving the site as a "dirty site." It is not a memorial to the victims, but instead a public shaming of the perpetrators, since those

involved in the project felt strongly that a memorial would allow for emotional closure to occur where it never should.

2.3. Discussion

The contemporary nature of MCA requires archaeologists as public figures, and stewards of the past, to fulfill their ethical responsibilities (Hodder 2012). With politics taking centre stage in this type of archaeological work, an examination of the ethical implications of the politics of fieldwork, as well as partnerships with local populations, descendant populations, and other stakeholder communities, becomes paramount (Hodder 2012; Zimmerman et al. 2003). In this vein, an ethical critique has moved away from *codes of best practice*, to explorations of the situated effects of the discipline (Hodder 2012; Meskell 2005). Organizations such as the World Archaeological Congress have created a public mandate of social justice "that seeks not only to instantiate a model of best practice but to go beyond in terms of reparations and enhanced livelihoods, to make a positive, felt impact for the communities within which archaeologists work (Hodder 2012: 217).

Today, there are many stakeholder communities (government agencies, victims, descendants of victims, museums, local community members) involved in investigations, research and conservation of sites of conflict. Their involvement affects the way in which research is approached, undertaken, interpreted and presented, and politics play an important role for many aspects of the investigations. Applying a critical theoretical lens reminds the archaeologist that archaeology is never politically neutral and one's research focus must always challenge the dominant class and bring to light their offences in support of the oppressed.

A critical archaeologist must always ask: "scholarship for whom?" (McGuire et al. 2005: 368). Critical theory in archaeology today shares the common lens of Horkheimer's emancipatory approach. An activist or emancipatory archaeology followed by critical theorists, emphasizes the importance of praxis – the dialectical inter-relating of knowledge and critique of not only the social world, but also from one's research. It is the movement from thought to action, or praxis, that separates all critical theorist-based archaeological approaches from non-critical approaches (McGuire et al. 2005), and it is only through praxis that social change in current society can truly be achieved. Nicholas

so aptly writes, “for any type of archaeology we do, we always ask ourselves why we do archaeology, for whom we do it, and how best can it be done?” (2012: 218).

2.4. Conclusion

Today, modern conflict archaeology broadly comprises the intricacies and complications of conflict and the inherent aftermath of the 20th and 21st centuries, and importantly, conflict resolution through archaeological praxis (Hodder 2012; Perring and van der Linde 2009: 197-213; Saunders 2012: xi-xiv; Saunders and Cornish 2017: iii).

Critical theory in archaeology lends itself well to modern conflict archaeology since praxis works best when there is a contemporary group that shares a marginalized historical narrative with an oppressed group in the archaeological record. Intrinsic to war are the transgressors and victims whose historical narrative is often re-written through the lens of shifting political regimes. Hence, the need to speak out against such injustices becomes the onus of society, and the field of archaeology can thus greatly contribute to social justice. It is this knowledge that will enlighten society so that it may rise up against historical, ongoing and future injustices.

Chapter 3.

The Materiality of Mental Health at the Morrissey WWI Internment Camp

Civilian prisoners of war (PoWs) imprisoned on Canadian soil existed in a liminal state as neither combatants captured from the front lines nor civilians who had committed crimes. Although not considered criminals, they were still regarded as enemy aliens and consequently were both spatially and psychologically displaced from the routines of daily life (Proctor 2010). The process of internment forcibly severed the civilian PoWs' ties with their past, their contact with family and free society, and importantly, their knowledge about the war's progress (Becker 2004).

Due to the blurred boundary between civilian and military PoWs, unique to Canadian WWI internment camps (Kordan 2002; Proctor 2010), it is important to examine the effects of institutional confinement as it applied to broad categories of prisoners. Institutional confinement is a broad term covering numerous categories of imprisonment, of which prisons, civilian or military internment camps, refugee camps, and staging camps are just a few. The imprisoned in each of these institutions share similar experiences with regard to coping mechanisms under stress and thus offer a unique lens through which to examine mental health. This helps shed light on the effects of internment, especially for the mental health of this unique group of civilians.

Material culture—in this study, specifically trench art—examines the relationships between landscapes, buildings, art, and artefacts incorporated into our daily lives. According to Saunders (2016:14), trench art is regarded as "any item made by soldiers, prisoners of war and civilians, of war material directly, or any other material, as long as it and they are associated temporally and/or spatially with armed conflict or its consequences." These relationships shed light on not only the individuals who created the material but also the society and environment in which they live, since these relationships are characteristic of culture. The material holds no cultural value without a specific relationship, but when the latter arises, even the most unassuming object can no longer remain neutral or passive (King 2010:7). This paper uses the material culture record at the Morrissey WWI internment camp as a point of access to examine the

coping strategies adopted by PoWs to help mitigate mental health issues triggered by confinement.

3.1. Morrissey Internment Camp

The town of Morrissey is located in the Elk Valley, southeastern British Columbia (BC), Canada. The internment camp was in operation from September 28, 1915 to October 21, 1918 and was one of 24 internment camps that housed a total of 8,579 immigrants from the multinational Austro-Hungarian, German, and Ottoman empires, as PoWs on Canadian soil, and for almost two years after the end of WWI. Many of these prisoners were civilians and a few were even Canadian born or naturalized British subjects. As the number of internees increased, prisoners were divided into first- and second-class groups based on nationality. Germans were considered first-class prisoners and were held in close confinement while Ukrainians and other Europeans from the Austro-Hungarian and Ottoman empires were considered second-class prisoners and placed in labour camps. The first internees at the internment camp in Morrissey were coal miners from the latter category.

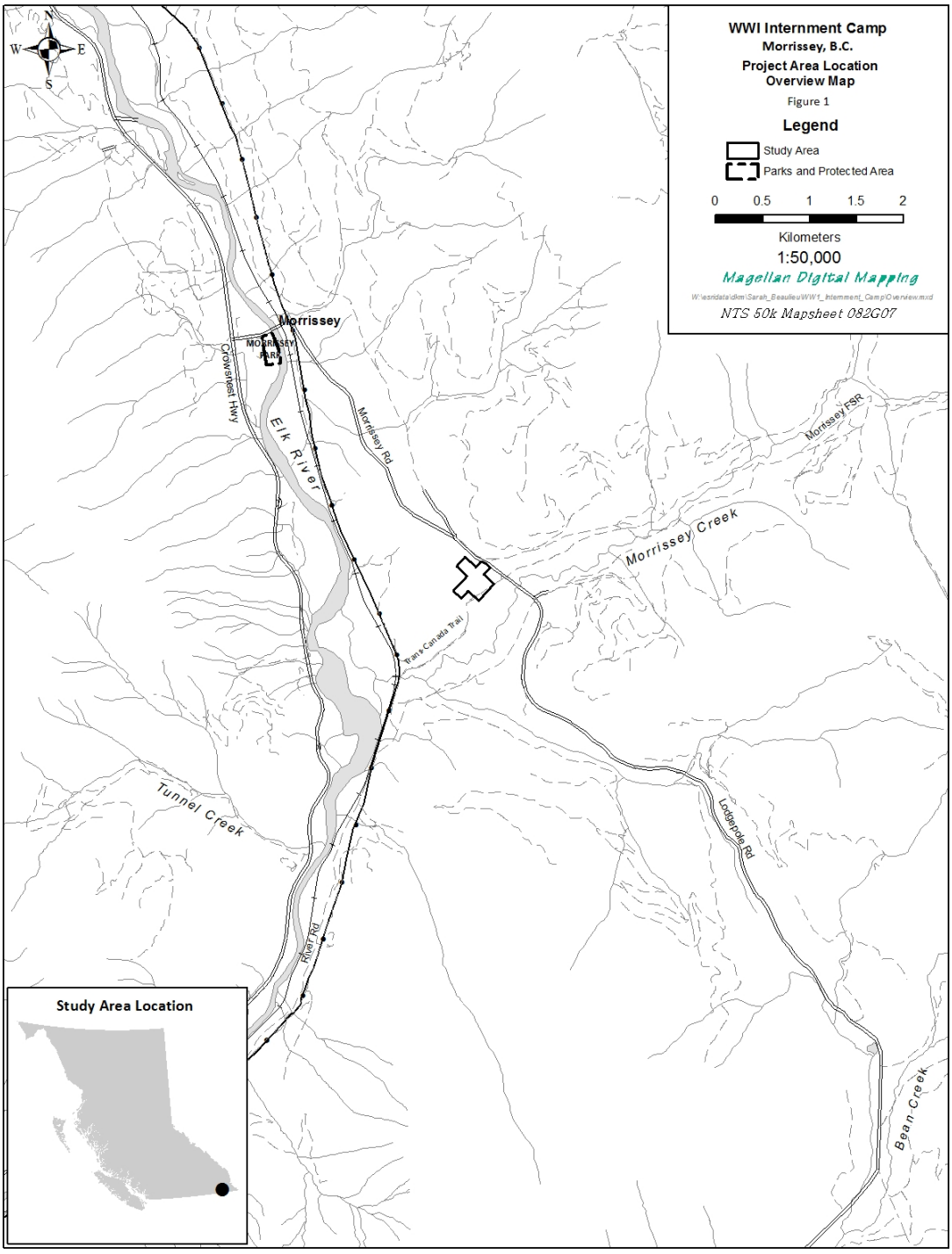

Figure 3.1. Morrissey Internment Camp Site Location Within British Columbia.
Note: Map courtesy of Magellan Digital Mapping.

The stirrings of internment initially began in the Fernie area where unemployment rates were high. The Coal Creek miners went on strike on June 8th, 1915 refusing to work with the enemy alien. The strike continued on June 9th and a telegram was sent to William Bowser, B.C.'s acting premier while Premier McBride was visiting Britain. Bowser responded by announcing that the provincial government would begin interning all unmarried German and Austro-Hungarian miners as well as married men whose families remained in Europe. Fernie's ice rink became the temporary location of the internment camp and Bowser announced that the purpose of interning the German and Austro-Hungarian coal miners was to increase employment opportunities for deserving men as well as to return the communities to their early peaceful ways (Norton 1998:69).

The Federal government considered the Fernie internment camp, set up by the provincial government, illegal since the local German and Austro-Hungarian coal miners were not regarded as a threat to national security. However the miners at Hillcrest, Alberta, followed the Fernie coal miners actions and on June 15th began to strike. Fearful of any disruption to the wartime coal production, the Federal government took over the Fernie internment camp and brought it under the umbrella of Canada's first national internment operations. Morrissey was an abandoned coal mining town, 14 km outside of Fernie and proved to be an ideal location since the unoccupied buildings could be leased from the Crows Nest Past Coal Company at a reasonable rate. Hence in September 1915, the internees initially housed at the Fernie ice rink were transferred to the permanent internment camp in Morrissey (Beaulieu 2015).

In 1916, Canada was experiencing a labour shortage due to a dire need for soldiers overseas. This lead to the parole of many of the prisoners who were then permitted to work for private businesses, railway companies and all levels of government (municipal, provincial and federal) at a fixed rate of pay comparable to a soldier's wage. General Otter noted that this benefited "organizations short on labour," especially since the newly paroled internees fixed rate of pay was significantly less than what they would have been able to earn as private citizens. In addition, any insubordination or work refusal could result in re-internment (Luciuk 2001). As a result, numerous internment camps across Canada began closing in 1916 and the remaining internees were amalgamated into the remaining camps, the German prisoner population increased at Morrissey, and it reverted to a confinement camp. Despite this reclassification, Morrissey staff were notorious for their mistreatment of the internees. The Consul of Switzerland

Samuel Gintzburger, responsible for overseeing the treatment of PoWs in Morrissey, submitted an inspection report directly to his government noting that the internees were provided with food of lesser quality than those served in criminal institutions. He also addressed the question of forced labour in the camp as well as the poorly heated rooms in the Big House during the harsh winter months (RG 6 Vol. 765, File 5294). In fact, Canada received several *notes verbales* from Germany, reminding the Canadian government that retaliation would be swift toward Canadian and British PoWs in Germany should conditions at Morrissey not improve (Luciuk 2001; Norton 1998).

The majority of the prisoners in the Canadian internment camps were civilians, a fact that "exposed the problems of the civil/military divide, creating categories of people who did not fit neatly into either" (Proctor 2010: 205).The Dominion Canadian government was a signatory to the 1907 Hague Convention, a set of international rules established to ensure the proper treatment of military prisoners in times of war. Canada required a means to fund the internment operations; extracting labour from the prisoners became a method for doing so (Francis 2008; Morton 1974; Waiser 1994). The Hague Convention of 1907 stipulated that military personnel could labour for the country of their capture if the work did not benefit the war effort. The War Measures Act of 1914 provided the Canadian government with extensive power to maintain security during times of war (Kordan 2002: 53, 54; Minenko 2018). For example, orders-in-council, pursuant to section 6, provided the government with unlimited authority as long as it was considered necessary for the nation's security, defence, peace, order, and welfare during a real or apprehended war, invasion, or insurrection (Minenko 2018; Mark Minenko, personal communication 2019). The order-in-council of October 28, 1914, provided the government with the authority to intern civilians and classify them as PoWs, pursuant to P.C. 2721 (LAC, Department of Justice Files, 770/15). Labelling civilians as PoWs appears to be unique to the Canadian experience and caused much upheaval with the civilian prisoner population (RG 24, Vol. 4661). Many protested the PoW label and instead self-identified as "civil" prisoners of war as noted on headstones in the Morrissey internee cemetery.

As the war progressed, morale declined in the camp, as evidenced by government documentation noting Morrissey prisoners sent to the provincial psychiatric institution Essondale Hospital, later known as Riverview Hospital, beginning in 1917 and 1918 (AGWMA Report 1917–18). In response, the Young Men's Christian Association

(YMCA), a non-profit Christian organization, began providing aid to help boost prisoner morale. This included establishing a schoolhouse in which PoWs taught courses in arithmetic, bookkeeping, carpentry, English, French, Spanish, freehand drawing, higher accountancy, and motor engineering. In December 1917, 119 PoWs had signed up to partake in these courses. The YMCA also provided reading material for the prisoners, which arrived late in 1917, less than a year before the camp's closure (RG 6 Secretary of State Vol. 5348 Part 1 YMCA 1917–18). Prior to this, between 1915 and 1918, prisoners busied themselves with camp labour, entertainment through the PoW orchestra, gardening, and collecting and creating arts and crafts (Norton 1998).

3.2. Research Methods

Upon its closure and according to government records, the camp was completely dismantled (Morton 1974). Hence, at the start of the excavation that forms the basis of this study, there were no surviving structures on the forested landscape, with the exception of the visible footprint of the second-class PoW building. Fieldwork involved surveying, mapping, the deployment of a ground penetrating radar (GPR), and excavation within the grounds of the internment camp. A walking traverse of the site along with surface collections of archaeological material were conducted, in addition to the use of maps, aerial photographs, remote sensing methods such as a metal detector, and GPR. Shovel and auger tests were conducted at five-meter intervals, and sub-surface anomalies were recorded, with excavations taking place where concentrations of anomalies were noted. This allowed for the location of the first- and second-class prisoner compounds, the prisoners' living quarters, the exercise yard, and the privies, as well as the camp canteen and several building footprints of the guards' quarters. Once these were located, one- and two-meter excavation units were placed at the locations of the German first-class prisoner living quarters and the camp canteen, on the guards' side of the camp. Units were also placed inside the second-class compound in the living quarters known as "the Big Building," as well as the escape tunnel and two privies. Screening was conducted through quarter-inch mesh, and the artefacts from each unit confirmed the identification of each location in the camp.

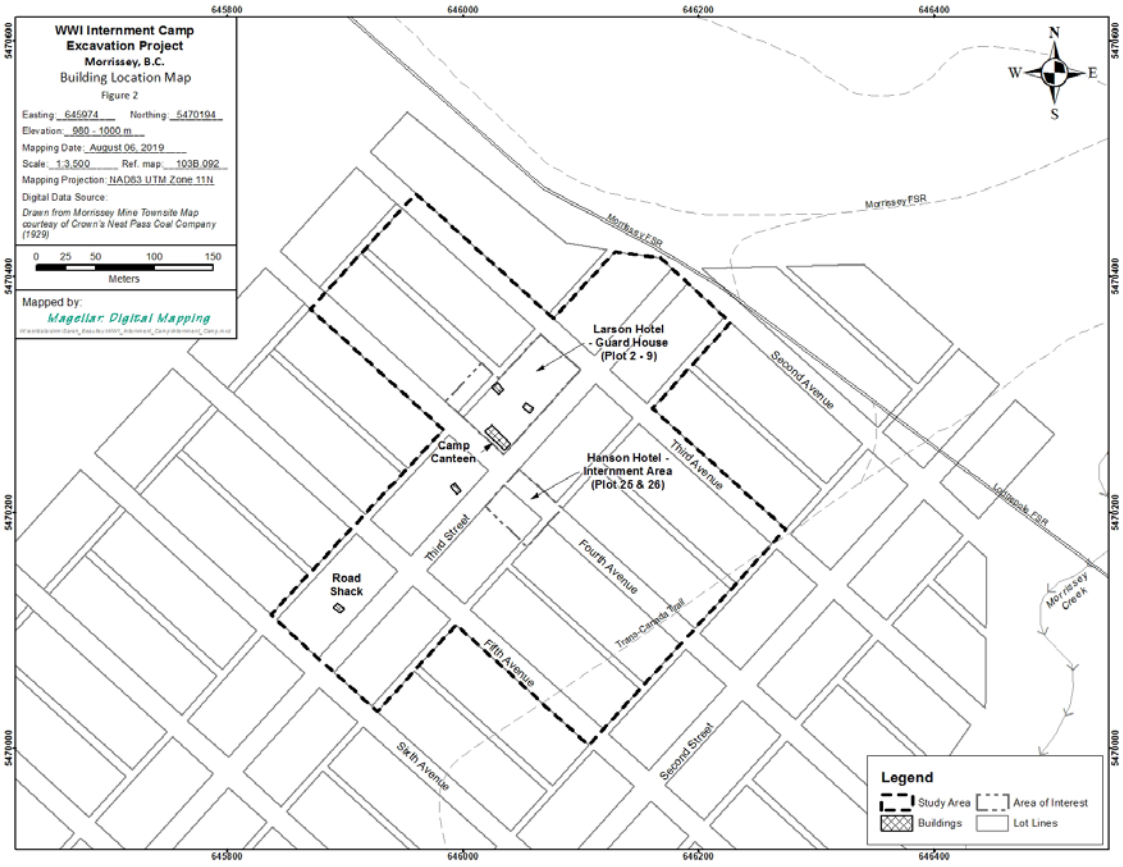

Figure 3.2. Map of Morrissey Internment Camp Site Location Within the Context of Morrissey's Abandonned Mining Town.

Note: Map courtesy of Magellan Digital Mapping.

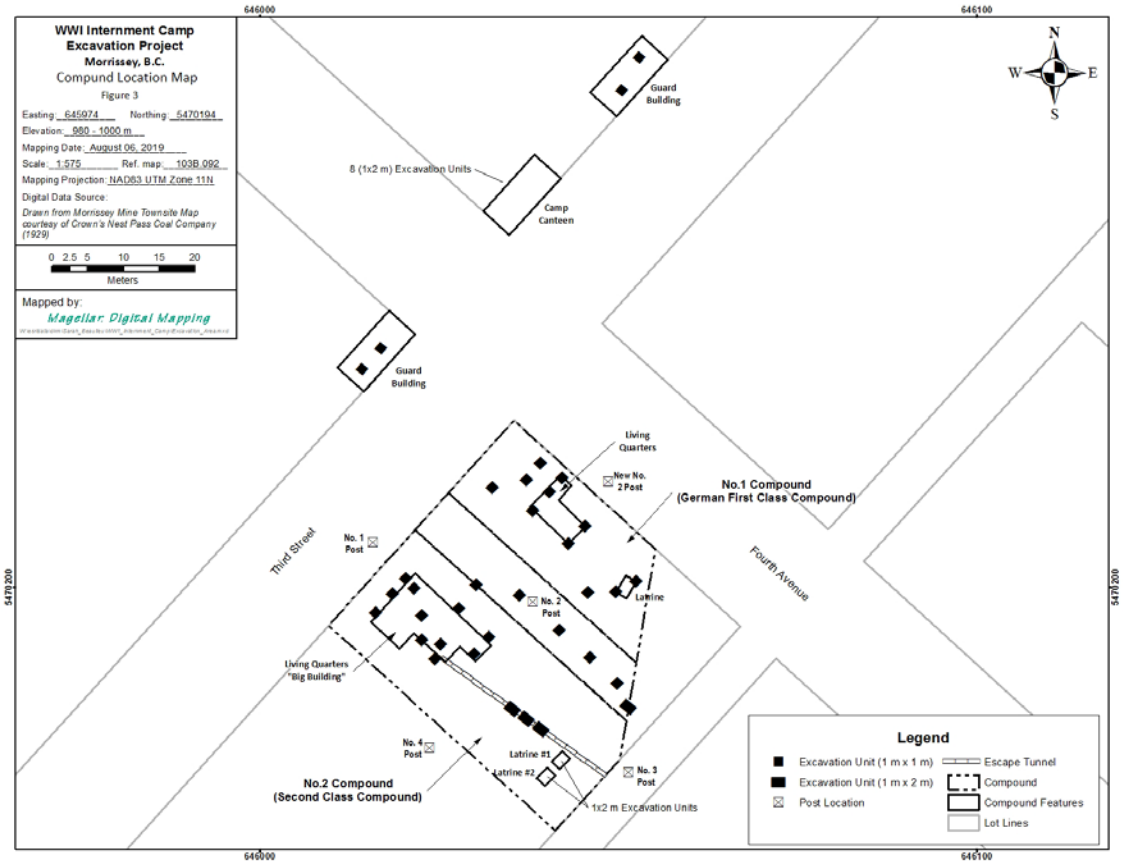

Figure 3.3. Map of Morrissey Internment Camp Excavation Area.
Note: Map courtesy of Magellan Digital Mapping.

3.3. Mental Illness and Confinement

One of the earliest connections between captivity and mental illness was recorded in the mid 19th century when the term “doolally,” a common adjective for madness, was coined (Jones and Wessley 2010:165). In 1861, the British army had set up a base and sanatorium in Deolali, Maharashtra, India. It served as a transit camp for soldiers returning from their deployment and awaiting passage back to Britain. Since troop ships sailed only between November and March, the summer months proved long for soldiers waiting to return home and confined to the camp. Soldiers who began to behave strangely were diagnosed as having the “doolally tap,” *tap* being the Urdu word for fever. There was no mention of this beyond the Deolali base in India, as the correlation with mental illness was interpreted as related to extreme heat and not confinement (Jones & Wessley 2010:165; Richards 1936:73–74).

Traumatic neurosis in PoWs was studied during WWI, but research acknowledging the lasting traumatic effects of warfare was extremely limited at the time. Researchers believed that although captives suffered trauma during incarceration, the after-effects were negligible (Jones & Wessley 2010:163). German psychiatrists and British physicians studied the mental health of PoWs in their respective camps and noted very few cases of neurosis amongst PoWs. This likely correlated with the conventions of war; imprisoned soldiers considered themselves combatants and therefore morally obligated to escape. Conceding to depression or anxiety would have been equivalent to surrender (Wilkinson 2017). However, the post-war medical records of British veterans revealed lasting psychological symptoms. Doctors reported that repatriated veterans suffered from neurasthenia and disturbances in their heart activity. This came as a surprise to the medical community, which had thought that while shell shock affected combatants directly in the field, captivity protected soldiers from neurosis (Jones & Wessley 2010:167).

3.4. Barbed-Wire Disease

Bing and Vischer (1919), who were among a small group of researchers supporting claims that poor mental health resulted from captivity, were responsible for coining the term “barbed-wire disease.” Studying British prisoners interned in neutral Switzerland, they identified symptoms of neurosis specific to captivity that were unique and distinct from shell shock. This new form of “neurasthenia” was characterized by mental exhaustion, intellectual instability, irritability, poor concentration and memory loss, triggered by confinement, monotony, and lack of privacy.

> The treatment of prisoners (in the stalags) has but little influence on their mental condition. Brutal treatment does not produce the disease, neither does good treatment prevent it. Even a beautifully situated camp is not preventative. . . . The disease is not cured by mere release from imprisonment (Vischer 1919:3).

However, the correlation between captivity and mental illness only began to be taken seriously after WWII, when repatriated officers with exceptional records were being redeployed and rates of disciplinary incidents began to rise (Jones & Wessley 2010:163). Late 20th-century retrospective studies of veterans held as PoWs during WWII further supported the connection between captivity and mental illness, what is now termed post-traumatic stress disorder (PTSD) (Engdahl et al. 1997; Speed et al. 1989).

Similar to PoW camps, prisons, holding centres, detention centres, and refugee camps have also proven to be catalysts for mental illness. Individuals incarcerated in prisons experience four types of loss: freedom, sense of reality, sensory experiences, and identity (Lengfelder et al. 1993:14). A systematic review of 100 case studies of 33,000 European prisoners confirmed that one in seven had major psychosis or depression related to the experience of loss (Fazel et al. 2016). Asylum seekers placed in holding centres for long-term detention exhibited significant levels of psychiatric symptoms, such as despair, sadness, insomnia, severe anxiety, and intrusive memories of traumatic experiences. After 30 days of detention in the United Kingdom, 76% of asylum seekers were found to be clinically depressed. After five months of detention in the United States, 86% of asylum seekers were found to have clinical depression, 77% clinical anxiety, and 50% clinical PTSD (Keller & Rossenfeld 2003). Similar findings of depression and anxiety have been found in refugee camps (Silove et al. 2017).

3.5. Coping Strategies

Coping mechanisms are conscious, voluntary efforts to mitigate stressful situations. Lazarus and Folkman (1984:23) define coping as “constantly changing cognitive and behavioural efforts to manage specific external or internal demands that are appraised as taxing or exceeding the resources of a person.” The subjective nature of stress impact must also be acknowledged, since what is traumatic or stressful for one individual may be neutral for another (Mohino et al. 2004). There are two forms of coping: problem focused and emotion focused. The former applies problem-solving strategies to mitigate stressful relationships between the individual and their environment, while the latter attempts to decrease emotional stress through avoidance, minimization, distance, selective attention, and the application of positive values to negative events (Iwasaki & Schneider 2003; Lazarus & Folkman 1984; Mohino, Kirchner & Forns 2004).

Some researchers also bring a process view to coping, which involves identifying distinct stages of coping over a defined time period. An early experiment with infants, in which mother and infant were separated to observe the child’s behavioural and emotional reactions upon reunion, noted that the infant proceeded through three stages of coping: protest, despair, and detachment. These three stages were acted out in an effort to mitigate the stressful experience (Main 1977:642). Frankl (1984:46–48)

identified similar stages of coping over time in prisoners entering Auschwitz. The period following admission was filled with shock. Once the prisoner became exposed to the horrors of camp life, apathy and numbing of emotions took over. Those who survived internment often combatted bitterness and emotional detachment, therefore, concerted efforts were required to reawaken one's capacity for empathy.

Numerous environmental factors affect prisoners' physiological and psychological health (Ursano & Rundell 1995:433). Physiological stressors include crowding, diarrhea, epidemic diseases, exhaustion, forced labour, infectious organisms, injuries, medical experimentation, nutritional deprivation, sleeplessness, torture, weather extremes, and wounds. Psychological stressors include boredom, close long-term affiliation, confinement, danger, family separation, fear, guilt, humiliation, isolation, terror, threats, and unpredictability. The character and disposition of PoWs are directly correlated with their adaptability and coping strategies and therefore their mental health during confinement. Personality flexibility increases the chance of adaptability and survival, while rigidity does the opposite (Ursano & Rundell 1995:434).

3.6. Leisure and Recreation

Studies show that recreation and leisure activities help individuals cope with stress and contribute to positive outcomes and well-being (Caldwell 2010). The specific type of leisure activity (active, passive, social, or solitary) also plays an important role in prevention of and recovery from stress (Pollanen 2015:86). Historically, most prison institutions have had various forms of recreational programs (Lengfelder et al. 1992:13). The primary objective of institutional recreational and leisure activities was and continues to be social control—to keep prisoners busy, relieve boredom, prevent uprisings, and discourage escape attempts. However, it also helps with the neurosis, ennui, and depression that affect many incarcerated prisoners (Lengfelder et al. 1993:13; Mohino et al. 2004; Ursano and Rundell 1995). During institutional confinement, recreational and leisure activities benefit prisoners by elevating morale, helping them acquire new skills, increasing their physical activity, and negating the effects of daily monotony and boredom (Lengfelder et al. 1992:13). Such activities can lead to relaxation, compensation, escapism, and independence and thus have the potential to significantly reduce prisoners' stress and aid in restoring self-esteem, keeping it continuous with their identity prior to incarceration. These activities can also

aid with individual growth and the development of healthy new perspectives, as well as preventing mental health problems and detrimental physical ailments that can arise during incarceration (Iwaski & Schneider 2003).

Institutional mental health can be examined through the archaeological study of asylums (Casella 2007; Coleborne 2001; Psota 2011). However, very few have studied the material culture of mental health as it pertains specifically to internment camps (Carr 2011; Mytum 2013). Mytum (2013) first applied the universal coping mechanisms proposed by psychiatrists Ursano and Rundell (1995) to Cunningham's Camp, a WWI internment camp in Britain. The coping mechanisms proposed were skills, traits, and means, both human and material, applied in an effort to develop and maintain positive outcomes during times of stress (Bandura 1981). I will apply the applicable categories to the material record of the Morrissey WWI internment camp.

Table 3.1 Morrissey Internment Camp Prisoner of War Coping Mechanisms as Outlined by Ursano and Rundell (1995:436)

Categories	Artefact	Source or Location Excavated
Conscious Effort: Self-development Activities	Woodworking Files	Second-Class PoW Privies & Canteen
Conscious Effort: Self-development Activities	Swagger Sticks Miniature Farms Insect Collecting Ships in Bottles	Archival Photographs
Social: Group Activities	Board Games Musical Instruments	Archival Photographs
Conscious Efforts: Self-development Activities/ Social: Group Activities	Orchestra	Archival Photographs
Resistance	Nautical Life Ring Patchwork Quilt Toy Soldiers	Archival Photographs
Psychological: Fantasy	Paintings Paint Cans Paint Jars	Archival Photographs Escape tunnel
Conscious Efforts: Communication	Letter Writing Inkwells German Reading Material	Archives Second-Class PoW Privies
Emphasizing the Greater Good: Feeling Closer to God	Barbed Wire Cross	Second-Class PoW Privies
Conscious Efforts: Realistic Expectations	Chocolate Tins Cocoa Tins	Escape Tunnel

Categories	Artefact	Source or Location Excavated
	Syrup Tins Coffee Tins	
Conscious Efforts: Maintaining Self-Respect	Colgate Shaving Tin Moustache Comb	Second-Class PoW Privies
Conscious Efforts: Realistic Expectations	Chewing Tobacco: Edgeworth, Meerschaum Cigarette Tobacco: Capstan Navy Cut Pipe/Cigarette Tobacco: Velvet, Red Cap, Prince Albert, Tuxedo	Escape Tunnel Second-Class PoW Privies; Escape Tunnel, Big Building
Conscious Efforts: Resistance	Irish Clay Pipe Irish Flag (from a toy soldier)	Second-Class PoW Privy Second-Class PoW Privy
Conscious Efforts: Will To Live	Pharmaceutical Bottles Iron Tonic Bottles	First-Class Compound (503 g); Second-Class Compounds Privies (458 g), Canteen (286 g), Escape Tunnel (146 g) Second-Class Privy
Psychological: Dissociation	Beverage Bottles (Alcohol)	First-Class PoW Compound (324 g) Second-Class PoW Compound Yard (815 g) Second-Class PoW Privy 1 (17, 247 g) Second-Class PoW Privy 2 (3,326 g) Basement of Second-Class Living Quarters (218 g) Canteen (484 g) Escape Tunnel (191 g)

3.7. Material Culture and Mental Health at Morrissey

Arts and crafts provided a means of escapism, a conscious effort used to cope with the dreariness of institutional confinement. Being cut off from the outside world and not knowing how long the war would last or when release would come created great instability among PoWs. Importantly, as the YMCA did not begin providing aid until December 1917, the prisoners for a long time were left to their own devices to find ways to occupy themselves and stave off depression. Arts and crafts contributed in many ways: they ameliorated and dressed up personal space, and they could be sold to

generate income, traded to acquire other goods, and gifted to show gratitude (Carr 2011; Casella 2007; Myers and Moshenska 2011, 2013). Some of the prisoners were extremely talented woodworkers, as evidenced by archival photographs of handmade grandfather clocks, furniture, board games, instruments, toys, and walking sticks (LAC, RG 18, vol. 1769, part 53). Forty-two woodworking files were excavated from the second-class PoW compound privies and the camp canteen, where prisoners could purchase tools for their craft making.

Archival photographs show an entire miniature model farm constructed by PoWs, including a three-story mansion, farm stores, and barns. Model farms likely depicted homesteads continuous with the creators' past lives and would have kept "home" close to the heart. A separate photograph also displays a poultry house, an odd choice of buildings to construct. (Photo: [Morrissey Internment Camp, B.C.] ca. 1915–1918**:** Library and Archives Canada/Canada Department of Militia and Defence fonds/DSCN 8067). However, food was at the forefront of the prisoners' minds, and food complaints were numerous, as revealed in numerous prisoner complaint letters to the Swiss and American consuls (RG 6, vol. 766, file 5610). Although calorically the camp food was sustainable, it lacked variety. For instance, the Auditor General's report notes that prisoners were not supplied with eggs until 1917, and even then, only once monthly (Auditor General 1917, vol. IV, part ZZ). As further confirmation, a single rooster and no hens were noted in the faunal assemblage of the camp canteen, so the rooster was likely used as an "alarm clock" rather than for consumption (Bartlett 2018).

Swagger sticks, also known as walking sticks, were common, not only in Morrissey but in many other Canadian WWI internment camps, and several officers in archival photographs can be seen using them (RG 6, vol. 756, file 3380). Swagger sticks carved by PoWs are first noted in the historical record of the Boer War concentration camps (Woodruff 2014). Prior to WWI, non-commissioned officers in the British army carried swagger sticks when off duty, and they remained popular with the British army until 1939. However, after the start of WWII, the British army no longer wore uniforms off duty, so the sticks were no longer required as part of an off-duty uniform (Stein 1974).

Figure 3.4. Swagger stick made by PoW 189 at the Morrissey Internment Camp.
Note: Photograph courtesy of the Fernie Museum and Historical Society.

Carved swagger sticks and war souvenirs were advertised for sale in the *Morrissey Mention* newspaper (Aug. 26, 1916). A single walking stick (part of a pair) displayed at the Fernie Museum was initially gifted from PoW 189 to Mary Cavanaugh and her housekeeper, Beatrice Good (Figure 3.1). Hence, swagger sticks were no longer exclusive to military men but also used by civilians, including women. William Cavanaugh, Mary's husband, was a train engineer for Morrissey and would either have purchased the walking sticks for his wife and housekeeper or received them as a gift. The swagger sticks from Morrissey include the date and place of the carving, along with the intended owner. The snake motif was popular in Morrissey and the surrounding internment camps in Vernon and Edgewood. The swagger stick boasts a snake that wraps around the length of the cane, with head and tongue rising toward the handle. A Union Jack flag and a Canadian red ensign are above the snake's head, and a .303 rifle cartridge is below the tail (Fernie Museum 2018).

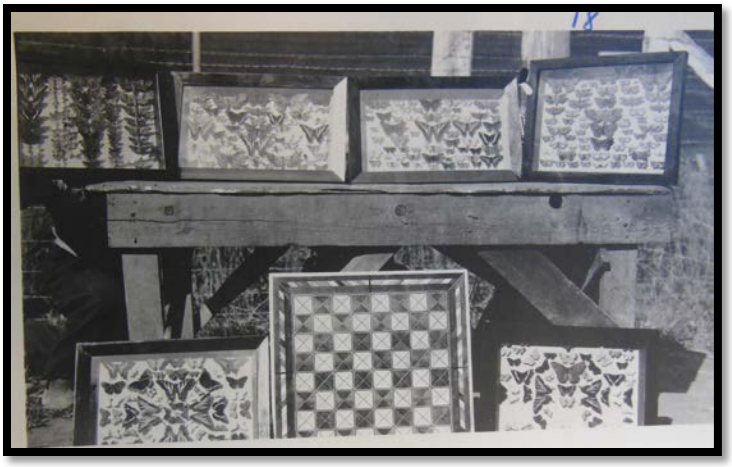

Figure 3.5. Morrissey PoWs' butterfly collections and handmade chess board.
Note: 1915–1918, DSCN 8065 LAC File R112 1966-088, NPC Box 03390, reproduced with permission.

Butterfly collecting was also a popular pastime in the camp (Figure 3.2), requiring one to two weeks per specimen to relax, pin, and mount (Drees 2017). Archival photographs show six frames containing hundreds of butterflies in each (LAC, RG 6, vol. 756, file 3380). A hobby that consumed large amounts of time, it was undertaken in other PoW internment camps as well. Letters to family in England document a WWI PoW in Switzerland requesting that his butterfly collecting equipment be sent to him in prison (Whitmarsh 2017). Graham Howarth, an entomologist from the London Natural History Museum and a PoW in WWII, had an extensive insect collection. "Howarth secretly preserved his collection of 1,115 butterflies, 347 moths and 100 other insects in cigarette tins and managed to smuggle it home after liberation in August 1945" (Marren 2015). Bug collecting was also popular with German PoWs at Fort Hearne in WWII (Waters and Long 2006:50).

A single known intact ship in a bottle survives from the Morrissey WWI internment camp. However, photographic evidence shows ships in lightbulbs were also made. Nautical themes were commonplace in the Morrissey camp and presented in a variety of media. In addition to ships in bottles and light bulbs were intricate model ships encased in special frames, paintings of ships, and a life preserver used to frame a painting of a ship (Figure 3.3). The ships inside the bottles and light bulbs may have represented freedom and escape, with the bottle representing the invisible barrier of captivity.

Figure 3.6. Items made by the Morrissey PoWs to pass the time. Note the ships in light bulbs, walking sticks, and ship paintings.
Note: 1915–1918, DSCN 8066 LAC File R112 1966-088, NPC Box 03390, reproduced with permission.

Figure 3.7. Items carved by the Morrissey PoWs to pass the time. Note the handmade violins.
Note: 1915–1918, DSCN 8064, LAC File R112 1966-088, NPC Box 03390, reproduced with permission.

The oldest surviving ship encased in glass dates to 1784. Seamen on long voyages initially built ships in bottles as a way to pass the time. The creation of ships in glass by prisoners of war dates back to the Napoleonic wars (Stammers 2013). Ships made in “bottles” only began to occur in 1860, due to the advent of mass bottle production. Matchboxes, fruit, scissors, decks of cards, padlocks, and rope knots in bottles were equally common during this period (Stammers 2013). They appear to have been extremely popular during both WWI and WWII internment in Canada. Their construction required relatively few materials, all of which were fairly easy to acquire. There was significant interest from many of the guards and civilians, so the PoWs had a market for selling or trading them. During WWII, the Canadian internment camps initially forbade the building of ships in bottles but relaxed the restrictions during the latter part of

the war. The internment authorities then allowed the internees to sell their handicrafts at organized arts and crafts shows and sales. After the German government cut off the PoWs' monthly allowances, these sales became their primary source of income (Michael O'Hagan, personal communication 2018).

Figure 3.8. Ship in a bottle made by a civilian PoW for an individual's great-great grandfather, whose homestead was near Morrissey. Private collection, Fernie, BC.

Note: Author's photograph, July 2014.

Ships in bottles appear to have been more popular in German internment camps during WWII and ships in light bulbs more abundant during WWI. Unique to Canadian WWI internment camps was the use of medicinal bottles instead of beverage bottles, likely due to the lack of clear glass, as the majority of the surviving beverage bottles excavated from the camp were dark green or brown whereas most medicinal bottles were clear (Figure 3.5).

Figure 3.9. Morrissey PoW Orchestra.
Note: Fernie Historical Society, 3888do, reproduced with permission. Courtesy E. Hollinshead, photographer, 1918.

Group and self-development activities can be observed through the archival record with photographs of board games, musical instruments, and camp orchestras (Figure 3.6). Boredom was extremely common in PoW camps and was problematic, as it could lead to depression and anxiety. Crafting could occupy many hours; ideally, PoWs would conceive of designs that would extend the life of the art piece beyond creation and display. Essential to this endeavour was the crafting of items that not only took a significant amount of time to build but also would further occupy time once they were created, such as games and musical instruments (Carr 2011:140). Archival photographs show chess games made out of wood, including boards inlaid with various types of wood. Some of the chessboards sat atop tables carved with ornate legs, drawers, and elaborate chess pieces (Figure 3.4). These would have provided escape not only while the prisoners were creating the intricate pieces but also when they were playing the games. Musical instruments were also carved out and built in the camp. Photographs note long-necked mandolin–guitar hybrids and violins. Guitars, snare drums, and stand-up bass instruments were ordered from a catalogue and purchased through the camp canteen (LAC, RG 6., vol. 756, file 3380). Musical instruments were also made at other WWI internment camps across Canada. The Canadian Museum of History (CMH) exhibits a handmade violin, carved by PoW John Melnick who was interned at the Brandon Internment Camp, (CMH exhibit no. CHH 3.1.1.4-AR01). Making instruments was used to pass the time, with some prisoners learning to play an instrument and others continuing to play an already learned instrument, all of which constitute conscious

efforts toward self-development. Mastering the technical skills to play an instrument would require daily practice, while joining the camp's orchestra would further one's repertoire, bring musical enjoyment, and contribute to a sense of camaraderie. In addition, the orchestra would then conduct performances for fellow prisoners and guards, bolstering camp morale.

Paint cans and glass jars still containing paint were excavated from the second-class compound privies and the escape tunnel. PoWs painted to improve the bleak surroundings of their living quarters. The paintings documented in the military records (RG 6, vol. 756, file 3380) depict commonalities within the scenery that were polar opposite from the realities of daily life: sailing vessels, water, footpaths, and non-native plants such as palm trees. Thoughts of freedom and far-off places, as well as longing for release and the liberty to walk freely, are clearly depicted. The largest archived painting shows a man and child walking on a path next to a river.

Inkwells were excavated from the escape tunnel and privies. Ink was used for letter writing and as part of the curriculum at the YMCA PoW school. Prisoners received and wrote letters to family and sent letters of complaint to the Swiss and American consuls. For the letters to be censored prior to being mailed, those not written in English required translation through the camp's designated interpreter, Constantino Baby (Auditor General Report 1917). This often caused long delays, so prisoners anxious to have their letters mailed quickly would write in English to avoid waiting in the long translation queue (RG 24, Vol. 4661). In a letter to General Otter, Sgt, T. W. Wroughton wrote:

> All communications addressed to the Swiss Consul have either been sent direct, or to Ottawa, for your approval. P/W #252 (Albert Bauer), wrote to the Swiss Consul, in the month of July last, "Our rations have been reduced to starvation." The letter was handed back with the request that he strike out that portion. He wrote another letter which was forwarded to the Swiss Consul leaving out the above words. [RG 6, Vol 765, File 5294]

Reading material was permitted in the camp providing that it was written in English (American Consul Report Aug 14, 1914 – RG 13 Dept. Justice, vol. 206 LAC 1). Nonetheless, a German newspaper was excavated from the second-class PoW privy (Figure 3.7). Little remains of the print, but these words can still be distinguished: "Oesterreich" (Austria), "Nordwesten" (northwest), "Bulgaren" (Bulgarians), "Deutsch"

(German), “Züge” (trains), “melden” (to report), and “in die Häuser” (into the houses). The limited wording appears to discuss the current events of the war, and given that PoW letters were rigidly censored (RG 6, vol. 765, file 5294), it seems rather improbable that information pertaining to the war, especially not in English, was able to enter the camp legally.

Figure 3.10. Scraps of German newspaper excavated from the second-class privy.
Note: Author’s photograph, July 2018.

Seeking comfort in religious observance is a coping strategy that Ursano and Rundell (1995) propose is reached through emphasizing the greater good. Holding familiar items continuous with prisoners’ past lives can provide strength and comfort during times of stress. Mundane objects can become tools for coping that remind prisoners of their sense of self and help distinguish them from their captors (King 2010:xi). Often, prisoners turn to religion and faith in an effort to justify their current hopeless conditions (King 2010).

We have very little documented evidence regarding the religious practices of the prisoners in Morrissey. Although priests were permitted to visit the internment camps, there is no documented evidence that they did, nor that church service or routine prayers took place at the Morrissey camp. However, prisoners quietly pursued their faith, as evidenced by a barbed-wire cross (Figure 3.8) excavated from Privy 1 in the second-class PoW compound. The cross remains a powerful image of what the prisoners endured—a symbol of Christian faith created out of barbed wire, the boundary separating prisoners from freedom and also resembling Christ’s crown of thorns. This

was a way for a prisoner to comment on the injustice and suffering of internment, akin to the innocent being crucified.

Figure 3.11. Barbed-wire cross (right) excavated from the second-class PoW compound, now on exhibit in the Canadian Museum of History (CMH).
Note: Photographer: Steven Darby, CMH, reproduced with permission.

Evidence of self-care was observed in the material record through supplemental items excavated from the second-class internment compound. A Colgate shaving stick tin excavated from Privy 1 demonstrates an effort to maintain self-respect through grooming and proper hygiene. Prisoners also held realistic expectations of the camp's basic provisions and appreciated what could be purchased with their labouring funds. Comfort foods excavated from the escape tunnel—cocoa, chocolate, syrup, and coffee—were not part of the basic supplies provided to the prisoners and thus were likely purchased through the camp canteen. These luxury items would have added flavour and comfort to offset the daily monotony.

According to Article 28 in the Geneva Convention (1950), "canteens shall be installed in all camps, where PoWs may procure foodstuffs, soap, tobacco and ordinary articles in daily use. The tariff shall never be in excess of local prices." This regulation is not explicitly expressed in the 1907 Hague Convention; however, the official Canadian documentation indicates that similar regulations were followed. For prisoners who had earned money through their work, the canteen offered relief; purchased items afforded prisoners choice, improving their quality of life by providing a sense of agency. This contributed to a shift in outlook that contrasted with the dreary hardships and repetitive

nature of daily life, which contained little in the way of variety and autonomy. According to the internment records, prisoners in Morrissey could purchase the same goods provided to the guards, with the exception of alcohol (LAC, RG 13, vol. 206, no. 1261). For instance, the camp supplied clothing and basic soap at no additional charge to the prisoners; however, items such as better-quality soaps could be purchased from the canteen.

The canteen in Morrissey was used as a means to force labour, since the camp supplied only the most basic of necessities. Prisoners were paid for their labour, and these monies could be used to purchase goods from the canteen. All monies that entered the camp with the prisoners were confiscated and held in trust until their release (LAC, RG 13, vol. 206, no. 1261). Prisoners who did not or could not work were provided with $1.00 per month from the government. Prisoners earned 55 cents per day for their labour, of which half was held in trust by the government to be returned upon release (Kordan 2002; Luciuk 2001). Of the remaining 25 cents, prisoners were able to retain 12 cents, the remainder being taken as payment toward their room and board. According to the American Consul's inspection report, prisoners in Morrissey with personal funds earned from labouring could purchase tobacco and order articles by mail, such as violins, cameras, and guitars—items that would help ameliorate the rigours of camp life (American Consul Report, Aug. 14, 1914 – RG 13, Dept. Justice. vol. 206 LAC 1).

> The prisoners complain of being forced to work and in being deprived of all camp privileges when refusing to do so. One man states he was compelled to work outside of the compound. . . . They claim that they are deprived of the right to spend their own money at the canteen[. T]his means that refusal to work prevents them from obtaining tobacco or cigarettes. . . . In many cases the refusal to work would be followed by physical coercion on the part of the guards resulting in protests by prisoners and strong language the consequence being aggravated punishment. [LAC, RG 6, vol. 765, file 5294].

Cigarettes and pipe smoking were extremely popular among Canadian troops in WWI. Red Cross packages containing 50 cigarettes per week were sent to Canadian PoWs in Europe (Stibbe 2006). In Morrissey, however, the PoWs were required to purchase tobacco from the canteen. Tobacco tins and pipes were excavated from the second-class PoW compound privies and escape tunnel. There were diverse brands of chewing tobacco, pipe and cigarette tobacco, and exclusively cigarette tobacco. The combination of pipe and cigarette tobacco brands made up the majority of the

assemblage. In addition, a plastic mouthpiece attachment for a pipe as well as an Irish clay pipe were excavated from the second-class privy. From the assemblage it is clear that tobacco use was an extremely popular coping strategy in the camp, providing a sense of personal comfort and likely offering an opportunity for relaxation and social intercourse.

Two of the artefacts excavated from the second-class compound relate to Irish nationalism and require further discussion. The Irish clay pipe mentioned above reads "Ireland A Nation" on one side and "Who Fears to Speak of '98" on the other. The insignia commemorates the 100th anniversary of the 1798 rebellion. Additional excavated artefacts and fauna date this privy to 1917–18. Further investigation into the pipe reveals that it may have been made in Knockcroghery, a small village in County Roscommon, Ireland, renowned for 300 years for its clay pipes, or possibly in Waterford, another Irish centre also known for its pipe making (Claypipe Visitor Centre, personal communication 2018). In Ireland, clay pipes became a medium to express political thought, either through subtle symbolic imagery with the round tower, Irish wolfhound, or shamrock, or with more direct inscriptions such as those on this clay pipe. "Through the act of smoking it was possible to support the Irish nationalist movement without uttering a single word; it was only necessary to raise a pipe and puff" (Hartnett 2004: 140–41). These political pipes were symbolic of the smokers' antihegemonic principles and were subtle enough to be appreciated only by those in the know.

The second artefact is a small Bakelite Irish flag bearing an Irish harp insignia, excavated from a privy dated to 1916–17. The flag is likely from a toy soldier. "Toy soldiers were toys meant to be played with, a reality which served to reinforce the view that games and war were two sides of the same coin . . . and Churchill's opinion was that the Great War was merely an extension of the game" (Brown 1990: 248). Pouring lead into toy soldier molds was a popular pastime of German internees during WWI. In Fort McPherson, Georgia, German PoWs created lead toy soldiers that were sold at the camp canteen; the prisoners then used the canteen receipts to purchase tobacco and other camp goods (US National Archives). Italian WWII PoWs in Mombasa, Kenya traded wood-carved toy soldiers, stamps, and other handicrafts for a pound of butter or sugar (Munawar Sabir, personal communication, November 11, 2017). No documentation in Morrissey indicates that prisoners made toy soldiers. However, a single photograph remains of German prisoner Fritz Cohn in black tie at the dinner table

with two miniature soldiers in front of him (Figure 3.9; Fernie Historical Society, 3900do, courtesy of E. Hollinshead, photographer, 1918).

In WWI, Germany created alliances with widely diverse nationalist movements in India and Ireland in an effort to weaken Britain's position on the war front (Plowman 2003). On April 9, 1916, Germany shipped 20,000 captured Russian rifles along with one million rounds of ammunition and explosives to support the Irish rebellion. However, the plan was thwarted when the ship was intercepted by the British, later impacting the success of Ireland's Easter Rising (Barton 2010). In Ireland, support for independence grew from the aftermath of the Easter Rising. Increasing hostility toward the British and sympathy for the rebels ensued as the execution of the Irish ringleaders continued into May 1916 (Connolly 2004). Given the nature of the relationship with the Morrissey internees and the country of their capture, it is not surprising that the internees used the material culture of Irish liberation and independence to define their own acts of resistance against the British Empire.

Figure 3.12. Fritz Cohn, PoW 409, a German first-class prisoner, with toy soldiers on the table.
Note: Fernie Historical Society, 3900do, reproduced with permission. Courtesy E. Hollinshead, photographer, 1918.

Physical health is intrinsically linked to mental health, and the camp doctor was important for survival. If a prisoner developed physical ailments, these could quickly lead

to his demise. Access to treatment would have provided security to the prisoners and led to positive outlooks that could contribute to their recovery. Generally, PoWs were treated in a makeshift hospital located in the Big Building of the second-class compound; however, when they were quite ill, they were sent to the public hospital in Fernie, 14 km away (RG 6, vol. 765, file 5294). Tuberculosis (TB) was rampant in BC in the early 1900s; photographs of tents erected within the confines of the internment camp during a fever epidemic of 1915 suggest a very rudimentary healthcare response to the outbreak. Of the four known deaths in Morrissey, three men died of TB—PoWs Mike Katalinick, Harry Smeryczanski, and Tom Ruzich—while Hermann Rellmann passed away from kidney failure (RG 6, vol. 766, file 5610). The *Morrissey Mention* describes "La Grippe" sweeping through Morrissey before Christmas in December of 1916, filling the hospital with no fewer than 27 cases (*Morrissey Mention* [MM] 21 December, 1916). Another influenza epidemic, probably the Spanish flu, occurred just as guards were closing up on October 15, 1918. At the peak of the outbreak, between October 25 and November 24, 1918, 55 Fernie citizens passed away from the flu and were buried in St. Margaret's Cemetery (City of Fernie Burial Records 1899–1948).

Pharmaceutical bottles were excavated from the canteen, the first-class PoW compound, and the second-class PoW compound. It is interesting to note that the German first-class compound contained almost the same amount of medicinal bottles as the other areas although that compound interned only 20% of the inmate population. Possibly the Germans received better medical treatment than the second-class prisoners. It is also interesting to note that the German first-class compound had indoor plumbing, as ceramic belonging to a toilet and sink was excavated from the compound. The second-class prisoners were required to use the privy at the back of the compound, forcing them to leave the warmth of the building during the cold winter months.

A bottle from Privy 1 was embossed with a logo from the McLean's Drug and Bookstore in Fernie, BC, but the contents remain unknown. The medicinal contents of only two pharmaceutical bottles out of the total assemblage could be identified. One bottle excavated from Privy 2 contained eucalyptus, judging by the bottle's smell. Eucalyptus oil was used to relieve the symptoms of influenza and colds. Inhaling the oil vapour can act as a decongestant and treatment for bronchitis, as it has antibacterial effects on pathogenic bacteria of the respiratory tract; it can also be applied to wounds to prevent infection (Silva et al. 2003).

Figure 3.13. St. Jacob's oil, excavated from the camp canteen.
Note: Author's photograph, July 2018.

A bottle of St. Jacob's oil ("St. Jakobs Oel") was excavated from the camp canteen (Figure 3.10). The oil was "intended to help relieve muscular pain due to exertion or exposure," and its active ingredients were listed as chloroform, aconite, turpentine, camphor, oil of camphor, and oil of thyme. A German advertisement in the *Essex County Herald*, September 1880, notes that it is a "remedy for rheumatism, neuralgia, sciatica, lumbago, backache, soreness of the chest, gout, quinsy, sore throat, swelling and sprains, burns and scalds, general body pains, tooth, ear and head ache, frosted feet and ears, and all other pains and aches. Sold by all druggists and dealers in medicine for 50 cents" (*Essex County Herald*, 10 Sept. 1880).

An iron tonic bottle excavated from Privy 1 came from the Fernie Fort Steele Brewing Company and retains part of its label. The remaining words read: "Iron Tonic . . . Fatigue resisting properties . . . known to science . . . Free From Alcohol." There remain only three intact bottles with partial labels in the bottle assemblage, and only the iron tonic is legible. These bottles also belonged to the Fernie Fort Steele Brewing Company. Iron tonics were believed to be recuperative and strength-building supplements that helped with recovery from illness, especially in counteracting anemia in TB patients (Sabbatani et al. 2017).

When conscious efforts were no longer enough to stave off depression, anxiety, and ennui behind barbed wire, prisoners may have turned to alcohol consumption.

Alcohol offered a way to escape the stressful realities and monotony of daily life in the camp. Beverage bottles were excavated from the first- and second-class PoW compounds, and the canteen, with 22 kg of bottle glass collected in total. The majority of the bottle glass came from first privy (17 kg), followed by 3 kg in the second privy in the second-class compound. It is interesting to note that only brown bottle glass was excavated from the first-class German side, while the majority of the glass on the second-class PoW side was green. It cannot be determined definitively whether these bottles contained alcohol or soda pop or were alcohol bottles recycled with soda. However, the government records do not indicate that soda was supplied to the camp. If bottle reuse did occur in the camp, this would have been due to the value of the glass beverage bottles (Busch 1987). With PoWs having very little access to funds to improve camp life, they would have been more likely to return the bottles and receive the bottle deposit value rather than disposing of them down the privy.

Alcohol prohibition in Canada did not take place until October 1, 1917, after the camp had been in operation for two years. As mentioned earlier, military records specifically note (LAC, RG 13, vol. 206, no. 1261) that prisoners could purchase from the canteen the same items as the guards, with the exception of alcohol. Hence, one can deduce that there was a supply of alcohol in the camp for the guards prior to prohibition, and that it was possible for the prisoners to acquire it through exchange or as contraband.

Privy 1 contained bottles embossed with logos, and a few of the companies brewed beer or other alcohol: Kilner Brothers Ltd., John Lumb and Co., Fernie Fort Steele Brewing Company, WF and S Northern Glassworks (Miller Beer), Pabst Blue Ribbon (beer), Anheuser Busch (Budweiser). There was also an unmarked bottle with a champagne finish. The escape tunnel contained Anheuser Busch (Budweiser) and WF and S Northern Glassworks (Miller Beer) bottles. Privy 2 contained very few beverage bottles in comparison to Privy 1. A single bottle of WF and S Northern Glassworks (Miller Beer) was noted, as well as two particular bottles that would not have been recycled and used for soda: a whiskey bottle and a D. Davias brandy or cognac from France. Dating the privies through an analysis of the faunal assemblage, tobacco tins and government sessional reports (AGWMA Report 1917–18) added further insight into the variance in bottle distribution. Dating Privy 1 to 1916/17 and Privy 2 to 1917/1918 illuminated why there were significantly more bottles in Privy 1 since alcohol prohibition only came into

act after October 1917. With Privy 2's use occurring after prohibition, the few bottles excavated from this site were certainly contraband.

3.8. Discussion

Arts and handicrafts are often depicted in the historical record as leisure activities taken up by prisoners. Several of the photographs from Morrissey have accompanying handwritten notes from the camp commanders that state "prisoner pastimes" or "prisoner leisure activities" (LAC, RG 6, vol. 756, file 3380). This image, often noted in newspapers, would only contribute to the existing ill feelings toward enemy aliens; while the world was at war and lives were being lost, prisoners were portrayed as having time to take part in such mundane and leisurely aspects of daily life. However, the quality of care afforded to PoWs was often exaggerated when reported between governments, to avoid retaliatory treatment against Canada's PoWs in the Central Powers' hands. With an over-reliance on historical documents it is easy to lose sight of this. Focusing on leisure negates the fact that prisoners had been rounded up and transported to places of confinement and were held there under duress. Instead, the historical record should shift the lens from leisure activities such as arts and handicrafts to an examination of methods used by prisoners to cope behind barbed wire.

In Morrissey, arts and handicrafts were a significant means of improving camp life and keeping depression and ennui at bay. Prisoners applied various coping strategies to their art: *conscious effort* through self-development, *social* through group activities and affiliation, and *relationship to captors* through passive resistance. Some of the prisoners were extremely gifted woodworkers, a skill they had either developed prior to internment or learned from others during internment. Handicrafts were a method used to pass the time, keep the mind occupied, develop new skills, build self-esteem, and create social bonds with others prisoners. Crafting was undertaken with the intention of passing the time but also to create items that could be used repeatedly once they were complete, such as board games and instruments. Handicrafts improved prisoners' living environment by personalizing and dressing up their space. They were also given to others—prisoners, guards, and members of the community—to show gratitude, traded to acquire other goods, or sold to earn monies. Resistance could be carved, painted, or sewn into their artwork, boosting morale and camaraderie amongst the PoWs. It could

also be subtle—for example, sharing and using material culture that symbolized another country's nationalist movement against the common enemy, the British Empire.

Conscious effort coping strategies were also used to sustain outside *communication*, while the *maintenance of self-respect*, *realistic expectations*, and *flexibility* contributed to PoW agency and morale. Maintaining contact with the outside world through letters to family and friends, even though these were censored, was a way to retain continuity with one's past. Receiving outside communication through smuggled newspaper reports would also have provided information about the war that may have helped prisoners gain insight into when freedom might come.

Tonics, liniments, and ointments appear to have been elementary and cheap remedies accessed by prisoners in an effort to maintain good health and prevent illness. Although treating physical ailments as they arose would have addressed the physical aspect of illness, a positive outlook would have helped prisoners recover much more quickly. Hence, being proactive about one's health was critical to survival. Acquiring comfort foods and items that prisoners consumed or used in daily life prior to their arrest would have been a means to maintain a connection to their previous identities. Smells, tastes, and sounds brought about by foods, tobacco, musical instruments, and other personal items would have provided a sense of agency while allowing prisoners to retain a sense of their former selves.

Most of the internees, indeed so too their guards, were Christians of one or another denomination, and believers, for whom the annual cycle of religious dates had real meaning for their lives. For the internees their faith no doubt provided a source of comfort and hope as they coped with the daily discomforts and enervation of confinement, coupled with their strong sense of being the victims of an injustice. While we will never know who shaped the small Christian cross that this archaeological study has uncovered, it is a most evocative artefact made from the very same barbed wire that held these men inside the camp. This suggests that its owner perhaps saw himself as an individual enduring Christ-like suffering and mistreatment, indignities and injuries that could only be coped with by clinging to his (likely) Ukrainian (Greek) Catholic faith.

Finally, alcohol was likely resorted to for the pleasure of drinking, or even as a form of defiance, since it would have been regarded as contraband. However, it may

have also been used as a coping mechanism when mental escape through *dissociation* was needed. It would have been all too normal to seek distraction and relief from the unpleasant realities of internment life. Maintaining a positive outlook in dire times was challenging for many in the camp, as evidenced by prisoners sent to the mental asylum. Upon leaving the camp, prisoners did not speak of their time in captivity. It was regarded as a shameful and embarrassing chapter and a stain on their life histories. Hence, coping after internment while never discussing that traumatic experience likely caused the wounds to fester, at least in some. Essentially, those whose personalities were conducive to flexibility and adaptability were more likely than their less adaptive co-prisoners to survive internment successfully and recover unscathed.

3.9. Conclusion

Evidence shows that captivity and confinement, regardless of the quality of treatment, have dire effects on the mental health of prisoners (Vischer 1919). This pertains not only to internment camps but to all forms of total institutions including prisons, holding and detention centres, refugee and staging camps. The impact of stress and difficult situations is rather subjective, and what causes severe mental distress for one individual may have little or no impact on another (Mohino et al. 2004). Leisure and recreation activities provided or supported within institutional confinement can help mitigate anxiety and detrimental physical ailments, such a physical illness and depression. These activities can restore self-esteem and contribute to a positive outlook necessary for survival within an internment camp. Ursano and Rundell (1995) proposed a list of coping strategies that PoWs commonly use to survive, and this list was applied to the excavation of items from Morrissey. The findings indicate that arts and handicrafts, religion, communication, resistance, tobacco, alcohol, and purchased comforts from the canteen helped many PoWs stave off depression and mental illness.

Chapter 4.

The Prisoner of War Diet: A Material and Faunal Analysis of the Morrissey WWI Internment Camp

Nutritional science developed in response to the 1907 Hague Convention, which stipulated that belligerent nations abide by the rules of war and support basic human sustenance, including maintaining the dietetic welfare of prisoners of war (PoWs). When World War I (WWI) broke out, both Britain and Germany sought nutritional experts to define the caloric requirements of military men and PoWs. British nutritionists estimated that an adult male required 3,400 calories per day, while Germany calculated 2,700 (Wilkinson 2017: 104–118). Due to food shortages and blockades, Germany reduced the actual PoW caloric intake to an average of 1,212.55 calories per day. In Canada, the official internment rations were 2,595.52 calories per day (Kordan 2016: 161), but external factors may also have caused unrecorded reductions in the PoW diet on the home front. By contrast, Canada's modern nutritional guide recommends 2500 calories per day for men to maintain their weight. Among my objectives for conducting this archaeological excavation at the Morrissey Internment Camp in Morrissey, BC, was to gain insight into the PoW diet in Canada. Excavating at the Morrissey site was a point of access to a larger controversy because the results were applicable more generally to the diet of the inmates at Canada's 24 internment camps.

During the war, the protecting powers—the United States until 1917 and Switzerland thereafter (Morton 1974: 45)—interviewed PoWs and scrutinized military documents in Canada to ensure that they received proper treatment and care. However, official documentation was occasionally skewed, and the country of their capture often minimized PoW complaints to the contrary (LAC, RG6, vol. 765, file 5294). In Canada, PoW diets generated much correspondence between prisoners and the American and Swiss consuls who were overseeing their well-being throughout WWI. In 1918, a report noted:

> PoW no. 252 (Albert Bauer) wrote to the Swiss Consul, in the month of July last, "Our rations have been reduced to starvation." The letter was handed back with the request that he strike out that portion. He then

> wrote another letter which was forwarded to the Swiss Consul leaving the above words out (LAC, RG6, vol. 765, file 5294).

At the Morrissey Internment Camp, prisoner correspondence protesting the lack of food and describing foods as not fit for consumption circulated beyond the camp, despite the censor (LAC, RG6, vol. 765, file 5294). After the war, the Office of Internment Operations provided the Canadian government with the Auditor General's War Measures Appropriation Reports (AGWMA). These documents account for the government's expenditures, specifically pertaining to the prisoner supplies purchased and imported into the camp during internment. Details about the types of foods consumed and costs per annum are listed in these reports. Officially, the daily ration for a PoW interned in Canada consisted of 2 lb of bread, ¾ lb of meat, 1 oz. of bacon, 1 lb of vegetables, 1.5 lb of potatoes, 4 oz. of jam, and 2 oz. each of coffee, sugar, and butter. However, food supplies were difficult to come by, likely due to the reduction in transportation by the Canadian railways in order to conserve coal for the war effort (Brown and Cook 1974; Kordan 1991). Hence, food substitutions were common: unleavened flour for bread, fermented cabbage for vegetables, and rice or rolled oats for meat (Kordan 1991: 18).

Few archaeological investigations have addressed WWI PoW camps in Canada or elsewhere, so confirming how well PoWs were fed and whether the official ration was actually provided is difficult. Thus, research on internment sites, such as material culture studies, excavations, and faunal analysis, can support this type of inquiry. Faunal analysis is now commonplace in historical archaeology, using similar analytical techniques as those at prehistoric sites (Betts 2000; Chambless 2005; Mallard 2008). Historical documents can complement an archaeological analysis by corroborating or challenging the results. However, faunal analyses at sites of conflict are few, as is the archaeological literature on the prisoner diet (Bush 2000; Casella 2007). More often than not, attention remains on provisioning the military, with a significant focus on the American military during the 18th and 19th centuries: the American Civil War Union Army at City Point, Virginia (Andrews 2003), and soldiers at Valley Forge (Campana and Crabtree 2003), Fort George (Betts 2000), Fort Loudon (Parmalee 1960), and Fort Malden (Caroppo 1980).

In this study, I compared the material culture unearthed at Morrissey with the AGWMA Reports to ascertain whether the PoW diet was adequate or was somehow

deficient, as some claimed. I analyzed the food tins, bottles, and faunal remains to arrive at a more nuanced understanding of the prisoners' diet than the bureaucratic depiction in the AGWMA Reports.

4.1. The Morrissey Internment Camp

The Morrissey Internment Camp was located in the abandoned coal mining town of Morrissey in southeastern British Columbia (BC), Canada. The internment camp opened on September 28, 1915 and closed on October 21, 1918 and during its operational period continuously imprisoned between 70 and 240 internees. The Morrissey camp was one of 24 internment camps that detained a total of 8,579 enemy aliens from the multinational Austro-Hungarian, German, and Ottoman empires as PoWs on Canadian soil between 1914 and 1920. The majority of the prisoners were civilians, and a few were even Canadian born or naturalized British subjects. General Sir William Otter, head of Canada's first national internment operations 1914-20, divided the civilian internees into first- and second-class groups based on nationality. Enemy aliens from the Austro-Hungarian and Ottoman empires were regarded as second-class prisoners and placed in labour camps, while Germans were considered first-class prisoners and were held in close confinement.

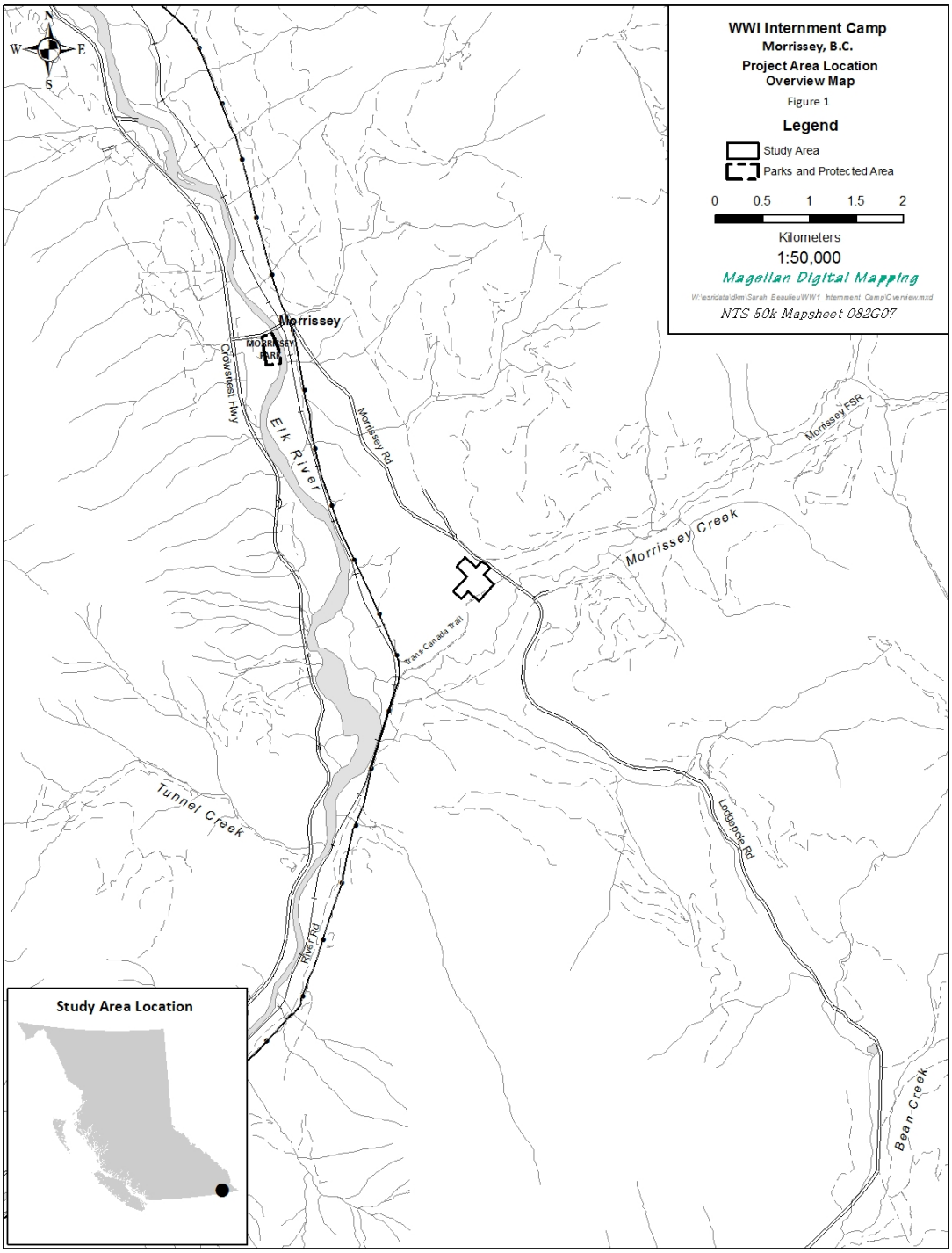

Figure 4.1. Morrissey Internment Camp Site Location Within British Columbia.
Note: Map courtesy of Magellan Digital Mapping.

The start of WWI brought about increasing unemployment in Canada (Morton 1978). This lead many communities to resent the working German and Austro-Hungarian populations who were regarded as removing jobs from patriotic, unemployed Canadians. In the Fernie area, the Coal Creek miners went on strike on June 8th, 1915 refusing to continue working with the enemy alien. The strike continued on June 9th and William Bowser, B.C.'s acting premier was sent a telegram of this development. The provincial government announced that it would begin internment, in Fernie's ice rink, of all unmarried German and Austro-Hungarian miners as well as married men whose families remained in Europe. Bowser proposed that interning German and Austro-Hungarian coal miners would increase employment opportunities for deserving men and would return the communities to their peaceful ways (Norton 1998:69).

The Federal government deemed the creation of the Fernie internment camp, set up by the provincial government, as an illegal act since the local German and Austro-Hungarian coal miners were not regarded as a threat to national security. However subsequent strikes in the surrounding areas, such as with the Hillcrest mine in Alberta on June 15th, began to follow the Coal Creek miners' lead. The Federal government became apprehensive about potential disruptions to wartime coal production and took over the Fernie internment camp in order to bring it under the umbrella of Canada's first national internment operations. Morrissey, an abandoned coal mining town, 14 km outside of Fernie, proved to be an ideal location for a more permanent internment camp and the Crow's Nest Pass Coal Company, eager to make up for its lost coal mining revenue, proposed leasing its unoccupied buildings to the Federal government. In September 1915, the Fernie prisoner population was transferred to the permanent internment camp in Morrissey (Beaulieu 2015).

In 1916, many internees were released on parole in an effort to help address Canada's labour shortage. This led to the closure of numerous internment camps across Canada and the amalgamation of the internees into the remaining camps. At Morrissey, the German prisoner population increased, and despite its reclassification as a confinement camp, the maltreatment of internees by their guards continued. The Consul of Switzerland, Samuel Gintzburger, sympathized with the internees and advocated for their welfare in the matters of forced labour, the poor-quality diet, and prisoner abuse (RG 6 vol. 765, File 5294). On one occasion, his report, discussing the poor heating in the second-class internment quarters, bypassed the censors and was submitted directly

to his government. The Dominion of Canada thus received a *note verbale* from Germany, threatening retaliatory treatment against both Canadian and British PoWs in Germany if the conditions at Morrissey were not improved (Luciuk 2001; Norton 1998).

4.2. Internees and the 1907 Hague Convention

Extracting labour from the prisoners provided the means for Canada to fund the internment operations (Kordan 2002; Morton 1974; Waiser 1994). A clause in the 1907 Hague Convention, a set of international rules established to ensure the proper treatment of PoWs in times of war and to which the Dominion Canadian Government was a signatory, stipulated that military personnel could labour for the country of their capture, providing the work did not benefit the war effort (Kordan 2002: 64-66). Although the internee population in Morrissey, and at most other camps across Canada, was largely civilian, the order-in-council of October 28, 1914 (LAC, Department of Justice Files, 770/15; Minenko 2018: 11-18) legislated both civilian and military internees as PoWs, subjecting both groups to the rules of the Hague Convention of 1907 (Kordan 2002: 63; Morton 1974). The classification of civilian internees as PoWs was new to WWI and therefore had not been considered prior to the implementation of the 1907 Hague Convention (Minenko 2018). Although this new classification provided the civilians with protection under the Hague Convention, confusion ensued since many of the internees understood it to apply only to members of the military (Kordan 2002: 60). Hence, many protested against the forced labour that was required of them, and consequently, we have numerous documented accounts of punitive action in Morrissey.

> I find that quite a number of prisoners have been punished for “refusing to obey an order.” On examination the Prisoners stated that invariably the “order” was a command to perform some work, of which they refused to do. [Swiss Consulate visit 7 September, 1917, LAC, RG6, vol. 765, file 5294]

Due to the frequent labour protests and subsequent punitive actions that followed, the Morrissey canteen became a tool for securing internee labour. Since only the most basic necessities were provided daily to the prisoners, having the financial means to purchase additional comfort items from the canteen proved useful. Prisoners who worked were credited a modest daily earning, which could be used to purchase goods from the canteen. Any funds an internee had brought with him to the camp were confiscated and held in trust until the man was released (LAC, RG 13, vol. 206, no.

1261). Prisoners who either refused or were unable to work received $1.00 per month from the government. Able-bodied captives earned 55 cents per day for their labour, of which half was held in trust by the government to be returned upon release (Kordan 2002; Luciuk 2001). Of the remaining 25 cents, prisoners retained 12 cents, and the balance was taken as payment toward their room and board. According to the American consul's inspection report, prisoners in Morrissey who worked and so earned credit at the canteen could purchase tobacco and order articles by mail—items used to make their daily lives in the camp more tolerable (American Consul Report, August 14, 1914 – RG 13 Dept. Justice, vol. 206, LAC 1).

Inspection reports from the American Consulate, prepared by G.C. Woodward, and the Consul of Switzerland, tabled by Samuel Gintzburger, documented the location of the second-class PoW quarters in what was known as the Big Building. Initially built as a hotel during Morrissey's mining days, it contained the sleeping quarters on the second and third floors, an infirmary on the second floor, and the kitchen, dining room, reading room, and guards' room on the first floor (RG 6, vol. 5294, file 765; RG 13, vol. 206. file 1750-69). Descendants of Morrissey PoWs note that inmates cooked food for their fellow internees. Archival evidence confirms, for example, that Johann Wirth (PoW 421) and Mike Slemco (PoW 502) were both cooks during their internment in 1917. Johann Wirth had previous experience as a cook and had worked in a hotel prior to his internment. According to the American consular report from August 1916, PoWs were served eggs once weekly and meat three times a day: "Bacon for breakfast, hot meat for dinner and cold meat for supper. Fresh meat other than beef liver, hearts, kidneys, hog liver, pig feet and bologna, are not often supplied during the summer months on account of the weather" (RG 13, vol. 206, file 1750-69).

Figure 4.2. Morrissey second-class PoW cooks inside the Big Building kitchen.
Photo courtesy of Mario Wirth, reproduced with permission.

Figure 4.3. Dining hall inside the Big Building for the second-class PoWs.
Photo courtesy of Mario Wirth, reproduced with permission.

4.3. Research Methods

The Morrissey internment camp was dismantled upon its closure (Morton 1974), leaving no surviving structures on the landscape with the exception of the visible footprint of the second-class PoW building. Fieldwork included surface surveying, mapping, remote sensing with the deployment of ground penetrating radar (GPR), and excavation. A walking traverse of the internment site along with surface collection of archaeological material was undertaken in an effort to complement the data accrued from historic maps and remote sensing methods such as metal detection and GPR.

Noted concentrations of sub-surface anomalies determined where excavations would take place, beginning with sample shovel and auger tests at five-metre intervals. The location of the first- and second-class prisoner compounds, the prisoners' living quarters, the exercise yard, and the privies, as well as the camp canteen and several building footprints of the guards' quarters, were located through a comparison of these data with the historic plans of the site (RG 24, vol. 4661). Once these were located, one- and two-metre excavation units were placed at the locations of the German first-class prisoner living quarters and the camp canteen, on the guards' side of the camp. Units were also placed inside the second-class compound in the footprint of the living quarters known as "the Big Building," as well as the escape tunnel and two privies. Artefacts, recorded in situ, and the matrix, sifted through quarter-inch mesh, confirmed the identification of the built environment found at the camp. Following the excavation, I commissioned a faunal analysis of excavated animal bone by Morgan Bartlett at Kleanza Archaeological Consulting Ltd., undertaking additional analysis and data interpretation myself. Soil samples were also taken from the privies, and Dr. Karl Reinhard at the University of Nebraska analyzed them.

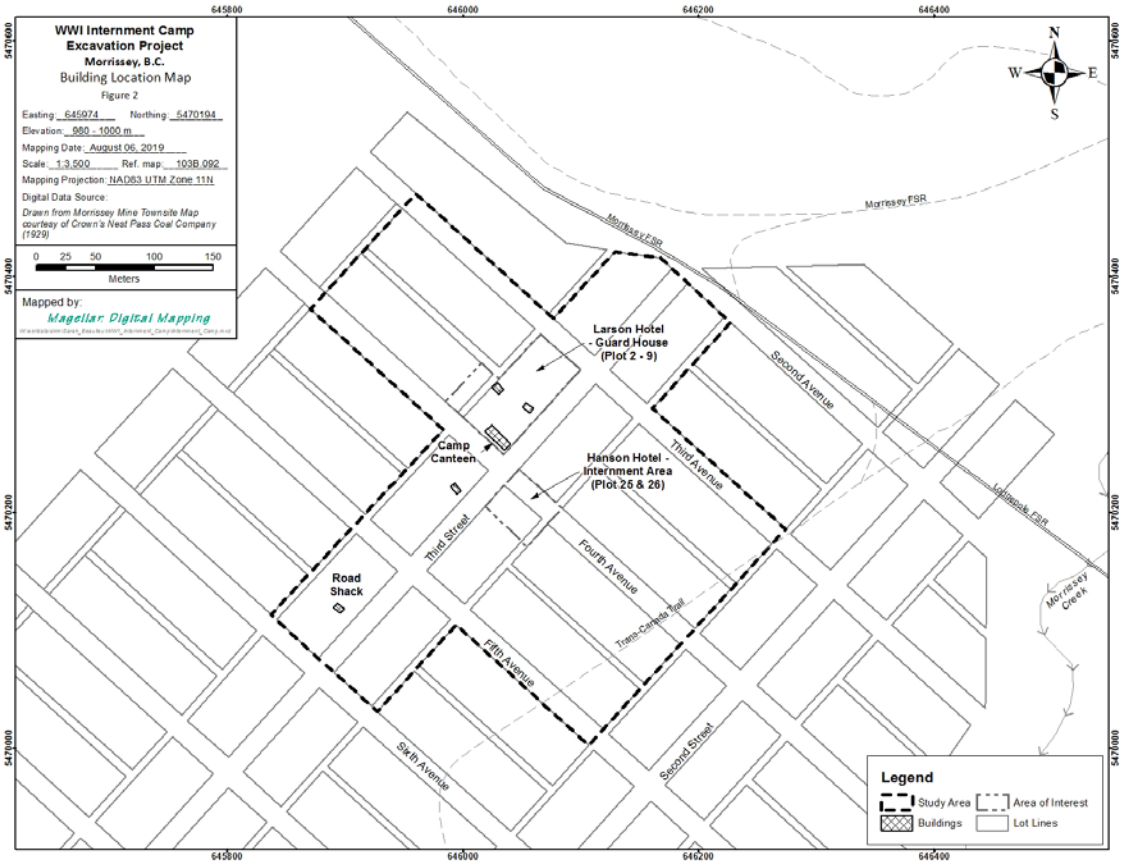

Figure 4.4. Map of Morrissey Internment Camp Site Location Within the Context of Morrissey's Abandonned Mining Town.

Note: Map courtesy of Magellan Digital Mapping.

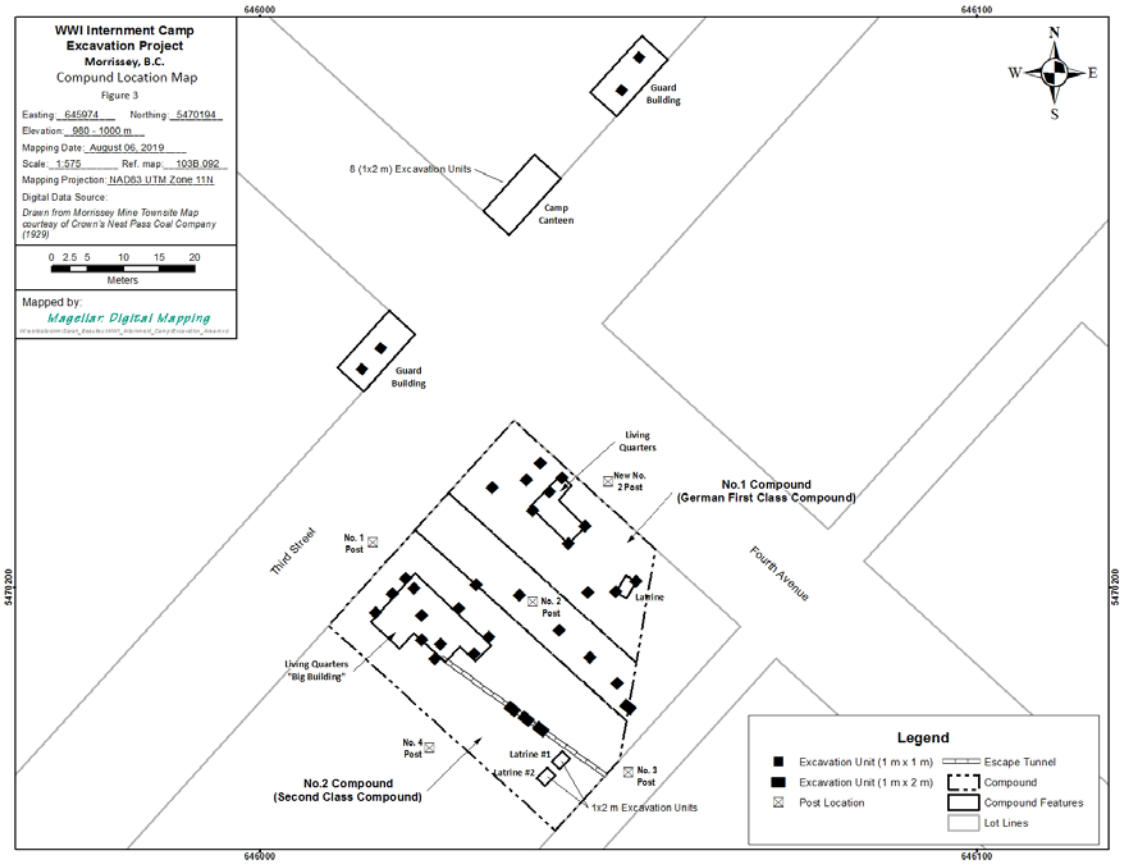

Figure 4.5. Map of Morrissey Internment Camp Excavation Area.
Note: Map courtesy of Magellan Digital Mapping.

The excavation results were then compared to the extant historical records. Documentary evidence appears in the Auditor General's War Appropriation Reports, which provides details for food supplied to the camp. A separate group of sessional papers detail the monetary expenditures applied to the PoWs during Canada's first national internment operations 1914-1920. National military files and notes of protest from the prisoners themselves were also analyzed (LAC, RG6; vol. 756, no. 5294; vol. 763, no. 4738; LAC, RG13, vol. 206, no. 1261).

Establishing a timeline for the use of each privy is essential for making further deductions about the prisoners' food consumption practices. This can be determined by comparing the AGWMA Reports with the excavated faunal samples as well as through analysis of the excavated artefacts. For instance, Prince Albert tobacco tins excavated from both privies (flat-sided and hinged-lidded) were manufactured post-1913,

confirming that both privies were in use during the internment period and not during Morrissey's initial occupation as a mining town (Sutton and Brooks 2002).

Privy 1 originated in 1916/1917, as it contained *Sus scrofa domesticus* (pig). According to the AGWMA Report (Sessional Paper 1917), this was the only year that "bone in" pork was supplied; bacon and ham were supplied throughout internment, but other cuts of pork were not. Privy 2 was in use during 1917/1918. Notably, there was an increase in bovine bones that does not correlate with the small amount of beef supplied in the first or final years of the internment operations. Elements of *Caprinae* (sheep, goat subfamily) and *Ovis aries* (sheep) excavated from Privy 2 further confirm its use prior to 1918, as the annual AGWMA Report for that year has no indication of mutton in the camp diet during its final months of operation. Lastly, the small amount of alcohol bottles in Privy 2 (3kg) in comparison to Privy 1 (17kg) coincides with alcohol prohibition that took place in October 1917, further supporting the dating of both privies.

4.4. Canada's Role with Food Rationing

In June 1916, Canada increased its food supply to the front lines, and the government began appealing for voluntary efforts to conserve fuel and essential items. Although the war had pulled Canada out of a depression, the country's resource-based economy came under strain. The rising prices of Canadian commodities, such as wheat, benefited farmers and exporters, but inflation placed particular hardships on unskilled labourers and those with fixed incomes (Richardson 2015). In July 1917, the government began to employ fuel and food controllers in an effort to manage the food supplies and exports. These controls would remain in place until 1918/19. The public had hoped that the implementation of food and fuel controls would lead to a reduction in food prices. However, the appointed food controller, W.J. Hanna, stressed that rising food prices had the added benefits of stimulating food production and supply while also encouraging Canadians to conserve food so that greater quantities could be released for overseas consumption (Brown and Cook 1974: 309).

In Canada, "most of the food control effort took the form of persuasion towards voluntary restraint from waste and encouragement of change in eating habits" (Brown and Cook 1974: 309). Hence, food rationing was not obligatory. Instead, Canada chose the middle ground between the compulsory rationing occurring in Great Britain and the

American effort at volunteerism (Brown and Cook 1974: 310). For instance, propaganda posters promoted food and ingredient substitutes for high-demand items and advised the observation of “fuel-less Sundays and meatless Fridays.” Citizens were encouraged to save wheat and replace it with corn, replace meat with fish, conserve fats, and substitute syrup for sugars. Eggs, dairy, beans, coffee, and chocolate were also placed on the ration list (Canadian War Museum 2018; Richardson 2015). In restaurants, beef and pork could only be served on certain days and sugar was limited to twenty-one pounds for every ninety meals (Brown and Cook 1974: 308).

4.5. Morrissey Internment Camp PoW Food Allocations

During the four years that the Morrissey Internment camp was in operation, there were distinct variations in the quantity, quality, and variety of food items provided to the internees. The AGWMA reports document the federal government’s PoW expenditures for each internment camp; this includes the food supplied to the PoWs. However, the guards’ expenditures are not recorded per individual camp but are instead recorded by the military district that the camp guards belonged to. The guards from the Morrissey internment camp fell under Military District 11, which also covered the rest of the internment camps in BC: Nanaimo, Edgewood, Monashee, Mara Lake, Vernon, and Revelstoke. Therefore, it is impossible to gain an accurate picture of the guards’ expenditures at the Morrissey internment camp and thus compare the food allocations of both guards and prisoners.

The AGWMA reports that pertain to the prisoners begin on April 1, 1915 and end on March 31, 1919. In June 1915, the prisoners were initially interned in Fernie, BC, but in September of the same year, the Fernie internment camp closed and the prisoners were transferred to the internment camp in Morrissey. Hence, the first report includes the initial camp in Fernie (June–August 1915) and the prisoner transfer to Morrissey between September and March 31, 1916. Between September 1915 and March 31, 1917, the camp maintained approximately 160 prisoners. From April 1, 1917 until its closure on October 21, 1918, the camp contained 200–240 prisoners (Report of the Auditor General, vol. IV, part ZZ, 1916, 1917, 1918, 1919; Norton 1998).

Table 4.1 provides an exhaustive list, derived from the AGWMA reports, of all the recorded food items supplied to the Morrissey prisoners and their total weights per

annum. The results of the excavation will be compared with the AGWMA reports to identify any similarities or differences between the two.

Table 4.1. Summary of Data from the Auditor General's War Appropriation Reports

Type	1915/1916	1916/1917	1917/ 1918	1918/ 1919
No. PoWs in Camp (Average)	160	160	240	200
Beef	23,443lb	89,357lb	67,700lb	26,631lb
Hearts				2,932lb
Liver				2,801lb
Mutton	8,012lb	1,559lb	976lb	
Cod		925lb		7,729lb
Pork (bone in)		439lb		
Bacon	4,250lb	13,721lb	8,707lb	5,125lb
Ham		312lb		
Sausage		3591lb		
Bologna			4,870lb	4,765lb
Corned beef		15 dozen		20 tins
Eggs		2 cases		3.5 cases + 76 dozen
Cheese	2,088lb	5,387lb	6,033lb	4,493lb
Head cheese				369lb
Potatoes	35,031lb	83,490lb	94,339lb	25,539lb
Beans	700lb	1,505lb	4,500lb	1,500lb + 10 cases
Split peas	1,109lb		7,527lb	1,390lb + 10 cases
Corn				10 cases
Vegetables (unspecified)	11,727lb	5,090lb	27,482lb	8,700lb
Cabbage		2,700lb	8,835lb	
Carrots		5,189lb		
Turnips		5,870lb		
Parsnips		1,600lb		
Onions		4,530lb	7,419lb	
Tomatoes				10 cases
Pepper		80lb	135lb	
Salt			5,750lb	1,750lb
Prunes		1,200lb	1,032lb	
Evaporated apples		225lb		
Rice		2,850lb	3,950lb	500lb
Macaroni			908lb	
Rolled oats	3874lb	16,486lb	7760lb	2100lb

Type	1915/1916	1916/1917	1917/ 1918	1918/ 1919
Flour		491 bags	597 bags	30 bags
Bread	38,000lb	7,562lb		
Yeast		285lb		
Baking powder				2 cases
Tea	520lb	225lb	696lb	
Coffee	783lb	2,500lb	3,000lb	1,050lb + $50 war tax
Milk		25 cases		
Evaporated milk		3,000lb	26cases + 3360lb	116 cases
Sugar	1,900lb	11 400lb	16,400lb	5,000lb
Syrup				20 cases
Jam	3,668lb	10,408lb	2,496lb	2,496lb
Marmalade		1,460lb	2,496lb	2,928lb
Butter	3,675lb	12,848lb	8,600lb	3,300lb
Oleomargarine			1,070lb	2,460lb
Lard		220lb		350lb + 6 tins

After June 1917, food rationing was the official response provided to the Morrissey PoWs for reducing certain foods in the camp (Norton 1998). However, food items on Canada's official ration list were not consistently reduced in the camp, and the recommended food replacements were also not always supplied. Hence, this calls into question whether food rationing was an accurate justification for cutting certain food supplies to the PoWs—or could cutting camps costs have also played a significant role?

Table 4.2 provides a breakdown of the food allotted to a single prisoner per day, based on the AGWMA report and the official statement on daily rations (RG 24, vol. 4280, File 34). According to these reports, fresh fruit did not enter the camp; only fruit preserves and dried fruit were supplied: jam, marmalade, dried apples, raisins, and prunes. Both milk and eggs remained in limited supply throughout internment. Baked bread loaves were no longer purchased after the second year that the camp was in operation, and instead, bags of flour were supplied to PoWs to bake their own. The meat supplied to the PoWs remained above .75lb per day, with the exception of the first year of the camp's operation, when the protein supplied was .7lb per day. Although pork was rationed, bacon remained well above the allotted 1oz per day, and coffee and jam supplies remained well below their official allotments. During Canada's rationing period,

citizens were being encouraged to increase vegetable and fish consumption, but in the camp, potatoes and other vegetables were limited and a significant fish supply was not introduced until the final year. Interestingly, PoWs were provided with an extra ounce per day of rationed sugar during the second and third years that the camp was in operation, and butter, lard, and oleomargarine, also on the ration list, remained similar to the official allowance, with the exception of the camp's second year, when the supply almost doubled.

Table 4.2. Daily Rations of PoWs interned at Morrissey, Based on the Data from the AGWMA Reports

	PoW Daily Rations Based on Official Gov. Statement	Morrissey Camp June 1915–March 31, 1916	Morrissey Camp April 1, 1916–March 31, 1917	Morrissey Camp April 1, 1917–March 31, 1918	Morrissey Camp April 1, 1918–October 22, 1918
		Year 1	Year 2	Year 3	Year 4
Food Type					
Meat	.75lb	.66lb	1.6lb	.8lb	.88lb
Bacon	1oz	1.6 oz	3.7oz	1.6oz	1.9oz
Cod			.02lb		.2lb
Potatoes	1.5lb	.8lb	1.4lb	1.1lb	.6lb
Vegetables	1lb	.3lb	.43lb	.6lb	.24lb
Coffee	2 oz	.3oz	.6oz	.5oz	.4oz
Sugar	2 oz	.7oz	3oz	3oz	2oz
Jam, Marmalade	4 oz	3.6 oz	3.2oz	.9oz	2oz
Butter, Lard, Oleomargarine	2oz	1.4oz	3.5oz	1.75oz	2.3oz
Bread	2lb	.8lb	.13lb		
Flour			*491 bags	*597 bags	*30 bags
Cheese		.7oz	1.5oz	1.1oz	1.7oz
Rice			.05lb	.05lb	.01lb
Macaroni				.01lb	
Rolled oats		.08lb	.3lb	.09lb	.05lb

*Due to lack of archival information, it is not possible to calculate the weight of the bags of flour supplied to the camps.

4.6. Excavation Results

My excavations around the camp canteen, the escape tunnel, and two privies located in the second-class PoW compound provided the material culture for my study. I unearthed the most significant amount of faunal remains from the second-class PoW privies and the camp canteen. I recovered discarded beverage bottles from the first- and

second-class compound yards, the basement of the Big Building, as well as the two privies. I found the tobacco tins that prisoners had tossed in the privies and the escape tunnel, and identifiable food tins abandoned in the escape tunnel.

4.6.1. The Escape Tunnel

An early newspaper account (*Fernie Free Press* [FFP] 1917) describes the Morrissey prisoners escaping via a tunnel in front of the second-class PoW building that ran parallel to the roadway and toward the guards' quarters, although the shortest distance to freedom lay in the opposite direction. Presumably the tunnel would eventually have turned toward the left of a wood thicket, where a reasonably secluded escape could have been made. However, the plan was thwarted the night before the escape was to take place, and riots broke out upon its discovery. Had the prisoners been successful, it is likely that the entire camp would have been free to escape into Montana. The ringleaders were subsequently rounded up and placed in solitary confinement (FFP, January 19, 1917).

In the present study, the ideal solution for locating the tunnel was the deployment of a Ground Penetrating Radar (GPR) since it is noninvasive and limits the number of destructive shovel tests that would otherwise be required. After the GPR survey data were analyzed and the location of the tunnel confirmed, three cross-sections measuring one metre by two metres were excavated to ground truth the GPR results. Numerous artefacts were excavated from the escape tunnel in the second-class compound, including liquor bottles, Anheuser Busch (Budweiser) and WF and S Northern Glassworks (Miller Beer) bottles, a picture frame, tobacco tins, paint jars and cans, along with inkwells. The identified food tins consisted of a corned beef tin and two key winds for corned beef tins, a Norwegian sardine can, Rogers Golden Syrup and Rogers Sugar cans, two J.S. Fry and Sons Chocolate and Cocoa tins, three Seal Brand Coffee cans, and a mustard jar. It is interesting to note that the majority of the identifiable food tins originated from the escape tunnel, while the only other identifiable food tins, three key winds, and a single corned beef tin were excavated from Privy 1.

4.6.2. Tobacco

PoWs could purchase tobacco from the canteen. Tobacco tins and pipes were excavated from the second-class PoW compound privies and escape tunnel. Smoking pleasure came from diverse methods and brands: chewing tobacco (Edgeworth Plug Slice, Meerschaum Cut Plug Imperial Tobacco), pipe and cigarette tobacco (Velvet, Red Cap, Prince Albert, Tuxedo), and exclusively cigarette tobacco (Capstan Navy Cut). The combination pipe and cigarette tobacco brands made up the majority of what was used in the assemblage. Prisoners disposed of their pipe and cigarette tobacco in both privies, the escape tunnel, and within the footprint of the prisoner building and front porch, but only chewing tobacco and cigarette tobacco were unearthed in the escape tunnel.

4.6.3. Alcohol

Our team's effort yielded 22 kg of bottle glass representing beverage containers excavated from the first- and second-class PoW compounds and the canteen. Prisoners tossed 17 kg of bottle glass in Privy 1 but discarded only 3 kg in Privy 2, which was the second-class compound. Brown bottle glass was excavated only from the first-class German side, while green was the main colour of glass on the second-class PoW side. Whether these bottles contained alcohol or soda pop or were alcohol bottles recycled with soda can be best determined by a residue analysis. However, the government records do not indicate if carbonated beverages were supplied to the camp. In addition, if bottle reuse did occur in the camp, this would have been due to the value of the glass beverage bottles (Busch 1987). With PoWs having very little access to funds to improve camp life, a bottle deposit would encourage recycling rather than disposing of them down the privy.

Alcohol prohibition began on October 1, 1917, two years after the camp became operational. Until this date, military personnel had access to alcohol. Military records specifically note (LAC, RG 13, vol. 206, no. 1261) that prisoners could purchase from the canteen the same items as the guards, with the exception of alcohol. An October 1915 letter from Major-General Otter, Officer Commanding Internment Operations to the Under Secretary for External Affairs, discussed the treatment of PoWs in Canadian camps: "To none however, is the use of beer, wine or spirituous liquors allowed. A restriction which has given rise to much complaint" (LAC, RG 13, vol. 206, no. 1261).

Hence, one can deduce that there was a supply of alcohol in the camp prior to prohibition, and that it was possible for the prisoners to acquire it through exchange or as contraband. PoWs would have disposed of alcoholic beverage containers down the privies to avoid punishment.

Privy 1 contained bottles embossed with logos, and a few of the companies brewed beer or other alcohol: Kilner Brothers Ltd., John Lumb and Co., Fernie Fort Steele Brewing Co., WF and S Northern Glassworks (Miller Beer), Pabst Blue Ribbon (beer), and Anheuser Busch (Budweiser). There was also an unmarked bottle with a champagne finish. The escape tunnel contained Anheuser Busch (Budweiser) and WF and S Northern Glassworks (Miller Beer) bottles. Privy 2 contained very few beverage bottles in comparison to Privy 1. A single bottle of WF and S Northern Glassworks (Miller Beer) was noted, as well as two particular bottles that would not have been recycled and used for soda: a whiskey bottle and a D. Davias brandy or cognac from France. These were certainly contraband.

4.6.4. Faunal Analysis

The initial identification of fauna was conducted by Morgan Bartlett at Kleanza Archaeological Consulting. The focus of this work was directed toward identifying the species represented and whether they were juvenile or mature, as well as determining any visible pathologies and recording any visible modification to the bones through tool marks or evidence of burning (Bartlett 2017; 2018). Due to budgetary constraints, biomass estimates based on bone weights were not conducted. I undertook further analysis pertaining to visible pathologies—for instance, investigating whether the arthritis noted in some of the sheep bones (Bartlett 2018) was an indication of an infection observed primarily in lambs or simply the result of advanced age. I then conducted data interpretation. The latter included categorizing the bone type according to the cuts of meat butchers produced in the early 20th century. This was done to place them in a monetary ranking system according to retail value. A comparative analysis was then undertaken with the AGWMA reports. Below is a summary of the methods and results of the initial faunal analysis conducted by Bartlett (2017; 2018).

Taxonomic classifications were identified using the comparative collection in the Department of Archaeology and with the aid of published faunal identification works

(Gilbert 1990; Gilbert et al. 1981). All identifiable *Bovinae* (cattle/bison subfamily) and *Caprinae* (sheep/goat subfamily) were classified to the level of “subfamily”; however, when diagnostic indicators were present, the specimen was then classified to species level. Each specimen was confirmed to be a domestic livestock, and not a related wild species, by cross-referencing all *Caprinae* specimens with *Odocoileus hemionus* (mule deer/black-tailed deer), and all *Bovinae* specimens with *Cervus canadensis* (elk) and *Alces alces* (moose) comparative collections. Fragmented specimens without diagnostic markers fell into the unidentified mammal or bird categories. Epiphyseal fusion is a trait of mature individuals and resulted in the code of fused or unfused. Matching epiphyses and shaft specimens were counted as two separate specimens, while each specimen was also labelled with either a left or a right side. Descriptions were provided in the comments section for the portion of the identifiable elements that displayed additional modifications to the bone, using terms such as distal, proximal, vertebral number, oxidization, etc.

Each specimen was examined for evidence of processing through butchery. The term “chopmark” was applied to bone shaft specimens exhibiting shatter marks related to blunt-force trauma, occurring at either oblique or perpendicular striking angles, or to deeply incised, diagnostic V-shaped cross-sections indicative of perpendicular strikes to the bone shaft. When observed, saw marks and burned bone were documented and pathological conditions, when present, were also recorded in the comments section. However, other than in instances of osteoarthritis, the type and severity of the pathology was not further investigated.

Saw marks—for example, saw cuts down the spinal column—and chopmarks, made by a large metal blade that left deeply incised, V-shaped scars on numerous bones, are consistent with historical butchery practices. Marrow extraction was also observed through transverse breaks or saw cuts on the shafts of long bones (Maltby 2007: 4), along with spiralling perimortem fracture patterns and dynamic impact scarring (Karr et al. 2010: 221).

Partially burned bone within the assemblage, including specimens with black and grey burned sections, indicate temperatures ranging from 100 to 400°C, whereas grey/grey-blue coloured specimens show a burning temperature in the 500 to 600°C

range. Higher temperatures in the range of 700 to 1000°C result in heavily-calcined white specimens (Ellingham et al. 2014).

Table 4.3. Results of Faunal Analysis

Note: Fauna was excavated from the second-class compound, including the privies and the camp's canteen on the guards' side of the camp.

Total Specimens (NSP)	4047 NSP	
Mammalian	Common Name	NISP
Number of Identified Specimens (NISP)		1,251 NISP
Caprinae	Sheep, Goat Subfamily	743
Bovinae	Cattle, Bison Subfamily	438
Sus scrofa domesticus	Pig	35
Meleagridinae	Wild Turkey	8
Odocoileus hemionus	Mule Deer	5
Ursus arctos	Brown or Grizzly Bear	3
Gallus gallus domesticus	Chicken (Rooster)	3
Lepus americanus	Snowshoe Hare	1
Mustelidae	Wolverine Family	14
Urocitellus columbianus	Columbian Ground Squirrel	1

Within the assemblage, the sheep, goat subfamily, followed by the cattle, bison subfamily were the most common taxa. Pig, wild turkey, mule deer, bear, and chicken were present but in smaller numbers (Bartlett 2017; 2018). Anomalous elements from snowshoe hare, wolverine, and Columbian ground squirrel likely indicate bioturbation rather than human consumption (Bartlett 2018).

Table 4.4. Fauna Excavated from Privy 1 and Privy 2

Note: The majority of the assemblage (3858/4047 NSP) was excavated from the two privies located in the second-class internment compound.

Privy 1	Privy 2
Caprinae Sheep (NISP 196)	*Caprinae* Sheep (NISP 483)
Bovinae Cow (NISP 131)	*Bovinae* Cow (NISP 271)
Sus scrofa domesticus Pig (NISP 15)	*Ursus arctos* Brown/Grizzly Bear (NISP 3)
Maleagridinae Wild Turkey (NISP 8)	
Odocoileus hemionus Mule Deer (NISP 5)	

4.6.5. Cow

Information pertaining to the butchering practices and cuts of meat supplied to the prisoners can be deduced from the presence or absence of elements in an assemblage (Table 4.3). Those identified from the camp are divided into categories based on the respective body part (Mallard 2008). The absence of entire carcasses from the assemblage confirms that cattle were butchered off site. Government records state that the Burns Company and McLean's Store supplied the camp with cuts of beef (Report of the Auditor General 1916–19).

Table 4.3. *Bovinae* Meat Cuts Ranked According to the Retail Value of the Late 19th Century (Schultz and Gust 1983)

Meat Cuts	Ranking	NISP (131)	NISP (271)	% of Total	% of Total	Bone Type
Bovinae		Privy 1	Privy 2	Privy 1	Privy 2	
Short Loin	1	12	14	9.2	5.2	lumbar
Sirloin	2	7	3	5.3	1.1	sacral, distal lumbar, ilium
Round	3	6	4	4.6	1.5	femur
Rump	4	12	8	9.2	3	innominate, ischium, caudal
Chuck	5	8	80	6.1	29.5	scapula, thoracic vertebra
Arm	6					humerus
Cross Rib	6	26	48	19.8	17.7	
Brisket	7					
Neck	8	7	39	5.3	14.4	cervical vertebra, atlas
Foreshank	9	34	55	26	20.3	distal humerus, radius, ulna, carpus
Hindshank	9	19	20	14.5	7.4	tibia, hock, tarsus

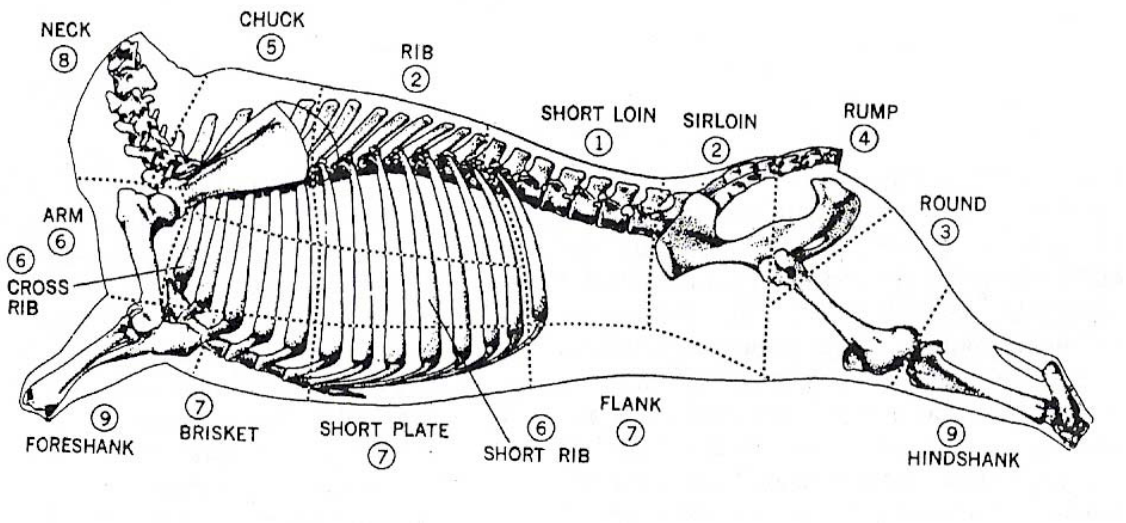

Figure 4.6. Late 19th-century secondary cuts of beef (ranked 1–9 according to retail value). Diagram from Schulz and Gust (1983).

Ranking of cuts of beef based on their monetary value in the late 19th century is instructive for this discussion (Schulz and Gust 1983). There are 15 cuts of beef, ranked 1 to 9 from most to least valuable (Figure 4.3). The faunal analysis indicates a 52% increase in total *Bovinae* bones excavated between Privy 1 and 2. Expensive cuts of meat decreased between 1916–17 and 1917–18, while the cheaper cuts increased around the same time period. For example, in 1916–17, 72% of the assemblage in Privy 1 consisted of low-quality cuts of meat whereas in 1917–18, the low-quality meat in Privy 2 increased to 89%.

Lumbar vertebrae were excavated from both privies. Cut marks on the lumbar vertebrae indicate they were either short loin cuts (the most expensive beef cut) or sirloin (the second most expensive cut), depending if they were from the distal end of the lumbar vertebrae. Short loin cuts decreased by 4% in Privy 2, while the sacral, distal lumbar, ilium chop and saw cuts also derived from sirloin steak decreased by the same amount in the second privy. Saw cut marks on the femur indicate the third most valuable beef cut, the round steak, which decreased by 4% as well. Chop and saw marks with innominate, ischium, and caudal bones are consistent with the rump cut, which decreased by 6% in Privy 2. The chuck, a middle-range cut of beef, ranked fifth in value. This includes the scapulae and thoracic vertebrae, which notably increased by 23% between 1916–17 and 1917–18. The atlas and cervical vertebrae relate to the second least valuable cut of beef, belonging to the neck region. Again, these poorer-quality cuts

increased by 9% from Privy 1 to Privy 2. One portion of the carcass that provides the lowest yield includes the fore and hind shanks, both rank last in the Schulz and Gust scale. Both privies contained tarsal and metatarsal bones. The *Bovinae* assemblage also showed a small age range, as all epiphyses were fused and exhibited no age-defining pathologies.

4.6.6. Sheep

Table 4.4. *Caprinae* Meat Cuts Ranked According to Retail Value

Meat Cut	Ranking	NISP (189)	NISP (519)	% of Total	% of Total	Bone type
Caprinae		Privy 1	Privy 2	Privy 1	Privy 2	
Loin chops	#1 Cut	18	55	9.5	10.6	lumbar
Rack of lam	#2 Cut	46	75	24.3	14.5	thoracic vertebra, rib
Leg of lamb	#3 Cut		22		4.2	femur,
Chump	Cheapest	10	22	5.3	4.2	sacral, ilium, innominate, ischium, caudal
Neck (scrag)	Cheapest	26	73	13.8	14.1	cervical vertebra, atlas
Foreshank (shoulder)	Cheapest	42	134	22.2	25.8	scapula, distal humerus radius, ulna, carpus
Metacarpus	Cheapest	6	30	3.2	5.8	
Hindshank	Cheapest	28	72	14.8	13.9	tibia, hock, tarsus
Metatarsus	Cheapest	13	36	6.9	6.9	

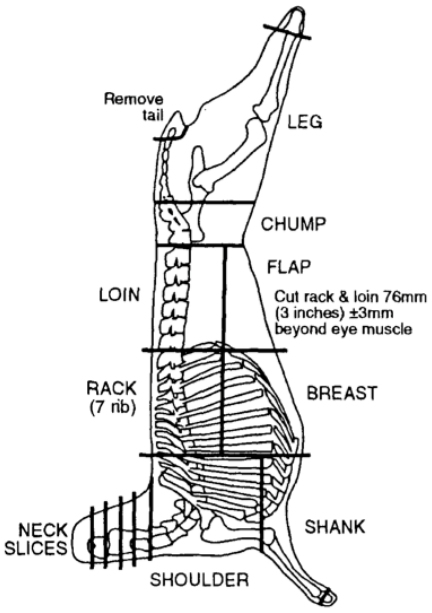

Figure 4.7. Cuts of meat (lamb).
Used with permission of the CFIA.

Both *Caprinae* (sheep/goat) and *Ovis aries* (sheep) were found in the assemblage. Most elements were identifiable at the higher taxonomic level of subfamily unless diagnostic indicators were present to classify them at the species level (Bartlett 2017; 2018). The government report does not indicate any goat being supplied to the camp, and the presence of *Caprinae* and *Ovis aries* in the assemblage seems anomalous (Report of the Auditor General, Sessional Papers, 1916–19). Although the government report documents mutton purchased for the internment camp, the faunal assemblage revealed a wide age range at time of death. Numerous juvenile specimens with unfused epiphyses, as well as fully fused specimens exhibiting signs of aging and pathology, particularly osteoarthritis, were present (Bartlett 2018).

Loin chop is the most expensive cut of lamb (Figure 4.4). Yet the lumbar vertebrae excavated from both privies indicate its presence (Table 4.4). The second most expensive cut of lamb, the rack, includes thoracic vertebrae and decreases by 10% between 1916–17 and 1917–18. The scrag, middle neck, chump, shoulder, breast, and hindshank are all considered lower quality and are the cheaper cuts of meat. The chump and hindshank values remain relatively unchanged between each privy assemblage. Unearthing the cervical and atlas vertebrae indicate cuts from the scrag and middle neck, while the scapula, humerus, radius, ulna, and carpus bones indicate the shoulder.

Each cut increased between 1916–17 and 1917–18. Bones such as metacarpus and metatarsus suggest the use of lower legs and hooves for soups. Similar to the cow fauna, there is a 64% increase in sheep bone from Privy 1 to Privy 2, with an overall trend of increasing amounts of cheaper cuts between 1916–17 and 1917–18 (67% to 71%).

4.6.7. Domestic Pig

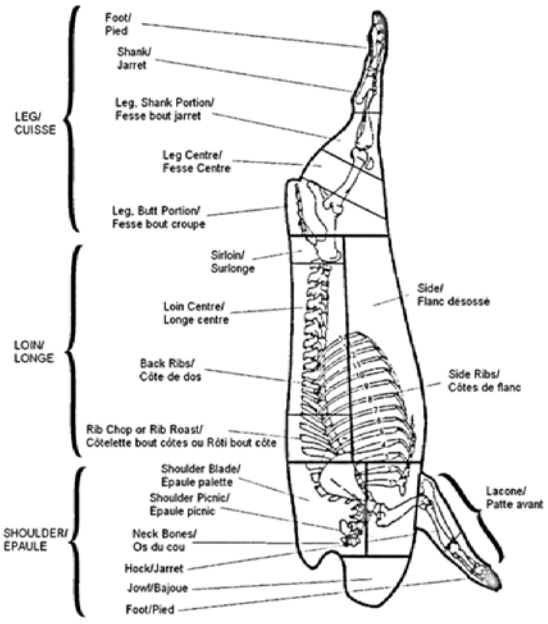

Figure 4.8. Cuts of meat (pork).
Used with permission of the CFIA.

Excavations in Privy 1 yielded domestic pig bones, including a single cervical vertebra, along with two scapulae, two humeri, six radii, and four ulnae. This assemblage included the pork shoulder and the picnic shoulder cuts (see Figure 4.5). The pork shoulder (butt blade) includes part of the neck, hence the cervical bone and scapula, and is a tougher meat because of the connective tissue. Both the picnic and butt shoulder cuts are among the toughest cuts of meat and are therefore regarded as the lowest quality and cheapest (BC Cook Articulation Committee n.d.).

Table 4.5. Wild Game

Mammalian	Common Name	Privy 1	Privy 2
Odocoileus hemionus	Mule Deer	NISP 5 innominate bone (NISP 1), femur (NISP 2), and phalanx (NISP 2)	
Maleagridinae	Wild Turkey	NISP 7 rib fragment, radius (NISP 2), ulna (NISP 2), and femur (NISP 3)	
Ursus Arctos	Brown or Grizzly Bear		2nd and 3rd metatarsals

Venison augmented the PoW diet in Morrissey (Table 4.5). Mule deer and wild turkey were excavated from Privy 1, while Privy 2 contained brown or grizzly bear bones (Bartlett 2017; 2018). Wild meats came into the camp and were processed there, since the faunal assemblage contained brown or grizzly bear metatarsals and mule deer phalanx. However, the prisoners were not hunters of large fauna themselves, since weapons were taken from them upon their arrest. A photograph (Figure 4.6) of local hunters supplying mule deer to the Morrissey camp on a sled shows that their diet was supplemented through the sale or trade of wild meat with local community members. It should be noted that the wild meat would not have been supplied by the camp's commandant (Canada's first national internment operations 1914-1920), since the AGWMA reports do not have any record of monetary exchange between the government and the local hunters for the wild meat supply.

Excavating around the canteen footprint yielded elements of wolverine (NISP 14) and Columbian ground squirrel (NISP 1), while we dug up bones of snowshoe hare (NISP 1) at the Big Building. Had the wolverine and Columbian ground squirrel been excavated from the prisoner compound instead of the camp canteen on the guards' side of the camp, one could propose that they may have been used to augment the prisoner diet. However, these taxa are known to displace archaeological sites with their complex tunnel systems and are rarely processed for food (Bartlett 2018), further suggesting that their presence post-dates the camp's closure.

Figure 4.9. Local hunters bringing a sled of mule deer into the Morrissey Camp. Photo courtesy of Jim Dvorak, reproduced with permission.

4.6.8. The Canteen

Excavations from the camp canteen revealed 67 animal bones, from which Sheep (9 NISP), Cow (7 NISP), Pig (35 NISP), and Domestic Chicken (3 NISP), were differentiated (Bartlett 2018). Seven cow bones were uncovered, including two lumbar vertebrae relating to sirloin cuts, a single thoracic vertebra, three scapulae that were part of the chuck, and a single cervical vertebra representing the neck cut. Of the nine sheep bones excavated, a single cuneiform, three metacarpals, two tibias, and three calcanea indicate consumption of the hind shank and lower legs. The canteen excavation also revealed six metacarpal and six phalangeal bones from a chicken. The presence of fauna in the canteen suggests that PoWs purchased additional meat cuts through the camp canteen with monies earned through internment labour.

Figure 4.10. Ossified spur on posterior shaft of Domestic Chicken tarsometatarsus.

The Domestic Chicken is an interesting anomaly, identified with two phalanges and a single tarsometatarsus, which exhibited an ossified spur along the posterior shaft (Figure 4.7). This is indicative of a male bird, as it becomes ossified when the cock is mature at one year old (Bartlett 2018). Domestic Chicken was not excavated from any other location in the camp, and the government reports further confirm that chicken was not provided, so this rooster is a unique find.

4.6.9. Soil Samples

One-litre soil samples were collected from each level excavated in the privies. Dr. Karl Reinhard at the University of Nebraska received the samples for analysis. Tests conducted in his laboratories found no macroscopic dietary residue, and microscopically no parasite eggs. Pollen was present, but this was environmental. Soil acidity typical of coniferous forests does not preserve macroscopic dietary residue and microscopic parasites well. Further confirmation of this was noted through the varying levels of taphonomy between the faunal specimens recovered from the same level; some were heavily degraded, with much of the cortical bone weathered away, leaving only the spongy trabecular bone, and others were almost completely intact (Bartlett 2017, 2018).

One possible explanation for this taphonomic variance is acidic soil corrosion occurring at variable rates due to groundwater flow (possibly from bioturbation) and/or pockets of acidity within the privy at the time of burial. A second possible explanation could be that these bones were buried at differing depths within the excavated level—the more degraded specimens being situated within the acidic boreal forest topsoil and the more intact specimens buried within the more benign subsoil (Pokines and Baker 2013). Acidic soil and/or groundwater corrode the smooth surfaces of the cortical bone, leaving a pockmarked and uneven appearance (Pokines and Baker 2013). Although fish was noted in the AGWMA Reports, acidic soil likely explains the absence of fish bones from the excavation (Report of the Auditor General, Sessional Papers, 1916–19).

4.7. Discussion

4.7.1. Food Tins and Alcohol

Food storage jars and tins for mustard, sugar, syrup, cocoa, chocolate, coffee, sardines, and corned beef were found in no other location on the internment grounds except the escape tunnel. Remarkably, in WWI Europe, British PoWs stockpiled similar high-calorie, easy to preserve and carry foods and used these as part of their escape kits (Wilkinson 2017: 145). Mustard is not on the War Appropriation ledgers, so prisoners must have had other means to acquire additional items. The food tins offer insight into the prisoners' diet, since items such as sugar, coffee, and chocolate were rationed in 1917, and little corned beef was brought into the camp. Items such as chocolate, cocoa, and mustard were available at the camp canteen and bought with monies earned through labouring or selling handicrafts to local community members. For instance, PoWs advertised clock and watch repairs and the sale of carved swagger sticks and other war souvenirs through the *Morrissey Mention* newspaper (Aug. 26, 1916). Records also show that tobacco was purchased through the camp canteen (LAC, RG 13, vol. 206, no. 1261). Alcohol prohibition began on October 1, 1917, coinciding with the limited number of beverage bottles excavated from Privy 2, which included the spirits brandy and whiskey. Privy 1, was dated to prior to prohibition and noted a significant amount of identifiable bottles that would have originally contained beer and other alcohol. Disposal of the bottles into the privies to avoid punitive action further supports the notion that they contained alcohol.

4.7.2. Faunal Analysis

Prisoners often complained about the lack of food and the poor quality of meat that arrived at the camp, which was sometimes rotten. The Consular of Switzerland, Samuel Gintzburger, conducted a camp inspection and in September 1917 reported:

> The cooks complain that the food supply is insufficient and that the beef often arrives in bad condition. They stated that two lots of beef, one of ten pounds and one of fifty-two pounds, had been returned as unfit for consumption but that the prisoners had not been refunded that amount of meat. This proved to be correct and the office responsible promised to have this matter rectified. It seems strange that a Consular Inspection should be necessary to have such matters remedied. If it had not been for

> my visit the prisoners would probably never have been credited with this sixty-two pounds of meat, which to them is a very important matter. The cooks assure me that the small allowance this Consulate is able to make to the prisoners makes a material addition to their food supply. I feel satisfied that if these men were not such good cooks able to prepare dishes which are nourishing and palatable the complaints in the matter of food would be far worse than they are. (Swiss Consul report, September 1917, LAC, RG6, vol. 765, file 5294)

In another note from Commandant J. Mitchell in Morrissey to the Staff Officer, Internment Operations, in Ottawa: “I do not consider it advisable to let the prisoners have scales in the kitchen. This is only asked for to enable them to check up on their rations as issued, and would lead to all kinds of trouble” (RG 6, vol. 765, file 5294).

The AGWMA reports document a 27,650-lb reduction in meat supplied to the camp between 1916–17 and 1917–18. Specifically, beef was reduced from 109,904 lb in 1916–17 (Privy 1) to 82,253 lb in 1917–18 (Privy 2). The same report indicated that mutton was reduced from 1,559 lb to 976 lb during the same period. This is significant since 80 additional PoWs were imprisoned in Morrissey in 1917–18. Interestingly, the excavations reveal an observable increase in *Bovinae* (52%) and *Caprinae*/*Ovis aries* bones (64%), since increasing lower-quality cuts of meat resulted in an increase in the quantity of bone. An increase in the quantity of bone-in meat, a cheaper cut, would hold a similar weight to a higher-quality cut of meat without bone. On paper, this would mask any significant reduction in the amount of consumable meat while also reducing food supply costs. Since the AGWMA reports only record the total weight of the various meats supplied to the camps, they do not provide an accurate account of the PoW diet.

It is impossible to discern from the faunal assemblage whether the meat arrived in poor or rotten condition, but an examination of the faunal assemblage can confirm a definitive increase in the cheaper cuts of meat and a decline in the better-quality meats as time went on. The majority of the PoW diet consisted of poor-quality cuts of beef, which increased 17.6% between 1916–17 and 1917–18 (71.7% to 89.3% of the total *Bovinae* assemblage). A similar trend was also noted with the lamb/mutton cuts, although on a smaller scale, with a 5% increase in the cheaper cuts of meat (66% to 71% of the total *Caprinae* assemblage). Mutton was also butchered at an advanced age, as demonstrated by osteoarthritis in some of the bones (Bartlett 2018). The presence of metatarsal and metacarpal bones suggests that poor-quality cuts with more bone and less meat, such as the hoof, began to replace finer cuts as internment progressed. Many

of the cow and sheep long bones also exhibited transverse breaks or saw cuts through the shaft of the bone. This butchery practice corresponds with the extraction of the nutrient-rich bone marrow, which added much-needed sustenance and aided in strengthening immunity (Drewnowski 2009).

Not only was there a reduction in meat supply, but the faunal assemblage and the AGWMA reports also demonstrate that the camp diet lacked variety. For example, during the four years that the camp was in operation, very few eggs were provided, and poultry did not enter the camp diet. Hence, it is not surprising that the prisoners were supplementing their diets with wild meats such as wild turkey, mule deer, and bear. Since PoWs would not have been able to hunt large game themselves, they likely augmented their diets with wild meat supplied through purchase or trade with local members of the surrounding communities.

Wartime voluntary rationing began in early 1917 and was imposed in June 1917. Rationed items included sugar, eggs, meat, butter, coffee, chocolate, wheat, beans, and dairy. Canadians were encouraged to increase fish, vegetables, and fruits in their diets (AGWMA reports 1916–19, LAC, RG 13, vol. 206, no. 1261). It is evident through both the AGWMA reports and the excavation that food reductions took place in Morrissey. Documentary evidence notes that food rationing was the main justification provided to PoWs for the decreases (Norton 1998).

According to the AGWMA reports, dairy (25 cases) was supplied in 1916–17, but for the remainder of internment, only evaporated milk was provided. A significant supply of bread was provided during the first year of internment, while flour was then added in the following years for the prisoners to bake their own loaves. Two cases of eggs were supplied in 1916–17, which would hardly have provided much to 160 prisoners, and eggs were not supplied again until the final year, 1918–19, when 76 dozen eggs were delivered; this still amounted to less than one egg per month per prisoner. As discussed above, by increasing the supply of bone-in and poorer quality cuts of meat, the internment operations would have been able to limit the meat supply without outwardly appearing to make dramatic reductions. Chocolate may have been ordered through the camp canteen but would have been in limited supply, since only two cans were excavated from the escape tunnel and none were found elsewhere in the camp. Notably

bacon, sugar, and butter were never rationed within the camp, and although the supply of bread loaves ceased, flour continued to be brought in.

Finally, although reading the AGWMA reports and analyzing the amount of food provided to the prisoners may give us an idea of the types of foods consumed, it does not constitute clear evidence pertaining to the quality and quantity of foods consumed. PoWs complained throughout their imprisonment about the lack and poor quality of food entering the camp. Unfortunately for them, on paper, the AGWMA reports showed conformity to the rules of the 1907 Hague Convention. For example, during the second year of camp operation, 110,000 lb of meat were brought in to feed approximately 160 PoWs. This appears to be an exorbitant amount, averaging 1.9 lb of meat per individual per day. The prisoners' complaints would therefore have appeared baseless.

It is important to acknowledge the discrepancy between the small sample size of fauna excavated from the privies in relation to the 110,000 lb of meat served to the PoWs in 1916/17. However, privies typically contain faunal assemblages that are not similar to other areas of a given site. Driver (2004) proposes that fauna excavated from privies represent food waste gathered directly from the table rather than kitchen waste. Hence, the presence of low-value bones in the privies does confirm that quite poor cuts of meat (with bone-in) were being served to the PoWs. Without the faunal analysis to offer insight into the types of cuts provided, the quality of the meat (hence, the total amount of meat in proportion to bone), and the mature age of some of the specimens, one would have assumed that the prisoners were fed extremely well. Notably, since bacon, sugar, beans, and fats (butter, oleomargarine, and lard), items on Canada's food ration list, were not limited, it is quite likely that sugar and fats were used to supplement what was otherwise lacking calorically in the prisoners' diets. Furthermore, rationing only specific items on the Canadian list was likely a ruse used to cut camp costs while appearing to adhere to the 1907 Hague Convention, rather than a genuine attempt to follow Canada's food rationing rules.

4.8. Conclusion

Excavations and faunal analysis were undertaken at the Morrissey WWI Internment Camp and compared to the Canadian AGWMA Reports to determine how well the Morrissey PoWs were fed. Prisoners commonly complained about the poor diet

and lack of food. Although the government's ledger noted a limited variety of foods, they appeared to be provided in fair amounts, given war-time rationing.

Excavation of food tins at the camp provided insight into a variety of foods that continued to be supplied even when they were on Canada's rations list. The faunal analysis determined that an increase in lower-quality, bone-in meats meant that the "meat weight" on paper appeared adequate and therefore raised no flags in terms of the laws of the Hague Convention, whereas in fact, the food supply to the prisoners was significantly reduced through this practice. Wild game supplemented the prisoners' diet and offers additional evidence that the diet was inadequate. The results from this excavation not only offer insight into the diet of the Morrissey internees but can be applied more generally to the Canadian Internment Operations as a whole.

Chapter 5.

Examining Acts of Resistance at the Morrissey WWI Internment Camp

In 1914, the implementation of the War Measures Act suspended the civil liberties of those living in Canada who at the time were regarded as enemy aliens. Mass arrests without charge or trial followed the suspension of these civil liberties and led to the internment of thousands of immigrants who had been invited to Canada to homestead along the Canadian Western Frontier (Kordan 2002: 60; Minenko 2018 11-18). It would seem only natural that these PoWs undertook acts of resistance under such unjust circumstances. This paper uses the historical and material record to explore the various resistance activities initiated by Morrissey internees, most of whom were civilians, to help mitigate the power struggles associated with forced confinement.

The Morrissey internment camp, located 14 km southeast of Fernie in southeastern British Columbia (BC), Canada, was in operation from September 28, 1915 to October 21, 1918. Morrissey was one of 24 internment camps that housed enemy aliens from the multinational Austro-Hungarian, German, and Ottoman empires as PoWs on Canadian soil. Canada's first national internment operations began in 1914, and some of the 8,579 prisoners were interned for almost two years after the Great War had ended. Only 3,100 of the interned prisoners could be loosely considered true PoWs, while the remaining were civilians, and some were even Canadian born or naturalized British subjects (Luciuk 2001: 6). The prisoners were divided into confinement and labour camps based on prisoner class and nationality. Germans held in confinement camps were considered first-class prisoners, while Ukrainians and other Europeans from the Austro-Hungarian and Ottoman empires were regarded as second-class prisoners and therefore placed in labour camps (Morton 1974).

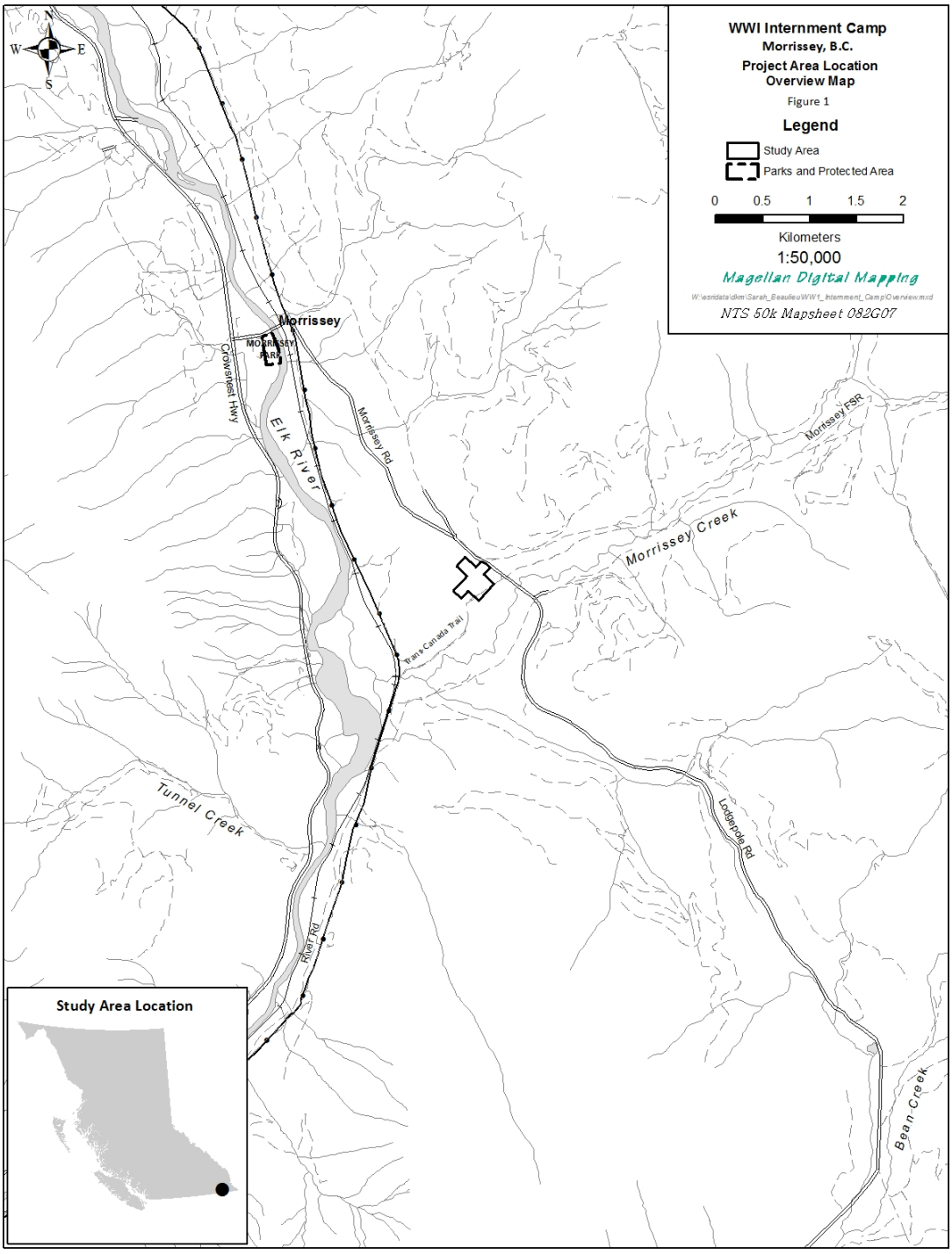

Figure 5.1. Morrissey Internment Camp Site Location Within British Columbia.
Note: Map courtesy of Magellan Digital Mapping.

Fear, prejudice, patriotism and increasing unemployment at the start of WWI lead many communities across Canada to refuse to work with the German and Austro-Hungarian population. The Coal Creek miners in the Fernie area, went on strike on June 8th, 1915, refusing to labour side-by-side with the enemy alien population. With the strike continuing into the early hours of June 9th, William Bowser, B.C.'s acting premier was notified of the increasing unrest. In response to the strike action, the provincial government began interning all unmarried German and Austro-Hungarian miners as well as married men whose families remained in Europe. The unpopular provincial government hoped that by increasing employment opportunities for deserving men and returning the communities to their peaceful ways, would help to increase their approval ratings (Norton 1998:69). However, the local German and Austro-Hungarian coal miners were not regarded as a threat to national security and thus the Federal government considered Fernie's internment camp an illegal operation.

However strike action at Hillcrest, Alberta, on June 15th, and at additional surrounding mines caused the Federal government to take over the Fernie internment camp under the umbrella of Canada's first national internment operations since any potential disruption to wartime coal production could hold dire consequences for the war effort. The Fernie ice rink had been hastily converted into a confinement area but was not ideally suited for long-term internment. The Crows Nest Pass Coal Company, anxious to make up for lost revenues due to the abandonment of their unproductive Morrissey coal mine, proposed leasing the mining town's vacant buildings to the Federal government at low cost. On September 28, 1915, the Fernie prisoners were transferred to the permanent internment camp in Morrissey (Beaulieu 2015).

In 1916, Canada's obligation to increase its military presence overseas created a labour shortage on the home front. Subsequently, many of the internees were paroled under the condition that they remain employed. Although the parolees would have earned higher wages as private citizens, their parole was granted under the order that they work at a fixed rate of pay equivalent to a soldier's wage. They could work for private businesses, railway companies, and all levels of government (municipal, provincial, and federal). This internee parole system greatly supported businesses lacking in manpower while enabling the closure of many of the internment camps across Canada (Luciuk 2001). Although the German prisoner population had been initially confined in separate camps, the camp closures resulted in the amalgamation of first-

and second-class prisoners of different ethnicities within the same camps. In Morrissey, the increased German prisoner population forced the restructuring of the camp, and a separate first-class compound was erected (RG 6, vol. 765, file 5295). The Consul of Switzerland, Samuel Gintzburger, responsible for the oversight of the prisoners, documented numerous accounts of mistreatment, including the poor-quality food, forced labour, and inadequate heating, in the second-class compound's living quarters (RG 6, vol. 765, file 5294). Germany warned the Canadian and British governments that retaliatory treatment against Canadian and British PoWs on German soil would be swift should camp conditions not improve (Luciuk 2001; Norton 1998).

The order-in-council of October 28, 1914 established that enemy aliens of both civilian and military status would be considered PoWs during the Great War (LAC, Department of Justice Files, 770/15; Minenko 2018: 11–18). As PoWs, the internees fell under the protection of the 1907 Hague Convention, to which the Dominion Canadian government was a signatory. A clause in the 1907 Hague Convention stipulated that military personnel could labour for the country of their capture, providing the work did not benefit the war effort (Kordan 2002: 60–66). This proved to be highly beneficial for the Dominion Canadian government, which needed to fund the internment operations and could thus do so by extracting labour from the prisoners (Francis 2008; Morton 1974; Waiser 1994). As civilians cognizant of their non-military status and confused by their classification as PoWs, many protested the forced labour in the camps (Norton 2017). Even after death, civilian internees made a point of engraving the civilian status of their fellow prisoners onto the grave markers, as noted in the Morrissey Cemetery (see Figure 5.1)

Figure 5.2. Grave Marker of Harry Smeryczanski noting "Civil" Prisoner of War
Note: Fernie Historical society photograph, reproduced with permission 0984.

5.1. Research Methods

One of the most striking, yet troubling, features of internment sites is their physical ephemerality. The very term "camp" conveys the temporary nature of internment (Myers and Moshenska 2011). In a similar vein, the Morrissey camp was completely dismantled upon its closure in 1918 (Morton 1974; RG 24, vol. 4661, part 2), and at the start of the excavation, the stone walls from the basement of the second-class PoW living quarters remained the only visible footprint. Fieldwork within the grounds of the internment site involved surveying, mapping, the deployment of ground penetrating radar (GPR), and excavation. A preliminary reconnaissance of the site included a walking traverse and collection of surface artefacts. Maps and aerial photographs were analyzed, in addition to the use of remote sensing methods such as metal detection and GPR. Sub-surface anomalies were recorded from shovel and auger tests, conducted at five-meter intervals, and excavations were undertaken where concentrations of material culture were noted. A comparison of the material culture with historical plans of the camp (RG 24, vol. 4661) allowed me to locate the first- and second-class prisoner compounds, the prisoners' living quarters, the exercise yard, and the privies, as well as the camp canteen and several building footprints of the guards' quarters. One- and two-metre

excavation units were then placed at the locations of the German first-class prisoner living quarters and the camp canteen, on the guards' side of the camp. Units were also placed inside the second-class compound in the living quarters known historically as "the Big Building," as well as the escape tunnel and two privies. Screening was conducted through quarter-inch mesh, and the artefacts from each unit confirmed the identification of these specific locations in the camp.

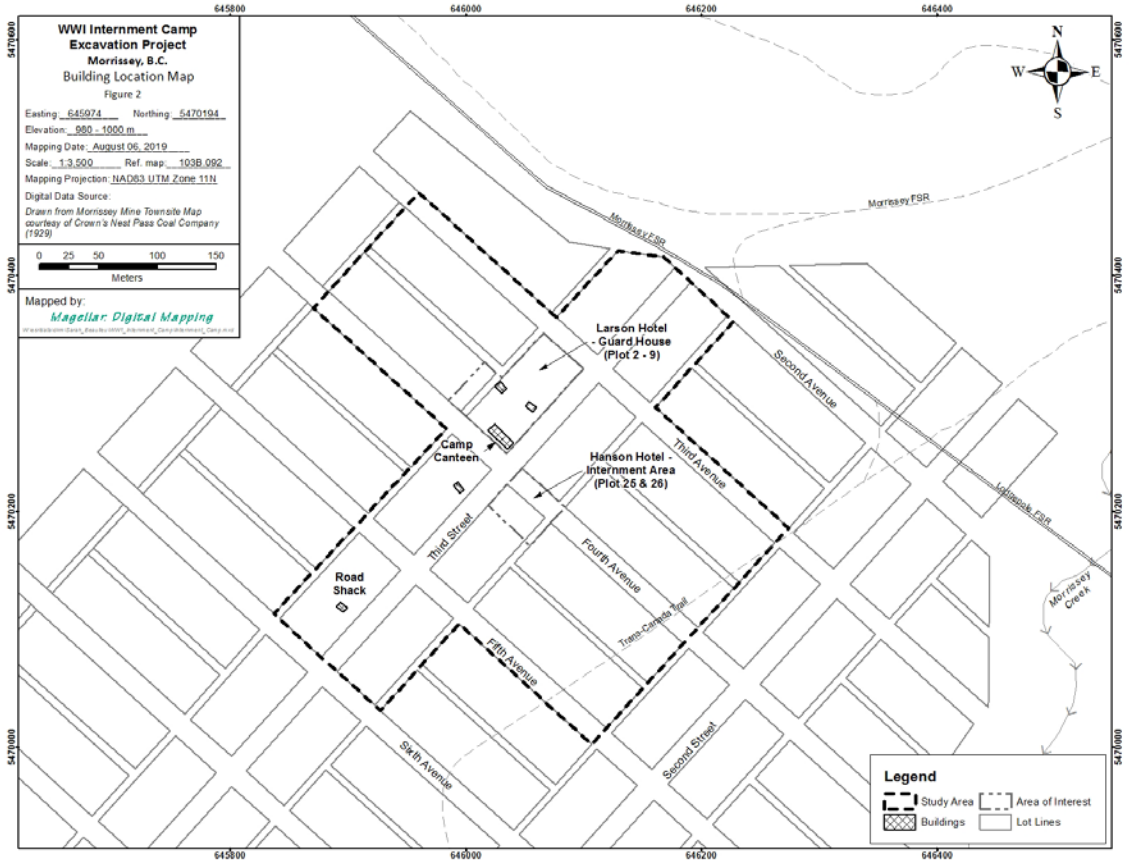

Figure 5.3. Map of Morrissey Internment Camp Site Location Within the Context of Morrissey's Abandonned Mining Town.

Note: Map courtesy of Magellan Digital Mapping.

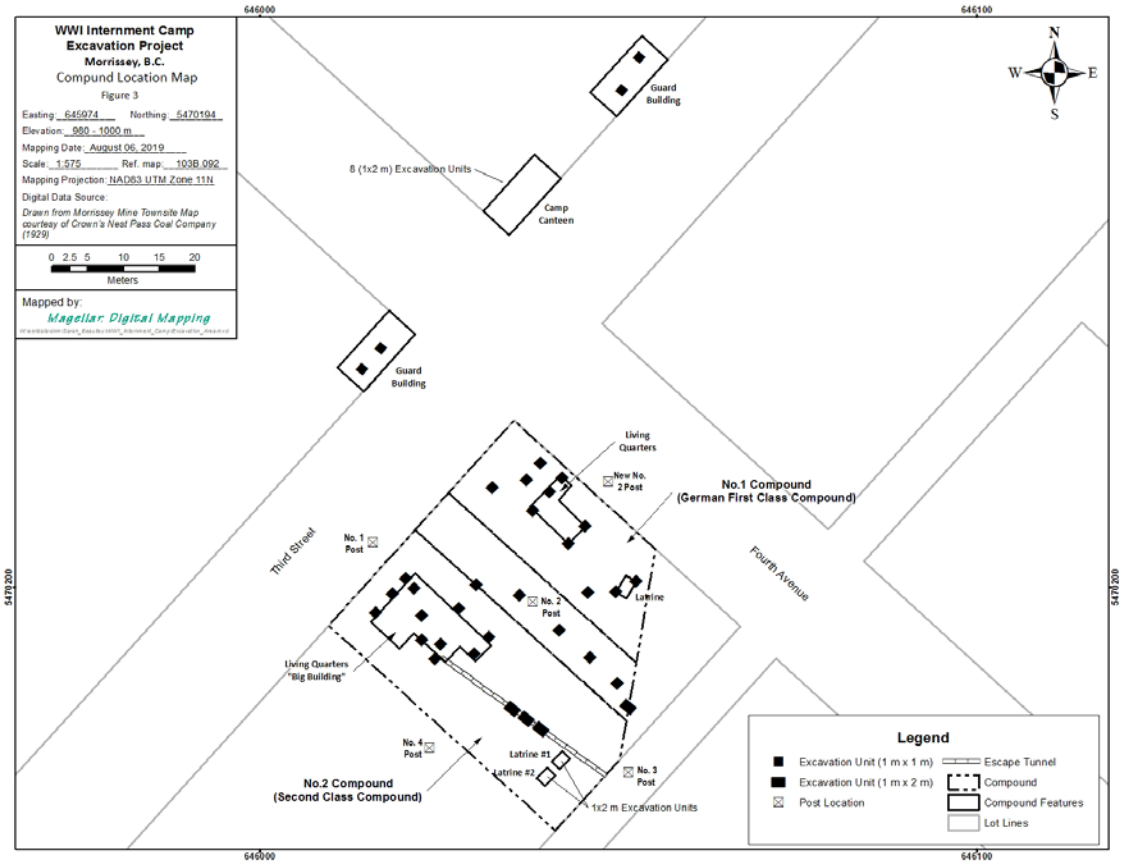

Figure 5.4. Map of Morrissey Internment Camp Excavation Area.
Note: Map courtesy of Magellan Digital Mapping.

5.2. Attitudes Toward Captivity

In general, WWI prisoners of war had conflicting attitudes toward captivity (Wilkinson 2017:136). Some viewed capture as the "termination of combat" and therefore accepted their terms of imprisonment, while others viewed captivity as yet another form of combat. Prisoners with a long military service record were more likely to accept their terms of imprisonment than those who had not, and this acceptance reduced the likelihood of resistance activities. In addition, older, more seasoned officers had a tendency to view resistance activities such as escape as childish and ungentlemanly (Wilkinson 2017:138–139). PoWs who viewed captivity as a continuation of combat would continue their resistance activities with the intention of returning to the front line. For these prisoners, resistance helped mitigate feelings of guilt, shame, and dishonour associated with capture (Waltzer 1969).

PoW forms of resistance can be classified as either passive, direct, or principled. Passive resistance involved symbolic protests, not necessarily to create change but instead to boost morale (Scott 1990:192–197). Conversely, with direct resistance, the very act of resistance generated the intended end result (Ursano and Rundell 1995:438–439). Sabotage and escape were the quintessential forms of this type of resistance. With principled resistance (Giddens 1997:93), the specific resistance act generated a secondary response, and it was the result of this secondary response that the PoWs hoped to achieve. In this case, PoWs were most often trying to effect a change in prisoner treatment.

Principled resistance in internment camps became more nuanced as part of a "dialectic of control" (Giddens 1979:93) wherein an uneven power struggle unique to internment occurred. Hence, resistance activities were not necessarily undertaken out of a sense of patriotic duty and indeed were more often simply a means to a specific end: to improve camp conditions. At Camp Douglas on the Isle of Man, for example, German civilians in WWI rioted in protest against the camp diet. Five men were killed and 19 injured when the British guards opened fire (Mytum 2013:169–186). More often than not, riots and revolts resulted in such dire consequences. Corporal or even capital punishments were handed out to the ringleaders, so it became more common for prisoners to strike rather than revolt (Doyle 1994). Strikes were staged when, for example, labour was too difficult and/or the hours too long, or when camp conditions and food were inadequate.

An interesting example of officers "striking" occurred at the Holzminden PoW camp in Germany during WWI. After a mass escape, the commandant punished the remaining prisoners. However, the German guards depended upon high-ranking British officers in the camp to preserve order amongst the PoWs so that fewer guards were required and German manpower was not diverted from the front line. Aware of this power balance, the British officers renounced control of their men, who then ignored all military discipline. As chaos ensued, the Germans conceded by relaxing their punitive actions, so the British officers reinstated camp order (Wilkinson 2017:145).

Avoiding work, known as "dodging the column," was a common form of resistance amongst second-class prisoners. Internees commonly feigned illness, inflicted wounds upon themselves, hid in their barracks, or pretended not to understand

orders to avoid the physical demands of forced labour. Doing so provided rest and boosted prisoner morale (Luciuk 2001:24; Wilkinson 2017:147).

5.2.1. Escape

Due to the Hague (1907) and Geneva Conventions (1929, 1949), first-class prisoners were not required to work in the camps and thus had plenty of spare time to plot. Second-class prisoners, provided with fewer calories and forced to engage in labour, lacked the time and energy to plan escapes. These prisoners were more likely to risk escape only once camp conditions became dismal. Although working camps provided more opportunities for escape, as prisoners worked outside the barbed wire, the risk of recapture and the resulting punitive action, which could include shipment to harsher work camps, deterred many (Wilkinson 2017:141). Hence, “escape became a luxury that many second-class prisoners could ill-afford” (Wilkinson 2017:146).

Escapees aimed to make a “home run”—that is, to return to their country. Successful escapes were uncommon; during WWI, less than one percent of all British PoW escapes were successful, with 0.5% being officers and 0.3% being other ranks (ORs) (Wilkinson 2017:146). Once free, prisoners risked travelling through enemy territory for days or even weeks before reaching safe soil (Waltzer 1969; Wilkinson 2017). Escape was even more difficult for those imprisoned in remote areas or completely removed to another continent. In general, success required the maximum interval of time between escape and the discovery that prisoners were missing. Hence, escapes most often took place after the evening roll call. Legitimate activities frequently provided a cover for forbidden ones; for example, PoW plays and concerts could distract and occupy the guards, allowing other internees to get away. Some men escaped “out the front door,” boldly walking out the front gates disguised as guards or civilian labourers (Early 2013:95–115). Escape “over the wire” usually occurred under cover of darkness (Myers and Moshenska 2013).

Escape “under the wire” required a vast amount of time and energy, not only to dig the tunnel but to prepare for travel upon reaching the other side of the barbed wire: stockpiling food supplies, increasing physical fitness and endurance, acquiring civilian or military clothing, reading maps and memorizing escape routes, procuring essential

escape tools such as compasses, wire cutters, and language translation books—and keeping everything concealed from the guards (Wilkinson 2017:147).

Portable, high-calorie foods such as chocolate, malted milk tablets, biscuits, and meat lozenges were stockpiled at Holzminden (Wilkinson 2017:145), with similar practices undertaken at other camps (Myers 2013:4). Prohibited items were sent to prisoners in care packages mailed from family members and humanitarian organizations such as the YMCA, the Red Cross, and even MI9 (Mackenzie 2008:330). Family members would hide compasses in jars of fruit or bake maps and wire cutters into cakes and loaves (Wilkinson 2017:145). During WWII, silk maps were hidden in Monopoly games provided to downed British airmen in Germany. Under the guise of fake charitable organizations such as the Licensed Victuallers Prisoners Relief Fund, the Allies provided escape kits that included compasses, metal files, currency, and maps (Garber 2013).

During WWI, PoWs did not receive official guidelines regarding their responsibilities in captivity. Hence, expectations as to whether they should engage in resistance activities and attempt escape were vague. Only toward the end of WWII would such guidelines come to fruition (Mackenzie 2008:330). Although the Great Escape (Stalag Luft III) is the most famous of PoW escape accounts, two other internment camps were equally notable for their escapes: Holzminden (WWI; Durnford 2014) and Colditz (WWII; Mackenzie 2004). During WWII, 32 escapes were attempted from Colditz, a camp notorious for its impenetrability; only 15 were successful (Mackenzie 2008:333). In November 1917, 60 officers at the Holzminden camp dug an escape tunnel. After 29 officers had made it through, the tunnel collapsed on the 30th. Ten made home runs, but the remaining 19 were recaptured and returned to Holzminden (Durnford 2014). The post-war accounts of this escape provided the foundations for PoW patriotic resistance acts, particularly the tunneling that took place during WWII.

5.3. Archaeological Excavations at Stalag Luft III and Camp 198

Archaeological excavations and geophysical surveys are becoming more common at internment sites, especially those with known escape tunnels. The latter

include the Ponar extermination site in Lithuania (Birnbaum 2017), the Andersonville Civil War Prison in the USA (Prentice and Prentice 2000), Stalag Luft III in Zagan, Poland (Doyle et al. 2007; Pringle et al. 2007), and Camp 198 in the UK (Reese-Hughes et al. 2016). This research contributes to a more in-depth knowledge of escape through the artefacts left behind, adding insight into specific tunneling characteristics: dimensions (length and depth) and directionality, shoring techniques, types of wood and tools acquired and used, and soil dispersion methods. Artefacts can also enable a more nuanced account of the preparation that went into escape planning beyond simply digging tunnels, including examining the items required to make a successful home run: escape kits, food reserves, civilian and military clothing, forged identity documents, and personal items. In this section, I look in more detail at two internment sites: Stalag Luft III—site of the code-named Tom, Dick, and Harry tunnels—and Camp 198.

Stalag Luft III was specifically constructed to deter prisoner escape. The site's sandy soil, yellowish on top and lighter below the surface, made it easy to detect tunneled soil dispersed across its surface. The barracks were raised 60 cm above the ground to further deter tunneling. The Tom tunnel was discovered in 1944, while the location of the Dick tunnel proved impractical for escape and was thus instead used for soil storage, tools, and shoring workshops for the Harry tunnel. Harry was the infamous "Great Escape" tunnel through which 200 PoWs hoped to make their getaway, although only 76 succeeded prior to its discovery. Fifty PoWs were recaptured and shot and 23 were shipped to other camps; only three made it back to Allied territory (Brickhill 1950; James 1983).

Subsequently, Dick became the focus of research, as the guards had destroyed the Harry and Tom tunnels. In 2003, an archaeological investigation of Stalag Luft III was undertaken to locate the gallery and entrance of the Dick tunnel. Magnetometry and GPR were conducted, and it was discovered that an estimated 100 additional tunnels had been dug at the same site (Doyle 2007). Because the area was densely forested, conventional surveying could not be conducted; instead, measuring tapes were used and bearing information recorded to build a proper site map. The identification of specific buildings led to an accurate map, likely the first survey since the camp's construction (Doyle et al. 2007; Pringle et al. 2007).

Excavation of the entrance trap door, hook, and runner confirmed the tunnel's entry. Additional excavated artefacts including a mutton-fat lamp, porcelain electrical light fittings, and shoring from bed slats, shedding light on the sophistication of the PoWs' tunneling activities. Evidence of document forgery was uncovered with the discovery of a rubber disk stamp cut from a boot heel and bearing a Wehrmacht eagle carved into it. An escape kit was unearthed from beneath the floor in Hut 122, where Dick was located. The kit included a civilian-style coat, buttons, a glass marble, a checker piece, a toothbrush, a mess tin pan, and a German language book (Pringle et al. 2007). The escape kit and fake stamp bear witness to the extensive preparation required to survive the journey through enemy territory; tunneling was only part of the battle.

Allied escape tunnels are prominent in the literature, but very little research has focused on Axis escape tunnels. We have few written accounts even about the largest escape of German PoWs, which took place at Camp 198 in Bridgend, South Wales, UK. In March 1943, 83 German PoWs escaped via a tunnel dug under Hut 9. They were later recaptured, none having made it back to Germany. As at Stalag Luft III, tunnel soil dispersal proved problematic since the soil beneath the surface was a lighter colour than the topsoil. PoWs at Camp 198 mitigated the issue by building a false wall in the washroom of the internment quarters of Hut 9 to store the majority of the soil. When Rees-Hughes and colleagues conducted their investigation in 2016, the false wall remained (Rees-Hughes et al. 2016).

They undertook remote sensing methods to gain further insight into the Axis PoWs' tunneling construction methods and materials. GPR, magnetic gradiometry, electrical resistivity, and ground lidar surveys were undertaken to confirm the tunnel's directionality (0.8 m x 0.8 m). The tunnel contained shoring made out of wooden bed legs. From its opening in Hut 9, the tunnel remains intact for six metres then is filled with soil—presumably having been back-filled once discovered (Rees-Hughes et al. 2016). Although the escape attempt was unsuccessful, the ingenuity of the false wall and the tunnel's similarities to others in terms of size and shoring material add to our growing information on the subject.

5.4. Resistance in WWI Canadian Internment Camps

The Canadian World War I Internment Operations historical records note numerous escapes across Canada's 24 internment camps. Since these prisoners were regarded as enemies of the British Empire, this research provides an opportunity to further investigate Axis prisoner resistance and escapes. Resistance activities in various forms took place at all of the internment camps across Canada. For example, at the Kapuskasing internment camp, in Ontario, a full-scale riot broke out between 900 to 1,200 prisoners and 300 guards, leaving one prisoner dead and 11 injured (Luciuk 2001:24; 2006:8). PoWs sent from Ontario to Nova Scotia to work in the local mines and steel mills went on a hunger strike until their demands to be sent back to Ontario or Austria were met (Luciuk 2006). Hunger strikes and work refusals were also noted at the Jasper and Yoho internment camps, among others (Gilbert 2011; Kordan 2002; 2016).

Escape proved challenging in the Canadian camps, as most were purposefully located in extremely isolated regions, such as the Spirit Lake Camp in the Abitibi region of northern Québec (Kordan 2002). The Internment Operations records note that during WWI, six men were shot and killed while attempting to escape: two died escaping Amherst internment camp in Nova Scotia, and one each died at the Montréal, Spirit Lake, Brandon, and Capreol internment camps. Dire camp conditions, forced labour, lack of food, and lack of proper winter clothing drove many prisoners to successfully escape from the Jasper, Castle Mountain, Kapuskasing, Lethbridge, Amherst, Munson, and Morrissey internment camps (Kordan 2016; Luciuk 1988; 2006; Waiser 2013).

The majority of escape attempts took place over or under the wire, with only four camps in western Canada known to have contained escape tunnels: Yoho Field, Vernon, Lethbridge, and Morrissey. At the Vernon internment camp, German prisoners made a successful escape by digging under the camp kitchen through to the neighbours' yard (VW 1916). At Lethbridge, six first-class prisoners made a successful escape using kitchen utensils to build a sophisticated 110-foot tunnel that included a mine fan and a sled for dirt removal. A second, nearly completed, tunnel was discovered in the second-class compound (Kordan 2016:158). At the Yoho Field internment camp, prisoners used a shovel and cutlery from the mess hall to dig a tunnel, hiding the dirt under the PoWs' beds. This tunnel was also discovered prior to the escape attempt (Waiser 2013). The Morrissey escape tunnel was dug in the second-class compound and was near

completion when discovered. I will now discuss the resistance activities at the Morrissey camp in more detail.

5.4.1. Principled Resistance

Military documentation of the punishments meted out to prisoners who did not comply with camp orders provides insight into the types of principled resistance undertaken by the Morrissey PoWs. Prisoners most commonly went on strike, refusing to labour when the guards and their families were to benefit from prisoner work. The rules of the 1907 Hague Convention stipulated that officers and first-class prisoners could not be compelled to labour except in the interest of their own hygiene or comfort. On October 5, 1917, German prisoners managed to smuggle out a letter to Samuel Gintzburger, a representative of the Swiss Consulate, in which the prisoners protested against the labour expectations imposed upon them:

> We continue to split wood for the bathrooms and kitchen. We have never needed any body [sic] to tell us to do such work. But as you Sir have told us in your letter, that we are expected to go out here into the woods and saw down the trees for fire wood, or to pick out potatoes for us, the soldiers and their families, which according to Capt. Mitchell's view is all classed as camp work we must say that quite a few of us prisoners are of a different opinion. If we can be forced to get the fuel for the camp, the Military authorities would also have the right to force us to go down into the coal mines and dig the coal for the camp as such is used here and was the case at the Lethbridge Camp. You must remember Hon. Sir, that we are not military prisoners, we have not "auf Guards und Unguarde" surrendered, in fact, we have never had a chance to shoulder a rifle to fight for our beloved "Vaterland." (RG 6, vol. 766, file 5610)

The German prisoners evidently went on strike at around the same time that the second-class prisoners were tasked with cutting wood for the first-class prisoners but refused. The guards were then forced to cut wood for the first-class prisoners and began requesting work releases, viewing this work as beneath them. The letter writers also told Gintzburger that refusal to work led to punitive action:

> In many cases the refusal to work would be followed by physical coercion on the part of the guards, resulting in protests by prisoners and strong language, the consequence being aggravated punishment. In one case Prisoner of War No. 258, Wilhelm Schneider, was sentenced to five months' hard labour in Nelson Jail, for refusing to obey an order and using obscene language toward Sergt. Major Bryant. (RG 6, file 5295, Swiss Consul Visit to Morrissey 1917–18)

Prisoners were also punished for statements made in letters sent through the normal channels. On March 6, 1917, PoW 393, F. Von Appen, was given 48 hours in solitary confinement for writing the following in a letter addressed to Miss Elizabeth Hoch:

> You do not need to send me literature of any kind, because the Censor won't pass it on, the Canadian newspapers do not tell us the truth, but only filled with lies, I may write something more but it is no use. The Censor cuts everything out. Sometime I will explain [to] you personally everything. (LAC, RG 6, vol. 765, file 5294).

It was common for prisoners to feign illness to gain a reprieve from the grueling camp labour. Camp records note that Morrissey prisoners were punished for lying in their beds during the day even when the prisoners claimed legitimate illness. On numerous occasions and even when the court records note blatant evidence of violence against prisoners, the guards were acquitted (LAC, RG 6, vol. 765, file 5294):

> The civil prisoners at the Morrissey Camp are not allowed to laydown [sic] on their bunks during the daytime, even if they feel ill, tired or hungry, without a permit of the medical sergeant, who gives his opinion whether the prisoner is sick or not. Prisoners found on their beds at daytime, were punished with as much as 6 days in the cells at half rations and in spite of their feeling unwell immediately arrested and forced to do humiliating work for the guards in the guardroom. Anybody refusing to do this was treated with bodily punishment. (Doskoch 1993; LAC, RG 6, vol. 765, file 5294).

5.5. Material Evidence of Resistance at Morrissey

5.5.1. Passive Resistance

Symbolic and cultural resistance were just as important in the camp, staving off depression and boosting camp morale while avoiding solitary confinement (Carr 2011; Myers and Moshenska 2013). For example, PoWs openly made art expressing their support of the German cause (LAC, RG 6, vol. 756, file 3380).

Figure 5.5. Life preserver framing ship painting: SM Boot G.134 Torpedo. Morrissey Internment Camp (LAC, RG 6, vol 756., file 3380).

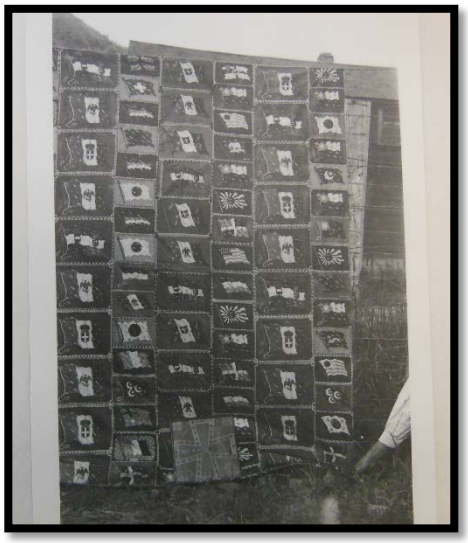

Figure 5.6. Patchwork quilt decorated with flags, the majority being of Entente or neutral powers. Note the large iron cross at the bottom. Morrissey Internment Camp (LAC, RG 6, vol. 756, file 3380).

An art piece representing a life preserver as a frame for a painting of a sailboat (Figure 5.2) reads “S.M. Boot, G.134, Torpedo” (LAC, RG 6, vol. 756, file 3380). The G134 was a German S90-class large-torpedo boat built in 1906, repurposed and relabeled T134 in September 27, 1916 (Gardiner and Gray 1984). It was fitted with both torpedoes and cannons to contribute to the German war effort. Whether the PoW was a mariner who had served on this ship or made it for someone who had, there is a definite link to this class of German warship, making it likely that this particular prisoner was a

combatant rather than a civilian PoW. Framing the painting with this specifically labeled life preserver was a way for the PoW to create something tangible that was continuous with his life prior to internment and clearly demonstrated support for Germany and the Central powers.

Support for the German cause is also notable in a patchwork quilt made by PoWs and patterned with international flags (Figure 5.3). The majority of the flags represent either the Entente powers or neutral countries: Belgium, Chile, Denmark, Egypt, Greece, Italy, Japan, Switzerland, and the United States. Of the central powers, 15 of the flags represent Austro-Hungary, a single flag is for the Ottoman Empire, and two are for Germany. Given that the majority of the prisoners in Morrissey at one point were from the Austro-Hungarian Empire, the quilt likely was regarded as a symbol of national pride or cultural representation rather than a threat. However, both German flags are placed in one of the centre rows—the smaller flag at the top of a row and the largest flag on the quilt, an iron cross, at the bottom of the quilt, spanning most of two rows. It is also interesting to note the absence of Canadian and British flags.

5.5.2. Direct Resistance

Figure 5.7. Modified spike. Location: Second-class compound, Privy 2.

Figure 5.8. Drilling cartridge modified with blade. Location: Second-class compound, Privy 1.

Figure 5.9. Pocketknife handle, blade missing. Location: Second-class compound, Privy 2.

In the archaeological record, material signs of contraband, solitary confinement cells, and escape remain some of the most tangible evidence of resistance (Myers and Moshenska 2013). At Morrissey, sharp objects were confiscated from prisoners when they arrived at the camp, but a pocketknife, modified spike, and handmade blade were excavated from the privies (Figures 5.4–5.6). The modified spike likely was an escape tool used to loosen fence staples holding barbed wire in place, since escape over the barbed wire was common in Morrissey (RG 24, vol. 4661). The cartridge modified into a knife was traced back to the Deutsche Waffen U. Munitions Fabrike, in Karlsruhe, Germany and was used with the Drilling, a three-barreled hunting rifle popular in both

Germany and the Austro-Hungarian Empire (Canadian Museum of History, personal communication 2017 and German ammunitions manual). It is unclear how the cartridge made its way into the internment camp, but clearly a knife made from a rifle cartridge originating from one's country of origin was symbolic of resistance.

5.5.3. Bottle Glass

Table 5.1. Bottle glass excavated from the Morrissey internment camp

Location: Second-Class Compound	Weight	Colour	Significant Brands
Compound Yard	815 g	Green	
Privy 1	17,247 g	Green, Teal, Blue	Kilner Brothers Ltd., Fernie Fort Steele Brewing Co., WF and S, Northern Glassworks (Miller Beer), Pabst Blue Ribbon (beer), Anheuser Busch (Budweiser), Champagne finish bottles
Privy 2	3326 g	Green, Teal, Blue, Colourless	WF and S Northern Glassworks (Miller Beer), a whiskey bottle, and a D. Davias brandy or cognac bottle from France
Escape Tunnel	187 g		Anheuser Busch (Budweiser) and WF and S Northern Glassworks (Miller Beer) bottles

It cannot be determined definitively whether the bottles excavated from Morrissey contained alcohol or soda pop or were alcohol bottles recycled to contain soda. However, the government records do not indicate that soda was supplied to the camp. In addition, if bottle reuse did occur in the camp, this would have been due to the value of the glass beverage bottles (Busch 1987). As PoWs had very little access to funds to improve camp life, they would have been more likely to return the bottles and receive the

bottle deposit value rather than disposing of them down the privy. Historically, privies were commonly used to dispose of contraband items, including alcohol bottles (Bush 2000; Casella 2007).

Alcohol prohibition did not come into effect until October 1, 1917, after the camp had been in operation for two years. Military records specifically note (RG 6, Aug. 2016) that prisoners could purchase from the canteen the same items as the guards, with the exception of alcohol. Government records, artefacts, and faunal analysis date Privy 1, containing the greatest number of beverage bottles, to before 1917, while Privy 2, which contained very few bottles of any type, has been dated to after 1917. Hence, one can deduce that there was a supply of alcohol in the camp prior to prohibition, and that it was possible for the prisoners to acquire it through exchange or as contraband. Alcohol would have provided temporary emotional numbing and when obtained as contraband would also have been a form of resistance (Myers and Moshenska 2013).

5.5.4. Escape

As noted earlier, attempted escape, the most blatant form of inmate insubordination (Casella 2007:126), also occurred at Morrissey. In June 1916, a PoW work party labouring on a road project near the town of Cranbrook successfully escaped across the Canada–US border into the state of Montana. There is little military documentation of the incident and no reference in newspaper reports; however, the military records note that there were suddenly more guards than prisoners in the camp after this point (Norton 1998:78).

In November of an unidentified year, three prisoners escaped into the bush while cutting wood for the camp. A fourth prisoner distracted the guards, yelling, “Porcupine!” while the others got away. On April 16, 1918, a guard recounted PoW 450’s attempted escape:

> I saw the escaped prisoner in the bush and I immediately gave chase and ordered Sergt Crofton to proceed down the track to prevent him from breaking towards Fernie. After hunting him through the bush for about ¾ of an hour I captured him and brought him back to camp. I fired several times at him with a revolver, but owing to the thickness of the bush I did not hit him and only when cornered at close quarters did he surrender. (RG 24, vol. 4661)

A German first-class prisoner, his mother-in-law, and his child did succeed in escaping. The reporting guard noted:

> The first I heard of the escape of PoW 224 with mother-in-law and child was at 10:20 pm. I went straight from the guard room to the no. 1 [first-class] compound and started to search in one of the bell tents. I found the blankets bunched up and a mallet at the head of the bed. It was made to look as though someone was still in bed. (RG 24, vol. 4661)

Military documentation demonstrates that prisoners attempted escape not only during work parties outside of the compound but also from within:

> Pte George King being called stated, I was on duty as night patrol on the night of October 25th. Cpl. Harrison warned me that three prisoners were going to try and escape. I walked up and down from the washhouse door to the front fence and examined the wires of fence of west side of compound. On the 4th post I found a staple out and the wire loose. (RG 24, vol. 4661)

Morrissey escape tunnel

Coordinated prisoner resistance is evidenced by the most archaeologically visible and enduring form: the escape tunnel (Myers and Moshenska 2013:3). The *Fernie Free Press* (FFP 1917) recounted the Morrissey prisoners' attempted escape through a tunnel dug in front of the second-class PoW building. Although the shortest distance to freedom lay in the opposite direction, the newspaper described the tunnel as running parallel to the roadway and toward the guards' quarters. It was assumed that the tunnel would eventually have turned toward the left of a wood thicket, where a reasonably secluded escape could have been made. However, upon its discovery the night before the escape was to occur, near riots broke out in the camp, since it was presumed likely that the entire camp would have been free to escape into Montana. Punitive action ensued, and the ringleaders were subsequently rounded up and placed in solitary confinement (FFP, January 19, 1917).

Limiting the number of destructive shovel tests at the internment site was important to my research and for conserving the site, so the ideal solution for locating this historic tunnel was through the noninvasive method of remote sensing, GPR. A Sensors and Software LMX 200 GPR, purchased with a research grant from the Endowment Council of the Canadian First World War Internment Recognition Fund, was used to survey the entirety of the first- and second-class compounds and locate the

tunnel. The GPR data (Figures 5.7 and 5.8) indicated the top and bottom walls of the tunnel were 0.6–1.4 m below the surface and its width was 0.7 m. The analysis also confirmed that the full length of the tunnel had already collapsed. In addition, “ring-down” or multiple reflections on the radar screen indicated there were impermeable or highly reflective objects such as metal below the surface (Dojack 2012:6).

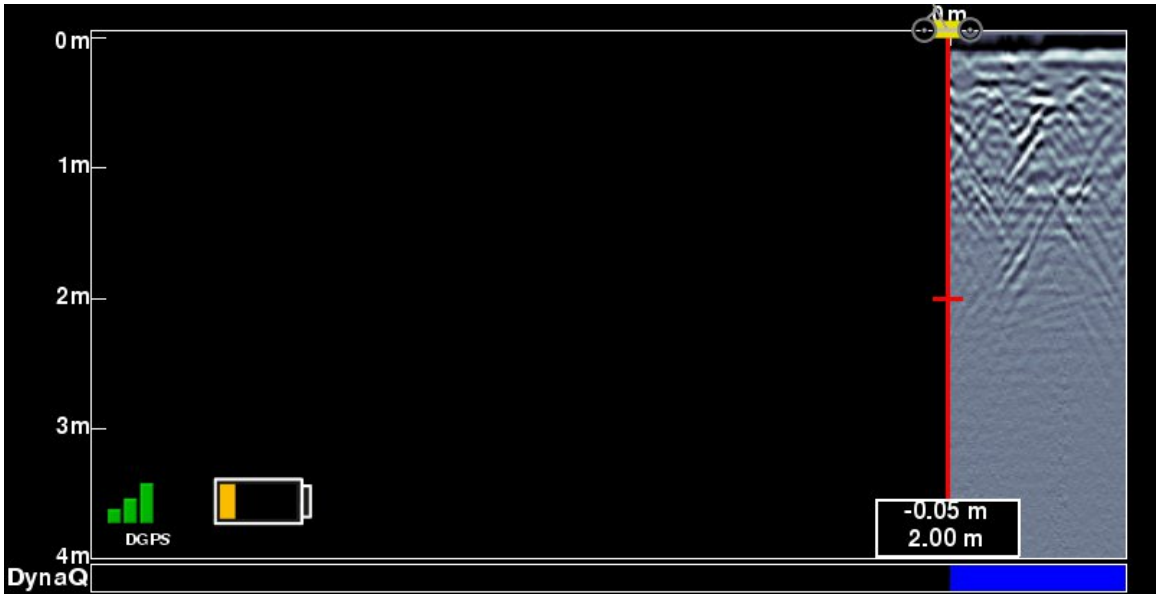

Figure 5.10. GPR vertical profile of a cross-section of the escape tunnel.

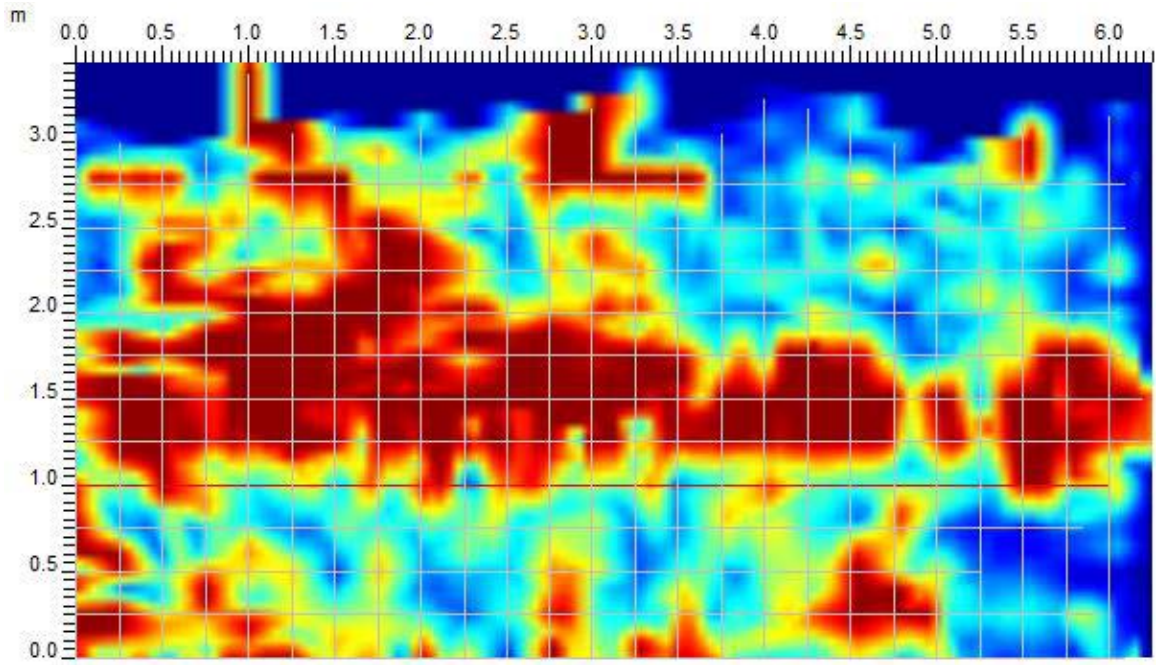

Figure 5.11. GPR plan profile.
Dark blue indicates areas with little soil disturbance, while red indicates areas with the deepest level of soil disturbance. The continuous horizontal red line indicates the presence of a subsurface anomaly sharing similar properties with a tunnel.

Figure 5.12. Two cross-sections of the tunnel during excavation (July 2017).

Table 5.2. Notable artefacts from the Morrissey escape tunnel

Material	Object	No. of Artefacts	Maker's Mark/Notes
	Possible escape tools		
Ferrous metal	Bucket handles	7	
Ferrous metal	Buckets	5	
Ferrous metal	Coffee pot	1	
Ferrous metal	Coffee cup	1	
Ferrous metal	Shovel	1	Handmade mining shovel
Ferrous metal	Tobacco tins	18	Tuxedo, Velvet, Edgeworth, Meerschaum
Ferrous metal	Tobacco tins containing nails	2	Prince Albert, Velvet
Ferrous metal	Nails	137 (540g)	
Wood	Shoring	71	
Ferrous metal	Roof pin	1	
Ferrous metal	Paint cans	6	
Ferrous metal	Clothing fasteners	4	Suspender clips attached to a bucket handle
	Food supplies		
Ferrous metal	J.S. Fry & Sons chocolate and cocoa	2	
Ferrous metal	Coffee	1	Boston Massachusetts
Ferrous metal	Sugar	1	Rogers Sugar
Ferrous metal	Syrup	1	Rogers Golden Syrup 2lb
Ferrous metal	Sardines	1	Norwegian Sardines
Ferrous metal	Corned beef	4	Corned Beef
Ceramic	Mustard jar	1	
Glass	Beverage bottles	7 shards; 195g	Anheuser Busch (Budweiser); WF & S Northern Glassworks (Miller Beer)

Material	Object	No. of Artefacts	Maker's Mark/Notes
Escape kit or personal items			
Galvanized metal	Picture frame	1	Handmade
Handicraft materials			
Glass	Inkwells	2	
Glass	Jar containing green paint	1	

After the GPR survey data were analyzed and the location of the tunnel confirmed, three cross-sections measuring one metre by two metres were excavated to ground truth the GPR results (Figure 5.9). Upon excavation, a fine layer of shoring became visible. The thin, narrow wood was similar to that used to build packing crates. Beds supplied to the PoWs in Morrissey were made out of wooden shipping crates, as reported by the Swiss consul: "The bunks are poorly built of odd pieces of lumber, including pieces of packing cases" (RG 6, vol. 765, file 5294). This suggests that the Morrissey prisoners, similar to PoWs in Europe, may have secreted the wood from their beds to use as tunnel shoring (Doyle et al. 2013; Pringle et al. 2007; Reese-Hughes et al. 2017).

A single shovel excavated from the tunnel bears a strong resemblance to coal mine shovels from the same period, the only exception being its handfolded edges, evidence that it was not manufactured but handmade. PoWs with mining experience were often sought out when tunneling and escape plans were being organized, as evidenced in camps such as Stalag Luft III (Pringle 2007), Holzminden (Durnford 2016), and Lethbridge (Kordan 2016). Hence, it was not surprising to uncover a handmade shovel in the escape tunnel, especially since coal miners were some of the first Morrissey prisoners (Kordan 2016; Norton 1998).

Numerous tobacco tins were excavated from the tunnel, two of which stand out: a Prince Albert and a Velvet. The tins when excavated had closed lids and contained nails. It was common to carry these flat-sided, hinged-lid tins in one's shirt pocket. Hence, it is possible that the prisoners excavating the tunnel carried shoring nails hidden almost in plain sight of the guards. Food storage jars and tins for mustard, sugar, syrup, cocoa, chocolate, coffee, sardines, and corned beef were found in no other location on

the internment grounds except the escape tunnel. As mentioned above, in Europe, British PoWs stockpiled similar high-calorie, easily preserved and carried foods and used these as part of their escape kits (Wilkinson 2017).

The handmade metal picture frame (containing no surviving photograph) found in the tunnel was potentially part of a personal selection of items packed in an escape kit. Paint cans and paint jars were also found in the tunnel, as was a notable layer of ash running through the artefacts, and a large quantity of melted glass. This evidence suggests that once discovered by the guards, the tunnel was opened from above, barricaded, and burned in an effort to prevent future escape attempts. The items used to barricade the tunnel likely originated from the internment camp's garbage site, along with personal items belonging to the PoWs, since paint jars, inkwells, and handicraft items were also present within the assemblage.

It is interesting to note that the local newspapers reported only failed escape attempts at Morrissey (FFP 1917; *Morrissey Mention* [MM] 1916), likely to boost the morale of the local population, and the relevant news stories were often misleading, as was the case with the Morrissey escape tunnel. This excavation confirms that the *Fernie Free Press* report deliberately misled readers by suggesting the prisoners lacked intelligence, since they apparently were tunneling toward their captors instead of away from them. The true tunnel was dug under the washhouse adjacent to the PoW building, toward the back of the prisoner yard, where wilderness and freedom lay beyond.

5.6. Discussion

Prisoners at the Morrissey internment camp engaged in various forms of resistance to protest their imprisonment. As mentioned above, military PoWs in WWI had differing attitudes toward captivity. If they regarded captivity as the end of combat, then they were more likely to accept their fate and not resist. Hence, acts of passive and principled resistance were more likely to be undertaken by these PoWs. However, those who felt that captivity was merely a detour in the continuation of battle would continue to find ways to sabotage the enemy and ultimately attempt escape. For them this was a patriotic duty, and direct resistance was absolute.

This is where the Canadian internment PoW population differs greatly from the allied PoWs captured from the front lines in Europe. The majority of the Canadian prisoners were not military personnel. As internees, they were fighting not for their countries but for their civil rights and liberties—and in many cases, simply for survival. This was not a patriotic fight, so it is not surprising that principled resistance was the most common form of defiance in the Morrissey camp. Although more generally, strikes and riots had the potential to lead to positive action within the camp, they did very little to effect change for the Morrissey prisoners. Instead, internees were beaten and placed in solitary confinement on restricted diets to discourage future outbursts. The confinement cells were used often, as noted in PoW correspondence and the military records (LAC, RG 6, vol. 765, file 5294), demonstrating camp conditions were so dire that the prisoners were willing to risk severe punitive action in their attempts to ameliorate their confinement conditions.

The prisoners also became sophisticated in their resistance activities, notably by secreting letters to the Swiss consul, who on one occasion forwarded a letter directly to Germany to avoid Canadian censorship. Passive resistance, both symbolic and cultural, could be expressed through artwork and handicrafts, staving off depression and boosting camp morale. Escape was the ultimate form of resistance, and although attempts were common, success was not. Prisoners risked being shot or dying from exposure, as many of the camps remained in isolated regions far from local populations (Luciuk 1988). In Europe, escape committees were common among prisoners and were set up almost immediately upon a camp being populated (Pringle et al. 2007). Prisoners with specialized skillsets useful for tunneling were recruited immediately (Mackenzie 2008). Similarly, prisoners in Morrissey as well as other camps in BC and Alberta who had previous mining experience were highly sought (Kordan 2016); as noted earlier, some of the first prisoners had previously worked in the local coal mines.

Escape across the border into the United States was common until that country entered the war in April 1917. The Morrissey camp was located approximately 45 km from the Canada–US border and was ideally situated for a large-scale tunnel escape to be executed in early 1917. However, as was the case with three out of the five tunnels built in western Canadian internment camps, they were discovered shortly before the escapes were to take place. It is interesting to note that the two successful tunnel escapes occurred through the first-class compounds at Vernon and Lethbridge. The

unsuccessful attempts took place in the second-class compounds at the Lethbridge, Yoho, and Morrissey camps. Similar to PoWs in Europe, the first-class prisoners were not compelled to work and hence had time to focus on and plan escapes. The second-class prisoners spent more daytime hours labouring and were also calorically deprived due to the work. It therefore was much more physically and psychologically demanding for second-class prisoners to dedicate time and energy to planning and executing tunnels.

5.7. Conclusion

In the absence of formal guidelines regarding acts of resistance, WWI PoWs' attitudes toward captivity were polarized. Passive resistance boosted prisoner morale, while principled resistance attempted to effect changes in camp conditions and prisoner treatment. Direct resistance such as sabotage fulfilled a patriotic need, while escape was the ultimate goal. Although this research has applied the resistance sentiments of WWI PoWs captured in Europe as a baseline for understanding PoW resistance activities at Morrissey, it is important to acknowledge the differences in sentiments between the two situations. The majority of the Morrissey internees were civilian, their internment resulting from the War Measures Act that classified both civilian and military prisoners as PoWs. They were interned and forced to work under the rules of the 1907 Hague Convention. The civilian prisoners protested both their internment and their classification as PoWs, and thus, principled resistance predominated. Unlike military captives in Europe, Morrissey PoWs undertook strike action, sabotage, or escape not out of a patriotic duty to their country but simply to protest against their unethical and inhumane treatment.

Chapter 6.

Conclusion

Modern conflict archaeology (MCA) is a relatively new subdiscipline within archaeology that applies a multidisciplinary approach, incorporating oral history testimony, archival documentation, and numerous forms of community engagement, in addition to traditional excavation (Moshenska 2013). This mixed-methods approach—the combining of data sets—can offer a more nuanced method of studying contested histories. MCA moves beyond the battlefield and examines all aspects of war, including the landscapes, artefacts, and memories that endure beyond zones of conflict (Saunders 2012).

Although Canada was geographically removed from the frontline battles of WWI, the scars still remain on the landscape, deep in the soil and within the memories of those affected by the Great War (Norton 2017). It is paramount for the delicate nature of conflict research that the archaeologist apply a critical theoretical lens informed by an ethical approach (Moshenska 2008; Theune 2018) (Article 1: "Applications of Critical Theory within Modern Conflict Archaeology of the 20th and 21st Centuries"). One must be cognizant of the various stakeholders involved in one's research and, most importantly, place the needs of the victims and descendant communities before those of any other stakeholder (González-Ruibal and Moshenska 2015). In addition to the descendant communities, one must be aware of the needs of local community members who also hold significant ties to the landscape of conflict.

Our Canadian internment history is a difficult narrative to accept. The implementation of the War Measures Act in 1914 suspended the civil liberties of those living in Canada who at the time were regarded as enemy aliens (Luciuk 2006). This led to the arrest and internment of thousands of immigrants who had been invited to Canada to homestead along the Canadian Western Frontier. It also created a new category of prisoners unique to the Canadian experience – the civilian POW – a category not recognized in internment camps outside of Canada. In opposition to the treatment and internment of enemy aliens, former Prime Minister Sir Wilfrid Laurier showed foresight in his 1917 House of Commons address: "I believe—we shall be judged some day by our

actions here—that the Government is taking a step which will cause serious injury to the country (Kordan 2002: 81). Unfortunately, his words fell on deaf ears.

The destruction of much of Canada's WWI internment history in 1954, following the compensation of Japanese PoWs interned during WWII, set in motion a platform for social amnesia and historical revisionism (Luciuk 2001). Consequently, until recently, very few Canadians were aware of Canada's WWI internment operations. Historians began mining the remaining documentary evidence from the Canadian archives in the 1980s in an effort to piece together the remnants of this fragmented history. Through the study of the material record from the Morrissey Internment Camp, my dissertation research in the field of MCA has contributed to filling in these gaps and bringing to light new information about the internees whose lives were so deeply affected by their imprisonment. The excavations at the Morrissey Internment Camp are the first research excavations to take place at any of Canada's 24 internment sites.

With the exception of those who had familial ties to the internment camp or whose families had homesteaded the surrounding farms near Morrissey, very few were aware of Morrissey's dark internment history. Those who did know were under the impression that it had been a safe haven for destitute foreigners during the war. This was far from the case (Beaulieu 2015). As noted, community engagement and support play a principal role within the discipline of MCA (Moshenska 2013). These excavations and research could not have been completed without the support of numerous local community members. Some of these were descendants of the PoWs, the guards, or the camp police, while others were descendants of those who had purchased or traded items in exchange for the prisoners' labour and handicrafts. One particular gentleman had no ties to the camp but continued to support the excavation out of his good nature, only later to find out through this research that his grandfather had also been arrested and interned during WWI. This was a stark reminder of the historical erasure that had taken place.

The material record from the Morrissey Internment Camp has provided new insight into the lives of the Morrissey PoWs. By examining the food remains of the prisoners, in Article 3: "The Prisoner of War Diet: A Material and Faunal Analysis of the Morrissey WWI Internment Camp," I am able to corroborate the PoWs' complaints that they were not fed particularly well (LAC, RG6, vol. 765, file 5294). This is significant

since the official food allotments purchased for the camp appeared, on paper, to follow the rules of the 1907 Hague Convention pertaining to the proper treatment of PoWs (AGWMA Reports 1916-19). Being able to confirm that the PoWs' complaints were not unfounded is significant for changing the dialogue surrounding Canada's internment history. This research also provides new insight into the ways that the PoWs dealt with hunger. For instance, hunting or purchasing wild meats such as venison, wild turkey, and bear provided the PoWs with additional calories and variety to supplement a nutritionally deficient and bland diet. The results of this analysis can be further applied to the remaining camps across Canada. Excavating the remaining camps will provide new insight into whether the Morrissey camp was anomalous with regards to feeding prisoners or whether these same food patterns occurred at most or all of the other camps.

Resistance is another interesting subject that can be examined through the material record. Often, there are limited discussions about the various types of resistance activities documented within the historical record; escapes and prisoner strikes appear to be the most commonly documented (Wilkinson 2017). Examining the material record for evidence of resistance activities that took place at Morrissey sheds light on the relationships between the prisoners and their captors (Article 4: "Examining Acts of Resistance at the Morrissey WWI Internment Camp"). Analyzing the archival material for passive resistance activities demonstrates the numerous ways by which PoWs symbolically resisted, such as through their handicrafts (Carr 2011). Direct resistance through contraband, such as alcohol, and of course through escape attempts, were other forms of inmate insubordination (Myers and Moshenska 2013). This research includes an examination of the escape attempts through tunneling that more often than not took place in Western Canada (Kordan 2016). It also corroborates what has already been observed about WWII escape tunnels in Europe: successful escapes were more likely to occur from first-class PoWs' compounds than from second-class prisoners' quarters (Wilkinson 2017). In addition, through remote sensing and excavation, this research has been able to amend a historical inaccuracy. In 1917, an article in the *Fernie Free Press* (1917) portrayed the PoWs as unintelligent because they were tunneling towards their captors'—the guards'—quarters instead of away from them. Instead, the excavation reveals that the true tunnel was dug from behind the PoW building toward the freedom that lay just beyond the perimeter fence.

Resistance activities are only one of many PoW strategies that offers insight into the mental health of this group. Numerous other activities were also examined through the historical and material culture records to reveal how the prisoners coped with confinement through arts and handicrafts, orchestras, religion, self-care with hygiene and over-the-counter medicines, tobacco, and alcohol (Mytum 2013) (Article 2: "The Materiality of Mental Health at the Morrissey WWI Internment Camp"). Each of these provided a distinct means to cope with life behind barbed wire. Examining the various coping skills of the PoWs in Morrissey through the material culture record offers a unique lens through which to regard history.

Critical theory threads its way through my own research by first opening dialogue with the descendant and local community members along with the numerous other stakeholders affected by internment. Respecting the descendant community's wishes was paramount and included blessing the internment site prior to the start of the excavation. Praxis the key component of critical theory, the combination of theory and action, follows through my research by creating awareness of this internment history through tours of the Morrissey internment site during the excavation field seasons, providing public lectures relating to my research, a commemorative ceremony at the close of the final field season, an artefact exhibit in Canada's national museum, the Canadian Museum of History, and finally by sharing my research in the documentary "That Never Happened". This international award-winning documentary produced by Ryan Boyko and Diana Cofini, sheds light onto Canada's WWI internment operations. The film was screened at the United Nations in Geneva, Switzerland in September 2018, in celebration of the 70th anniversary of the Universal Declaration of Human Rights. The commemoration ceremonies and artefact exhibits will be discussed in further detail below.

As a result of the excavations as well as local and descendant community dialogue, two commemorative ceremonies took place. The first was a Moleben, a blessing of the internment site by Father Andrew Applegate, a Ukrainian Catholic priest, prior to the start of the excavation. Members of the descendant and local communities, along with the archaeologists, were present. The second was a commemoration ceremony to honour the PoWs buried in the Morrissey cemetery. This commemoration ceremony took place after the final day of excavation and was part of Project 107 (Lawrna Myers, personal communication, 2017). The main objective of this larger

project, supported by the Canadian First World War Internment Recognition Fund (CFWWIRF), was to locate and document the men, women and children who died during Canada's first national internment operations. Prior to the ceremony, members of the local community, with financial support from the CFWWIRF and from local businesses, raised monies and materials to rebuild the dilapidated cemetery. They also selected and brought in specific stones (boulders) that would hold the commemorative plaques created by the CFWWIRF. The archaeology team contributed by cleaning up the cemetery site, removing brush and debris from the graves and the surrounding paths. The graves were delineated with new picket fences prefabricated by local community members. The archaeological team helped to put these together on site prior to the ceremony. The ceremony consisted of three priests who blessed the gravesite: two Ukrainian Catholic priests and a Ukrainian Orthodox priest. Members of the CFWWIRF, the mayor of Fernie, local MLAs, the directors of the Sparwood and Fernie museums, members of the public, and, importantly, members of the descendant community were present. This commemoration ceremony provided closure, not only for the excavation that had taken place but also as an acknowledgement of the PoWs buried in the internment cemetery, who had essentially remained hidden for a century.

Of note when excavating in Morrissey was the question of who owns these artefacts. Since they are not regarded as prehistoric, they do not fall under the protection of the Heritage Conservation Act. Instead, historic artefacts in BC are retained by the property owner. In the case of the Morrissey Internment Camp, the land is owned by the Nature Conservancy of Canada—which is the main reason this land has remained relatively undisturbed over the years. The CFWWIRF has entered into an agreement with the Nature Conservancy of Canada to sign over all artefacts from this excavation to the Endowment Fund.

This excavation offers new information about the lived experiences of this unjustly imprisoned group of PoWs. The excavations that took place at Morrissey can be applied more generally to the remaining internment camps across Canada, to offer a more nuanced representation of PoW treatment within these confinement camps. Importantly, by employing a critical theoretical lens, this excavation succeeded in shedding light on a dark corner of Canadian history, which hopefully will help prevent such failures in the future. As Jason Kenney, former Secretary of State for Multiculturalism and Canadian Identity, so aptly stated, "You can never go back in

history and undo a terrible injustice. But what you can do is at least recognize that it happened, express regret and teach future generations to avoid its repetition" (Graveland 2013).

Continuing with this theme, two of Morrissey's excavated artefacts—a barbed wire cross and a handmade shovel excavated from the escape tunnel—are now on permanent exhibit in the Canadian Museum of History. These artefacts will remain as talking points, further contributing to public dialogue about our nation's internment history. This research serves as a reminder that to set a new course for a Canadian future that does not include the mistreatment of disenfranchised groups, we must learn from our historical miscarriages of justice. Through the archeological study of sites such as Morrissey, where such grave humanitarian transgressions occurred, this work will continue attempting to right a historical wrong.

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Appendix A

Morrissey Internment Camp Artefact Photos

Beverage Bottles

Artefact ID 5378, Fernie Fort Steele Brewing Company Iron Tonic, Privy 1

Artefact ID 5371, Fernie Fort Steele Brewing Company, Privy 1

Artefact ID 5383, Privy 1

Artefact 5804, WF&S Northern Glassworks Bottle (1896-1929), Privy 2

Artefact ID 5800, D. Davias Brandy or Cognac Bottle, Privy 2

Artefact 5839, Bottle Cap, Escape Tunnel

Clothing, Apparel and Shoes

Artefact ID 6145, Shoe Sole, Escape Tunnel

Artefact ID 6007, Metal Heel From a Boot, STP 900

Artefact ID 5854 Each From Privy 1, 5853 (F&M Winnipeg), 5857, 5855 (O.H.G. Ottawa), Buttons

Artefact ID 5862, Buttons, Unit 1

Artefact ID 6020, Clothing Ornament or Watch Fob, Camp Canteen

Artefact ID 5799, Suspender Clips Attached to Bucket Handle, Escape Tunnel

Construction Materials

Artefact ID 5400, Insulator, STP 900

Artefact ID 6162 Insulator, STP 900, Unit 1

Artefact ID 6402, Brick, Associated with the Big Building, Second-Class PoW Compound

Artefact ID 6293 Barbed Wire, Camp Canteen

Food Containers

Artefact ID 5878 Rogers Golden Syrup, Escape Tunnel

Artefact ID 5869, Unknown Food Tin, Escape Tunnel

Artefact ID 5888, J.S. Fry and Sons Chocolate and Cocoa, Escape Tunnel

Artefact ID 5892, Norwegian Sardine Tin, Escape Tunnel

Artefact ID 5926, Mustard Jar, Escape Tunnel

Artefact ID 5958, Unknown Tin, Escape Tunnel

Artefact ID 5984, Key Wind, Privy 1

Hygiene

Artefact ID 6442, Comb, Privy 1

Artefact ID 6010, Colgate Co. Shaving Stick, Privy 1

Artefact ID 6428, Porcelain sink/ toilet, STP 233, German First-Class Compound

Artefact ID 6429, Porcelain sink/ toilet, STP 289, German First-Class Compound

Pharmaceuticals

Artefact ID 8979, St. Jakob's Oil, Canteen

Artefact ID5398 Pharmaceutical Bottle, Privy 1

Artefact ID 6015 Glass Stopper, Privy 1

Artefact ID 5978, Pharmaceutical bottles, Privy 2

Tableware, Food and other Storage Containers

Artefact ID 5932, Fork, Canteen

Artefact ID 6253, Fork, Privy 1

Artefact ID 5931, Knife, STP 355

Artefact ID 5896, Bucket, Escape Tunnel

Artefact ID 5898, Paint Can, Escape Tunnel

Artefact ID 6439, Coffee Cup, Escape Tunnel

Artefact ID 6111 Base of Glass, Canteen

Artefact ID 5815, Jar Containing Green Paint, Escape Tunnel

Tobacco Tins and Pipes

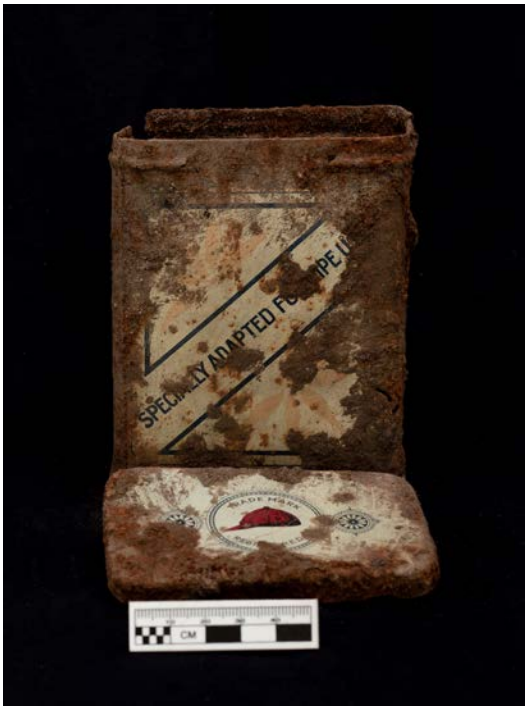
Artefact ID 5975, Tuxedo Tobacco, Escape Tunnel

Artefact ID 5976, Edgeworth Plug Slice Tobacco, Escape Tunnel

Artefact ID 5977, Velvet Tobacco, Escape Tunnel

Artefact ID 6196 Prince Albert Tobacco, Privy 1

Artefact ID 6436, Capstan Navy Cut Tobacco, Privy 1



Artefact ID 6440, Red Cap Tobacco, Privy 1

Artefact ID 6434, Irish Pipe, Privy 2

Artefact ID 6018, Pipe Mouthpiece, Privy 2

Tunneling

Artefact ID 6233, Shoring Excavated From the Escape Tunnel

Artefact ID 6214, Shoring Excavated From the Escape Tunnel

Miscellaneous Artefacts

Artefact ID 6252, Confederacy of Ireland Unofficial Flag (19th Century) From a Toy Soldier, Privy 1

Artefact ID 6014, Drilling Cartridge Modified with Blade, Privy 1

Artefact ID 5900, Modified Spike, Privy 2

Artefact ID 5983, Pocket Knife, Privy 2

Artefact ID 6066, Ink Bottles, Privy 1

Artefact ID 5981, Ink Bottles, Escape Tunnel

Artefact ID 6435 London Life Insurance Sign, Canteen

Appendix B

Faunal Analysis Reports

Archaeological Impact Assessments (AIA)
Archaeological Overview Assessments (AOA)
Traditional Use Studies (TUS)
Preliminary Field Reconnaissance (PFR)
Archaeological Monitoring & Site Mitigation
Culturally Modified Tree (CMT) Assessments
Dendrochronology
Archaeological Potential Modelling
Section 12 Site Alteration Permit Assistance
Aboriginal Trail Network Studies
Workshops and Archaeological Training
Remote Access to Archaeological Data (RAAD)

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March 14, 2018

Attn: Sarah Beaulieu
Tel.: [redacted]

Faunal analysis of a second-class prisoner-of-war privy, Historical Morrissey Internment Camp, Morrissey BC.

Introduction

This letter presents a summary of the faunal analysis of the historical Morrissey Internment Camp's second-class prisoner-of-war (POW) privy, located near Morrissey, BC. Faunal material was collected by Sarah Beaulieu during July–August 2017, which was subsequently analyzed on February 23, 26, 27, 28, and March 1, 2018, by Morgan Bartlett of Kleanza Consulting Ltd. (Kleanza). Sarah Beaulieu asked Kleanza to conduct an overview analysis to determine the scientific classification of each specimen within the assemblage, to classify each identifiable bone as juvenile or mature, to note any visible pathology, and to note any modification to the bone through toolmarks or burning. These results are presented in Appendix I.

Methodology

Due to budgetary constraints, research goals, and the limitations of the domestic faunal assemblage at Simon Fraser University, this assemblage was analyzed judgmentally. Taxonomic identifications were based on comparisons with the SFU comparative collection, as well as with the aid of published faunal identification works (Gilbert 1990, Gilbert et al. 1981).

All identifiable Bovinae (cattle/bison subfamily) and Caprinae (sheep/goat subfamily) were classified to the level of "subfamily", unless diagnostic indicators were present to

clearly classify the specimen to species level. To confirm each specimen was domestic and not a related, wild species, all Caprinae specimens were cross-referenced with *Odocoileus hemionus* (mule deer/black tailed deer), and all Bovinae specimens were cross-referenced with *Cervus canadensis* (elk) and *Alces alces* (moose) comparative collections. All fragmented specimens without diagnostic markers were classified as unidentified Mammal or Aves.

Epiphyseal fusion was coded as either fused or unfused. If a specimen did not show evidence of an unfused epiphysis, it was assumed that the specimen was mature. Matching epiphyses and shaft specimens were counted as two separate specimens.

All identifiable elements were named. Where possible, each specimen was given a side (left or right) and the portion of the identifiable element and/or additional modifications to the bone were described in the comments (distal, proximal, vertebral number, oxidization, etc.).

Each specimen was examined for butchery modifications. The term "chopmark" refers to either a deeply incised diagnostic V-shaped cross section, indicating perpendicular blows to the shaft of the bone, or shatter associated with blunt-force trauma at either a perpendicular or oblique striking angle. The presence/absence of saw marks and burned bone were also recorded during this analysis.

If pathological conditions were observed on a specimen, it was noted in the comments section, however the type and severity of the pathology was not further investigated.

Results

The faunal assemblage recovered from the Morrissey Internment Camp second-class POW privy in July–august, 2017, includes Bovinae, Caprinae, *Gallus gallus domesticus* (Domestic chicken), *Lepus americanus* (Snowshoe hair), Mustelidae, (wolverine Family), *Sus scrofa domesticus* (domestic pig), *Urocitellus columbianus* (Columbian ground squirrel), *Ursus Arctos* (brown bear/grizzly bear), Carnivora (carnivore), Artiodactyla (even-toed ungulates), and unidentified Mammal-class bone fragments (Appendix I). In total, the number of specimens (NSP) equals 2714, with the number of identified specimens (NISP) totaling 839, approximately 31% of the assemblage.

The most common taxa within the assemblage was Caprinae (NISP 531) followed by Bovinae (NISP 275). The Caprinae specimens showed a wide age span at time of death, indicated by both multiple juvenile specimens with unfused epiphyses and fully fused specimens showing signs of aging and pathology, specifically osteoarthritis (Figure 1). The Bovinae assemblage, however, showed a small age span, as all epiphyses were fused and no age-defining pathologies were observed.

Figure 1. Osteoarthritis observed on a Caprinae disarticulated elbow joint (humerus [left] and ulna [right]).

A unique specimen within the assemblage was the *Gallus gallus domesticus* (domestic chicken) tarsometatarsus exhibiting an ossified spur along its posterior shaft (Figure 2). The spur is indicative of a male bird and becomes ossified when the cock is mature at one year old.

Figure 2. *Gallus gallus domesticus* (domestic chicken) tarsometatarsus exhibiting an ossified spur along its posterior shaft

The chopmarks observed within the assemblage were likely made by a large, metal blade, based on the deeply incised, smooth edges of the V-shaped incisions observed on several of the bones (Figure 3). Many of the long bones also exhibited a transverse break or saw cut through the shaft of the bone (Figure 3), congruent with the extraction of marrow (Maltby 2007:4). Marrow extraction is often indicated by spiralling perimortem fracture patterns and dynamic impact scarring (Karr et al. 2010:221), which were both observed on many of the bones. Saw marks were also noted on many of the bones (Figure 4), often on skeletal elements indicative of historical butchery practices (e.g., saw cuts down the spinal column, often through the vertebral bodies).

Figure 3. A"V" shaped chopmark on the distal shaft of a Caprinae humerus (left) and spiralling perimortem fracture patterns mid shaft of a fused Bovinae radius/ulna (right).

Figure 4. Saw cuts indicative of historical butchery practices on Bovinae vertebrae.

Burned bone within the assemblage included partially burned specimens with black and grey burned sections (indicative of temperatures ranging from 100°C–400°C), grey/grey-blue-coloured specimens (indicative of temperatures ranging from 500°C–600°C), and heavily calcined white specimens (indicative of temperatures ranging from 700°C–1000°C; Ellingham et al. 2014). All burnt specimens (baring one Caprinae metatarsus fragment) were too heavily fragmented for further identification beyond the classification of Mammalia.

The taphonomic damage to the assemblage (apart from perimortem and antemortem butchery and burning) included general decay and degradation, plant root invasion, soil staining, trowel trauma, and bioturbation. No gnaw marks were noted on any of the recovered specimens but bioturbation was evident though the appearance of *Urocitellus columbianus* (Columbian ground squirrel), *Lepus americanus* (Snowshoe hair), and Mustelidae, (wolverine Family) within the assemblage. These taxa are known to displace archaeological sites with their complex tunnel systems and are rarely processed for food – indicating that that their presence occurred afterward (Pokines and Baker 2013).

Interestingly, there were varying levels of taphonomy between specimens recovered from the same level – some were heavily degraded with much of the cordical bone weathered away leaving only the spongy trabecular bone, and others were almost completely intact (Figure 5).

Figure 5. Varying levels of taphonomy – heavily degraded distal Caprinae humerus (left) and intact proximal Caprinae humerus (right).

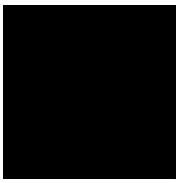
One possible explanation for this is acidic soil corrosion, occurring at variable rates due to groundwater flow (possibly from bioturbation) and/or pockets of acidity within the privy at the time of burial. A second possible explanation could be that these bones were buried at differing depths within the excavated level – the more degraded specimens situated within the acidic Boreal Forest topsoil and the more intact specimens buried within the more benign subsoil (Pokines and Baker 2013). Acidic soil and/or groundwater corrodes the smooth surfaces of the cortical bone, leaving a pockmarked and uneven appearance behind (Pokines and Baker 2013).

Conclusion

The faunal assemblage recovered from the Morrissey Internment Camp second-class POW privy was subjected to a preliminary analysis to understand the breadth of fauna disposed of within the privy. The assemblage was dominated by the Bovinae and Caprinae subfamilies, followed by *Sus scrofa domesticus* (domestic pig), *Ursus Arctos* (brown bear/grizzly bear), and *Gallus gallus domesticus* (Domestic chicken). *Lepus americanus* (Snowshoe hair), Mustelidae, (wolverine Family), and *Urocitellus columbianus* (Columbian ground squirrel) were also observed within the collection, likely due to bioturbation rather than human consumption.

Further analysis of butchery tool type, taphonomy, and additional bone modification, as well as identification of each element to species-level classification could be undertaken if allotted more time to do so.

Sincerely,



Morgan Bartlett, BA
Archaeologist
[redacted]

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Site Name: Morrissey Second-Class Privy
Program: Morrissey POW Camp Excavations
Location: Morrissey, BC
HCA Permit: N/A
Master Faunal Table

Kleanza Consulting Ltd.

Totals:		
	NSP	839
	NISP	2714

Caprinae	531
Bovinae	275

Unit	Level	Date Excavated (2017)	Bag Number	Class/Order/Family/ Genus/Species	Common Name	NSP	Side	Element	Comments	Burned Bone?	Unfused epiphysis observed?	Butchery Type
1	1	8/1/2017	1/1	Mammalia	Mammal	2		Unidentified	Too fragmented for positive ID	N	N	
9	2	8/1/2017	1/1	Mammalia	Mammal	1		Unidentified	Too fragmented for positive ID	N	N	
10	N/A	8/2/2017	1/1	Mustelidae	Muskrat/wolverine family	5		Lumbar Vertebrae	Possibly juvenile wolverine	N	Y	
						1		Thoracic Vertebrae	Possibly juvenile wolverine	N	Y	
						1	R	Ulna		N	Y	
						1	R	Femur	Proximal section and distal epiphysis	N	Y	
						2	R	Humerus		N	Y	
						1	R	Illium	Unfused	N	Y	
						1	L	Illium	Unfused	N	Y	
						1	L	Ischium	Unfused	N	Y	
				Caprinae	Sheep/Goat Subfamily	1	R	Calcaneum		N	N	
				Mammalia	Mammal	8		Unidentified	Likely *Mustelidae*	N	Y	
12	Surface	8/1/2017	1/1	Mammalia	Mammal	1		Unidentified	Too fragmented for positive ID	N	N	
	1	8/2/2017	1/1	Mammalia	Mammal	2		Unidentified	Some trowel trauma	N	N	
	2	8/2/2017	1/1	Mammalia	Mammal	2		Unidentified		N	N	
	3	8/2/2017	1/1	Mammalia	Mammal	1		Unidentified		N	N	
				Bovinae	Cattle/Bison Subfamily	1	R	Thoracic Vertebrae	Right transverse process	N	N	Saw cut
	4	8/2/2017	1/1	Mammalia	Mammal	2		Vertabral epiphysis		N	N	Saw cut
	5	8/2/2017	1/1	Mammalia	Mammal	3		Unidentified		N	N	
				Bovinae	Cattle/Bison Subfamily	2		Lumbar Vertebrae	Vertebral body and epiphysis	N	N	Saw cut
	6	8/2/2017	1/1	Mammalia	Mammal	1		Unidentified	Too fragmented for positive ID	N	N	
	10	8/3/2017	1/1	Mammalia	Mammal	2		Unidentified		N	N	
	11	8/3/2017	1/1	Bovinae	Cattle/Bison Subfamily	1		Scapula Body	Saw cut at the scapula neck	N	N	Saw cut
				Caprinae	Sheep/Goat Subfamily	1	L	Tibia	epiphysis	N	Y	
	12	8/3/2017	1/1	Bovinae	Cattle/Bison Subfamily	1		Scapula Body	Saw cut with 3 false starts	N	N	Saw cut
				Caprinae	Sheep/Goat Subfamily	1	L	Cuniform		N	N	
				Mammalia	Mammal	3		Unidentified		Y-1	N	
	13	8/3/2017	1/1	Bovinae	Cattle/Bison Subfamily	1	R	Scapula Body		N	N	Saw cut
				Mammalia	Mammal	6		Unidentified	Too fragmented for ID - rib frgament likely from *Bovinae*	N	N	Saw cut
	14	8/3/2017	1/1	Mammalia	Mammal	6		Unidentified		Y-2	N	Saw cut
	15	8/3/2017	1/1	Mammalia	Mammal	6		Unidentified		N	N	Saw cut
	16	8/3/2017	1/1	Mammalia	Mammal	5		Unidentified		Y-1	N	Saw cut
14	Surface (tree mound, NE Quadrent)	8/2/2017	1/1	Mammalia	Mammal	1		Unidentified	Vertebra epiphysis fragment	N	Y	Saw cut
	Surface (tree mound, NE Quadrent)	8/3/2017		Mammalia	Mammal	1		Unidentified		N	Y	
	Surface (tree mound, SW Quadrent)	8/3/2017		Mammalia	Mammal	1		Unidentified	Shaft fragment	N	N	
	1	2017-08-03 and -04		Mammalia	Mammal	16		Unidentified		Y-1	Y	Saw cut
	2	8/7/2017		Mammalia	Mammal	1		Unidentified		Y-1	N	
	3	8/8/2017		Mammalia	Mammal	1		Unidentified		N	N	Saw cut
	4	8/9/2017		Bovinae	Cattle/Bison Subfamily	1	R	Scaphoid				
	5	8/10/2017		Mammalia	Mammal	9		Unidentified		Y-8	N	

15	Surface	8/2/2017	1/1	Mammalia	Mammal	2		Unidentified	Too fragmented for ID - likley large mammal, possibly *Bovinae*	Y-2	N	
	1	8/3/2017	1/1	Mammalia	Mammal	1		Unidentified	Too fragmented for ID - likley large mammal, possibly *Bovinae*	N	N	
	3	8/3/2017	1/1	Mammalia	Mammal	2		Unidentified	Too fragmented for positive ID	N	N	
	4	8/8/2017	1/1	Mammalia	Mammal	1		Unidentified	Too fragmented for ID - likley a long bone shaft of a large mammal	N	N	Chopmarks
	5	8/9/2017	1/1	Mammalia	Mammal	1		Unidentified		N	N	
16	2	8/3/2017	1/1	Bovinae	Cattle/Bison Subfamily	1	R	Thoracic Vertebrae	Only Right transverse process, vertebra body, and spinous process remain	N	N	Saw cut
				Mammalia	Mammal	1		Unidentified	Too fragmented for positive ID	N	N	
	5			*Lepus americanus*	Snowshoe Hare	1	R	Mandible	Leporidae Family	N	N	
17	N/A	8/3/2017	1/1	Mammalia	Mammal	1		Unidentified	Likey *Caprinae* tibia shaft but all diagnostic features are missing	N	N	
18	N/A	8/3/2017	1/1	*Urocitellus columbianus*	Ground Squirrell	1	L	Tibia	Likely bioturbation	N	N	
			1/1	Caprinae	Sheep/Goat Subfamily	1		Metacarpal	Unfused distal epiphysis	N	Y	
				Mustelidae	Muskrat/wolverine family	1		Thoracic Vertebrae	Possibly wolverine	N	N	
				Mammalia	Mammal	1		Unidentified		N	N	
20	Unknown, possibly 0-70 cm?	8/8/2017	1/1	Caprinae	Sheep/Goat Subfamily	1	R	Calcaneum		N	N	
						1	L	Scaphoid		N	N	
				Mammalia	Mammal	18		Unidentified		Y-16	N	
	Unknown	8/7/2017	1/1	Caprinae	Sheep/Goat Subfamily	2	R	Metacarpus		N	Y	
						2	R	Radius	Distal portion and unfused epiphysis	N	Y	
				Mammalia	Mammal	1		*Mammalia*	Mammal	Y-1	N	
20	1	8/8/2017	1/1	Mammalia	Mammal	19		Unidentified		Y-18	N	
20	2	8/8/2017	1/1	Caprinae	Sheep/Goat Subfamily	2	L	Tibia	Distal portion and unfused epiphysis	N	Y	
						1	L	Astragalus		N	N	
				Mammalia	Mammal	7		Unidentified		Y-4	N	Saw cut
20	3	8/8/2017	1/1	Caprinae	Sheep/Goat Subfamily	1	R	Radius	Distal epiphysis	N	Y	
				Mammalia	Mammal	2		Unidentified		N	N	Saw cut
20	4	8/8/2017	1/1	Caprinae	Sheep/Goat Subfamily	1		Metacarpal	Broken mid shaft	N	Y	
				Mammalia	Mammal	14		Unidentified		Y-1	N	Saw cut
20	5	2017-08-09	1	Bovinae	Cattle/Bison Subfamily	1	R	Radius/ulna	Fused, saw cut at shaft and proximal ulna	N	N	Saw cut
			1			1	L	Scapula	Fused, saw cut atright angle through scalupa plate	N	N	Saw cut
20	6	2017-08-09	1/1	Bovinae	Cattle/Bison Subfamily	1	L	Thoracic Vertebrae	Only left transverse process remaining	N	N	
				Mammalia	Mammal	18		Unidentified	Heavily weathered	Y-2	N	Saw cut
20	7	2017-08-09	1/1	Mammalia	Mammal	3		Unidentified	Rib is likely *Bovinae*	N	N	Saw cut
20	8	2017-08-09	1/1	Caprinae	Sheep/Goat Subfamily	1	R	Metatasal		N	Y	
						2	R	Tibia	Distal shaft and epiphysis	N	Y	Chopmarks
						1	R	Astragalus	Matches above distal tibia	N	N	
						1	R	Calcaneum		N	N	
						2	R	Phalanx	Whole phalanx and unfused matching proximal epiphysis	N	Y	
						1	R	Cuniform		N	N	
				Mammalia	Mammal	1		Rib		N	N	Saw cut
20	9	8/9/2017	1/1	Bovinae	Cattle/Bison Subfamily	2	R	Humerus	1 shaft segment, 1 condyle	N	N	Saw cut/chopmarks
						1		Thoracic Vertebrae		N	N	Saw cut
				Artiodactyla	Even-toed ungulates	2		Rib	Likley *Bovinae* , but too fragmented to ID	N	N	Saw cut
				Caprinae	Sheep/Goat Subfamily	5	L	Tibia	2 distal shafts with unfused epiphyses, 1 unfused epiphysis	N	Y	
						5	L	Metatarsus	2 shafts with unfused epiphyses, 1 unfused epiphysis	N	Y	
						2	L	Calcaneum		N	N	
						2	L	Astragalus		N	N	
						4	L	Phalanx	4 1st Phalanges	N	N	

						2		Lumbar Vertebrae	Vertebral body and epiphysis	N	Y	
				Mammalia	Mammal	3		Unidentified	Likely *Bovinae* but too fragmented for positive ID	N	N	
20	10	8/9/2017	1/1	Bovinae	Cattle/Bison Subfamily	1	R	Humerus	Proximal segment	N	N	Saw cut
						1	R	Radius/ulna	Shaft	N	N	Saw cut
						1	L	Radius/ulna	Shaft	N	N	Saw cut
						2		Rib		N	N	Saw cut
						1	R	Psiaform		N	N	
						1	R	Lunate		N	N	
						!	L	Lunate		N	N	
						1	L	Magnum		N	N	
						1	R	Magnum		N	N	
						1	L	Scaphoid		N	N	
						1	R	Scaphoid		N	N	
						1	L	Unciform		N	N	
						1	R	Unciform		N	N	
						2	L	Scapula	Glenoid fossa and body	N	N	Saw cut
						3		Thoracic Vertebrae		N	N	Saw cut
				Caprinae	Sheep/Goat Subfamily	1	L	Metacarpus		N	N	
						1	R	Femur		N	N	Chopmarks
						3		Lumbar Vertebrae		N	Y	
						1	R	Innominate	Ilium and acetabulum	N	N	
				Artiodactyla	Even-toed ungulates	5		Rib	Likley *Bovinae* , but too fragmented to ID	N	N	Saw cut
				Mammalia	Mammal	31		Unidentified	Rib fragments are likely Bovinae but too fragmented for positive ID	N	Y	Saw cut
20	11	8/9/2017	1/2	Bovinae	Cattle/Bison Subfamily	4	R	Radius/ulna/humerus joint	1 Radius/ulna/humerus joint cut just below the joint, 1 distal radius	N	N	Saw cut
						1	L	Radius	Distal segment	N	N	Chopmarks
						1	L	Tibia	Distal segment	N	N	
						1	L	Ulna	Proximal process	N	N	Chopmarks
						1	L	Astragalus		N	N	
						1	L	Cuniform		N	N	
						1	L	Lateral Malleolus		N	N	
						1	R	Lunate		N	N	
						1	8	Cervicle Vertebra	2 axis, 2 atlas	N	N	Saw cut
						1		Thoracic Vertebrae		N	N	Saw cut
						2		R		N	N	Saw cut
						1		Lumbar Vertebrae		N	N	Saw cut
			2/2	Artiodactyla	Even-toed ungulates	8		Rib	Likley *Bovinae* , but too fragmented to ID	N	N	Saw cut
				Caprinae	Sheep/Goat Subfamily	1	R	Metacarpus	Proximal segment	N	N	Chopmarks
						1	L	Metacarpus	Proximal segment	N	N	Chopmarks
						1	R	Radius	Distal epiphysis	N	Y	
						3		Coccyx	1st, 2nd, and 3rd coccyx	N	N	
				Mammalia	Mammal	33		Unidentified		Y-4	Y	Saw cut/chopmarks
			1/1	Bovinae	Cattle/Bison Subfamily	1	R	Innominate		N	N	Saw cut/chopmarks
						1	L	Humerus		N	N	
						1	L	Radius/ulna		N	N	Saw cut
						1	L	Scapula		N	N	Saw cut
						1	L	Naviculo-cuboid		N	N	
						1	L	Lunate		N	N	
						1	L	Unciform		N	N	
						1	L	Rib		N	N	
						3		Cervicle Vertebra		N	N	Saw cut
						2		Thoracic Vertebrae		N	N	Saw cut
						2		Lumbar Vertebrae		N	N	Saw cut
						1		Sturnum		N	N	Saw cut

20	12	8/9/2017	2/2	Caprinae	Sheep/Goat Subfamily	2	R	Humerus	1 distal shaft and condyle showing pathology, 1 unfused humoral head. Varied level of taphonomy between specimens - some are heavily degraded and some in good condition (photo 3327-3328). Pre-mortem pathology noted in elbow joint of *Caprinae* specimen (photos 3329-3331).	N	Y	Chopmarks
						1	L	Humerus	Clear pathology at joint with ulna. Varied level of taphonomy between specimens - some are heavily degraded and some in good condition (photo 3327-3328). Pre-mortem pathology noted in elbow joint of *Caprinae* specimen (photos 3329-3331).	N	N	Chopmarks
						1	L	Ulna	Clear pathology at joint with humerus. Varied level of taphonomy between specimens - some are heavily degraded and some in good condition (photo 3327-3328). Pre-mortem pathology noted in elbow joint of *Caprinae* specimen (photos 3329-3331).	N	N	
						1	R	Scapula		N	N	Saw cut
						1	L	Scapula		N	N	Saw cut
						1		Thoracic Vertebrae		N	N	
				Artiodactyla	Even-toed ungulates	18		Rib	Likley *Bovinae* , but too fragmented to ID	N	N	Saw cut
				Mammalia	Mammal	37		Unidentified	Rib fragments are likely Bovinae but too fragmented for positive ID.	N	Y	Saw cut/chopmarks
20	13	8/10/2017	1/4	Bovinae	Cattle/Bison Subfamily	1	L	Humerus	Saw cut at distal end	N	N	Saw cut
						1	R	Humerus	Medial saw cut, enlarged tubricle - pathology	N	N	Saw cut
						1	L	Radius/ulna	Fused (chopmark Photos 3333–3337)	N	N	Chopmarks
						4	L	Innominate	2 illium, 2 acetabulum	N	N	Saw cut/chopmarks
			2/4			2	L	Scapula	1 Glenoid fossa, neck and body fragment, 1 body	N	N	Saw cut/chopmarks
						1	L	Magnum		N	N	
						16		Thoracic Vertebrae		N	N	Saw cut
						2		Lumbar Vertebrae		N	N	Saw cut
						5		Cervicle Vertebra		N	N	Saw cut
						4		Sturnum		N	N	
						1		Sacrum		N	N	Saw cut
						8		Rib		N	N	Chopmarks
			3/4	Caprinae	Sheep/Goat Subfamily	4	L	Radius	3 shaft segments, 1 unfused epiphysis	N	Y	Chopmarks
						1	R	Radius	1 distal shaft segment	N	N	Chopmarks
						2	R	Tibia	Shaft and epiphysis	N	Y	Chopmarks
						6	L	Humerus	2 proximal shafts, 2 distal shafts, 1 unfused head, 1 condyle	N	Y	Saw cut/chopmarks
						2	R	Femur	Shaft and unfused distal epiphysis	N	Y	Chopmarks
						2	L	Femur	Shaft and femoral head	N	Y	Chopmarks
						1	R	Metacarpus	Distal segment	N	N	Chopmarks
						2	L	Scapula	1 glenoid fossa, 1 body	N	N	Saw cut/chopmarks
						1	L	Innominate	Aceatabulum joint only	N	N	Chopmarks
						1	R	Innominate	Aceatabulum joint only	N	N	Chopmarks
						1	L	Scaphoid		N	N	
						2	L	Naviculo-cuboid	Unfused in 2 parts	N	Y	
						1	R	Calcaneum		N	Y	
						2		Phalanges	1st and 2nd	N	Y	
						2	R	Ulna		N	Y	
						3		Sacrum	S1 and S2 vertebra	N	Y	Saw cut

						7		Lumbar Vertebrae		N	Y	
						7		Thoracic Vertebrae	Varying ages in specicmens, some unfused juvenile, some completely fused with bone spinicles and pathologies	N	Y	Saw cut
						14		Cervicle Vertebra	4 atlas, 1 axis	N	Y	Saw cut
				Ursus arctos	Brown bear/grizzly	2	R	Metatarsus	2nd and 3rd			
				Artiodactyla	Even-toed ungulates	21		Rib	Likley *Bovinae* , but too fragmented to ID	N	N	Saw cut
				Artiodactyla	Even-toed ungulates	11		Rib	Likley *Caprinae* , but too fragmented to ID	N	N	Saw cut
			4/4	Mammalia	Mammal	231		Unidentified	Rib fragments are likely Bovinae but too fragmented for positive ID.	Y-2	Y	Saw cut/chopmarks
						2	**L**	**Humerus**	**Proximal segments**	**N**	**N**	**Saw cut/chopmarks**
						1	**L**	**Femur**	**Proximal segment**	**N**	**N**	**Saw cut**
			1			**2**	**L**	**Radius/ulna**	**Proximal segment**	**N**	**N**	**Saw cut**
						3	**L**	**Scapula**	**2 Glenoid fossi**	**N**	**N**	**Saw cut/chopmarks**
						1	**L**	**Tibia**	**Shaft**	**N**	**N**	**Saw cut**
				Bovinae	**Cattle/Bison Subfamily**	**2**	**L**	**Sacrum**	**S1 and S2 vertebra**	**N**	**N**	**Saw cut**
						1	**L**	**Scaphoid**		**N**	**N**	
						19		**Thoracic Vertebrae**		**N**	**N**	**Saw cut**
						4		**Lumbar Vertebrae**		**N**	**N**	**Saw cut**
			2			**9**		**Cervicle Vertebra**	**1 atlas (in 2 pieces),**	**N**	**N**	**Saw cut**
						10		**Rib**		**N**	**N**	**Saw cut**
						2		**Caudal vertabra**		**N**	**N**	**Saw cut**
						11	**L**	**Humerus**	**10 distal shaft and condyle, 1 unfused proximal head**	**N**	**Y**	
						8	**R**	**Humerus**	**5 distal shaft and condyle, 3 proximal shaft and head**	**N**	**N**	
						11	**L**	**Radius**	**3 full shafts (1 with unfused epiphysis), 4 proximal shafts, 2 distal shaft fragments (1 with unfused epiphysis)**	**N**	**Y**	**Chopmarks**
						7	**R**	**Radius**	**4 distal shafts, 1 distal epiphysis, 2 proximal shafts**	**N**	**Y**	**Chopmarks**
						7	**L**	**Ulna**	**Proximal segments**	**N**	**Y**	
						1	**R**	**Ulna**	**Proximal segment**	**N**	**Y**	
						1	**L**	**Metatarsus**	**Shaft**	**N**	**Y**	
						7	**R**	**Metatarsus**	**2 shaft, 6 distal epiphyses**	**Y-1**	**Y**	
						5	**L**	**Tibia**	**3 shafts, 2 unfused distal epiphyses**	**N**	**Y**	**Chopmarks**
						8	**R**	**Tibia**	**5 shafts (2 with unfused distal epiphysis), 1 tibia head with unfused epiphysis, 2 distal epiphyses**	**N**	**Y**	**Chopmarks**
						7	**R**	**Metacarpus**	**2 shafts with unfused epiphyses, 3 proximal shafts/heads**	**N**	**Y**	**Chopmarks**
20	**14**	**8/10/2017**				**4**	**L**	**Femur**	**3 proximal shafts (1 with unfused distal epiphysis)**	**N**	**Y**	**Chopmarks**
						1	**R**	**Femur**	**Proximal segment**	**N**	**Y**	**Chopmarks**
				Caprinae	**Sheep/Goat Subfamily**	**5**	**L**	**Scapula**		**N**	**N**	**Chopmarks**
						7	**R**	**Scapula**		**N**	**N**	**Chopmarks**
						1	**L**	**Innominate**	**Aceatabulum joint only**	**N**	**N**	**Chopmarks**
			3/5			**1**	**R**	**Lunate**		**N**	**N**	
						1	**L**	**Lunate**		**N**	**N**	
						2	**L**	**Magnum**		**N**	**N**	
						2	**L**	**Unciform**		**N**	**N**	
						1	**L**	**Cuniform**		**N**	**N**	
						1	**R**	**Cuniform**		**N**	**N**	
						1	**L**	**Naviculo-cuboid**		**N**	**N**	
						1	**R**	**Naviculo-cuboid**		**N**	**N**	
						1	**L**	**Scaphoid**		**N**	**N**	
						1	**R**	**Cuniform pes**		**N**	**N**	

						1	L	Lateral Malleolus		N	N		
						1	R	Astragalus		N	N		
						2	L	Astragalus		N	N		
						1	L	Calcaneum		N	N		
						2	R	Calcaneum		N	N		
						6		Phalanges	1st and 2nd	N	Y	Saw cut/chopmarks	
						2		Caudal vertabra		N	N		
						15		Lumbar Vertebrae		N	Y	Saw cut/chopmarks	
						35		Thoracic Vertebrae		N	Y	Saw cut/chopmarks	
						26		Cervicle Vertebra		N	Y		
				Carnivora	Carnivores	1		Metapodial	Unknown carnivore family - likely bear, but did not match anything in the comparitive collection	N	N		
			4/5	Artiodactyla	Even-toed ungulates	28		Rib	Likley *Caprinae* , but too fragmented to ID	N	Y	Saw cut	
				Artiodactyla	Even-toed ungulates	21		Rib	Likley *Bovinae* , but too fragmented to ID	N	N	Saw cut	
			4/5 and 5/5	Mammalia	Mammal	601		Unidentified		Y-28	Y	Saw cut/chopmarks	
						4	R	Metacarpus	All unfused, two with matching epiphyses	N	Y		
						2	L	Metacarpus	Shaft and epiphysis	N	Y		
						1		Metacarpus	epiphysis	N	Y		
						7	L	Tibia	1 shaft, 4 distal epiphyses, and 1 proximal epiphysis	N	Y		
						4	R	Tibia	3 distal epiphyses, 1 proximal epiphysis	N	Y		
						5	R	Radius	3 distal epiphyses, 1 distal shaft, 1 proximal shaft	N	Y		
						6	L	Radius	3 distal epiphyses, 1 distal shaft, 2 proximal shafts	N	Y		
						2	L	Astragalus		N	N		
						2	R	Astragalus		N	N		
						5	L	Ulna		N	Y		
						4	R	Ulna		N	Y		
						1	R	Calcaneum		N	N		
						2	L	Calcaneum		N	N		
						1	R	Magnum		N	N		
						2	L	Magnum		Y-1	N		
						1	L	Scaphoid		N	N		
						3	R	First Phalanx		N	N		
						1	L	First Phalanx		N	N		
			1/5	Caprinae	Sheep/Goat Subfamily	9	R	Humerus	1 proximal shaft with a matching unfused head, 1 proximal shaft with matching unfused head (in 2 parts), 1 complete shaft missing proximal head, 1 distal shaft and condyle, 2 unfused proximal epiphyses	N	Y		
						2	L	Humerus	1 proximal shaft with unfused head	N	Y		
						7	L	Femur	1 proximal shaft with unfused head, 1 proximal shaft with unfused head and trochanter, 1 unfused head, 1 proximal shaft with fused head, 1 distal shaft	N	Y		
						7	R	Femur	2 proximal shafts with unfused heads, 1 proximal shaft, 1 distal epiphysis , 1 distal shaft	N	Y	Chopmarks	
20	15	8/10/2017				4	L	Innominate	1 fused pubis and ishium, 1 fused ishium and Illium, 2 illium	N	Y	Chopmarks	
						1	R	Innominate	1 fused pubis/ishium/illium	N	Y	Chopmarks	
						3	L	Scapula		N	N		
						2	R	Scapula		N	N		
						27		Thoracic Vertebrae	20 vertebrae and 7 unfused epiphyses	N	Y	Saw cut	

						20		Cervicle Vertebra	13 vertebrae, 3 atlas vertebrae, 1 axis vertebrae, 3 unfused epiphyses	N	Y	Saw cut
						19		Lumbar Vertebrae	15 vertebrae, 4 unfused epiphyses	N	Y	Saw cut
				Artiodactyla	Even-toed ungulates	25		Rib	Likley *Caprinae*, but too fragmented to ID	N	Y	Saw cut
			2/5	Bovinae	Cattle/Bison Subfamily	1	L	Ulna	Sawed off just below head	N	N	Saw cut
						2	R	Humerus	Distal condyle and proximal head, both saw cut at shaft	N	N	Saw cut
						2	L	Radius	Proximal head sawed off at shaft, distal portion chopped at shaft	N	N	Saw cut/chopmarks
						1	L	Naviculo-cuboid		N	N	
						1	L	Astragalus		N	N	
						1	L	Tibia	Distal portion, saw cut at shaft	N	N	Saw cut
						1	L	Femur	Shaft segment saw cut at both ends	N	N	Saw cut
						1	L	Calcaneum	Posterior portion only	N	N	Saw cut/chopmarks
						1	L	Scaphoid		N	N	
						1	L	Unciform		N	N	
						1	L	Magnum		N	N	
						1	L	Cuniform		N	N	
						1	L	Lateral Malleolus		N	N	
						1	L	Pisaform		N	N	
						1	L	Sesamiod		N	N	
						1	R	Scapula		N	N	
			3/5			18		Thoracic Vertebrae	Highly fragemented	N	N	Saw cut
						8		Cervicle Vertebra	1 axis vertebrae	N	N	Saw cut
						6		Lumbar Vertebrae		N	N	Saw cut
			4/5			17		Rib		N	N	Saw cut
				Artiodactyla	Even-toed ungulates	19		Rib	Likley *Bovinae*, but too fragmented to ID	N	N	Saw cut
			5/5	Mammalia	Mammal	357		Unidentified		Y-15	Y	Saw cut/chopmarks
20	16	8/10/2017	1/5	Bovinae	Cattle/Bison Subfamily	2	L	Scapula	Body	N	N	Saw cut
						2	R	Humerus	Distal condyle and proximal head, both saw cut	N	N	Saw cut
						2	L	Femur	Distal condyle and proximal head, both saw cut	N	N	Saw cut
						3	L	Tibia	1 shaft segment, 2 proximal sections	N	N	Saw cut
			2/5			1	R	Radius	Proximal segment	N	N	Saw cut
						1	L	Radius	Distal segment	N	N	Saw cut
						1	R	Ulna	Proximal segment	N	N	Chopmarks
						1	L	Ulna	Fragment of head	N	N	Saw cut
						1	L	Calcaneum		N	N	
						1	L	Cuniform		N	N	
						1	L	Scaphoid		N	N	
						1	L	Magnum		N	N	
						1	L	Unciform		N	N	
						1	L	Innominate	Acetabulum joint only	N	N	Saw cut/chopmarks
						12		Thoracic Vertebrae		N	N	Saw cut
						5		Cervicle Vertebra	1 atlas, 1 axis	N	N	Saw cut
						9		Rib		N	N	Saw cut
						1		Sturnum	Medial saw cut	N	N	Saw cut
				Artiodactyla	Even-toed ungulates	34		Rib	Likley *Bovinae*, but too fragmented to ID	N	N	Saw cut
			3/5			9		Lumbar Vertebrae		N	Y	
						3		Thoracic Vertebrae	2 unfused epiphyses	N	Y	Saw cut
						13		Cervicle Vertebra	5 atlas, 3 axis, 1 unfused epiphysis	N	Y	Saw cut
						4	R	Innominate		N	Y	Saw cut
						1	L	Innominate		N	N	
						2	R	Humerus	2 distal condyles	N	N	Chopmarks
						4	L	Humerus	2 distal condyles, 1 shaft with distal condyle, 1 proximal portion	N	Y	Saw cut/chopmarks

			4/5	Caprinae	Sheep/Goat Subfamily	2	R	Tibia	1 unfused proximal epiphysis, 1 proximal portion	N	Y	Chopmarks
						1	R	Metatarsus		N	Y	
						2	R	Metacarpus		N	N	Chopmarks
						3	R	Radius		N	N	Chopmarks
						1	R	Ulna		N	N	
						4	L	Femur	1 head, 2 distal shaft segments, 1 proximal shaft segment	N	Y	Saw cut/chopmarks
						4	R	Femur	2 distal shafts with unfused epiphyses	N	Y	Chopmarks
						1	R	Phalanx	Rear 1st Phalanx	N	N	
				Artiodactyla	Even-toed ungulates	6		Rib	Likley *Caprinae* , but too fragmented to ID	N	N	Chopmarks
			5/5	Mammalia	Mammal	176		Unidentified		N	Y	Saw cut/chopmarks
21	N/A	7/22/2017	1/1	Caprinae	Sheep/Goat Subfamily	1	R	Metacarpal	Split down centre of shaft	N	N	
						1	R	Metatarsus		N	N	
						1	R	Tibia	Unfused distal epiphysis	N	Y	
						1	R	Calcaneum		N	N	
						1	L	Calcaneum	Fragmented	N	N	
				Bovinae	Cattle/Bison Subfamily	1		Cervicle Vertebra	Fragmented	N	N	
				Gallus gallus domesticus	Domestic chicken	1	R	Tarsometatarsus	Male cock specimen with advanced spur growth	N	N	
						2		Phalanges		N	N	
				Mammalia	Mammal	20		Unidentified				
24	N/A	8/4/2017	1/1	Caprinae	Sheep/Goat Subfamily	1	L	Metacarpal		N	Y	Chopmarks
TP 153	Test Pit 153	7/25/2017	1/1	Mammalia	Mammal	2		Unidentified	Fragments are likely *Bovinae* but too fragmented for positive ID	N	N	
TP 203	Test Pit 203	7/26/2017	1/1	Mammalia	Mammal	1		Unidentified	Too fragmented for positive ID	Y-1	N	
TP 263	Test Pit 263	7/27/2017	1/1	Mammalia	Mammal	1		Unidentified	Fragments are likely *Bovinae* but too fragmented for positive ID. Glass, carcoal, brick, and plaster also in bag.	N	N	Saw cut
TP 296	Test Pit 296	7/27/2017	1/1	Mammalia	Mammal	1		Unidentified	Fragment is likely femoral or humoral head	N	N	
TP 354	Test Pit 354	8/1/2017	1/1	*Sus scrofa domesticus*	Domestic Pig	2	L	Phalanges	Proximal epiphysis	N	Y	
TP 355	Test Pit 355	7/31/2017	1/1	*Sus scrofa domesticus*	Domestic Pig	4	L	Metacatpal	Two left metacarpals with unfused distal epiphyses	N	Y	
						2		Metacatpal	Two unfused distal epiphyses	N	Y	
						1	L	Cuboid		N	N	
						2	L	First Phalanx	Unfused proximal portion	N	Y	
						1	L	Second Phalanx		N	N	
						1	L	Third Phalanx		N	N	
TP 357	Test Pit 357	8/4/2017	1/1	Mammalia	Mammal	5		Unidentified	Too fragmented for positive ID	Y-5	N	
TP 358	Test Pit 358	8/4/2017	1/1	Mammalia	Mammal	2		Unidentified	Too fragmented for positive ID	Y-2	N	

Archaeological Impact Assessments (AIA)
Archaeological Overview Assessments (AOA)
Traditional Use Studies (TUS)
Preliminary Field Reconnaissance (PFR)
Archaeological Monitoring & Site Mitigation
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Marine and Underwater Archaeology
Dendrochronology
Archaeological Potential Modelling
Section 12 Site Alteration Permit Assistance
Aboriginal Trail Network Studies
Archaeological Workshops and Education
Remote Access to Archaeological Data (RAAD)

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November 3, 2016

Attn: Sarah Beaulieu
Tel.: [redacted]
[redacted]

Letter report summarizing faunal analysis of a second-class prisoner-of-war privy, Historical Morrissey Internment Camp, Morrissey BC.

Introduction

This letter presents a brief summary of the faunal analysis of the historical Morrissey Internment Camp's second-class prisoner-of-war (POW) privy, located near Morrissey, BC. Faunal material was collected by Sarah Beaulieu in July 2016 and analysis was conducted on October 19–21, 2016, by Morgan Bartlett of Kleanza Consulting Ltd. (Kleanza). Sarah Beaulieu asked Kleanza to conduct an overview analysis to determine the species of animal present within the assemblage, to classify each identifiable bone as juvenile or mature, and to note any modification to the bone through toolmarks or burning, these results are presented in Appendix I.

Methodology

Due to budgetary constraints, research goals, and the limitations of the domestic faunal assemblage at Simon Fraser University, this assemblage was analyzed judgmentally. Taxonomic identifications were based on comparisons with the SFU comparative collection, as well as with the aid of published faunal identification works (Gilbert 1990, Gilbert et al. 1981).

All identifiable Bovinae (cattle/bison subfamily) and Caprinae (sheep/goat subfamily) were classified to the level of "subfamily", unless diagnostic indicators were present to

clearly classify the specimen to species level. To confirm each specimen was domestic and not a related, wild species, all Caprinae specimens were cross-referenced with *Odocoileus hemionus* (mule deer), and all Bovinae specimens were cross-referenced with *Cervus canadensis* (elk) and *Alces alces* (moose) comparative collections. All fragmented specimens without diagnostic markers were classified as unidentified Mammal or Aves.

Epiphyseal fusion was coded as either fused or unfused. If a specimen did not show evidence of an unfused epiphysis, it was assumed that the specimen was mature. Matching epiphyses and shaft specimens were counted as two separate specimens.

All identifiable elements were named. Where possible, each specimen was given a side (left or right) and the portion of the identifiable element and/or additional modifications to the bone were described in the comments (distal, proximal, vertebral number, oxidization, etc.).

Each specimen was examined for butchery modifications. The term "chopmark" refers to either a deeply incised diagnostic V-shaped cross section, indicating perpendicular blows to the shaft of the bone, or shatter associated with blunt-force trauma at either a perpendicular or oblique striking angle. The presence/absence of saw marks and burned bone were also recorded during this analysis.

Results

The faunal assemblage recovered from the Morrissey Internment Camp second-class POW privy on July 15–20, 2016, includes Bovinae, Caprinae, Meleagridinae (turkey subfamily), *Odocoileus hemionus*, *Ovis aries* (domestic sheep), *Sus domesticus* (domestic pig), and unidentified Mammal- and Aves-class bone fragments (Appendix I). In total, the number of specimens (NSP) equals 1333, with the number of identified specimens (NISP) totalling 412, approximately 30% of the assemblage.

The chopmarks observed within the assemblage were likely made by a large, metal blade, based on the deeply incised, smooth edges of the V-shaped incisions observed on several of the bones. Saw marks were also noted on many of the bones, often on skeletal elements indicative of historical butchery practices (e.g., saw cuts down the spinal column, often through the vertebral bodies). Many of the long bones also exhibited a transverse break or saw cut through the shaft of the bone, congruent with the extraction of marrow (Maltby 2007:4). Marrow extraction is often indicated by spiralling perimortem fracture patterns and dynamic impact scarring (Karr et al. 2010:221), which were both observed on many of the bones (Figure 1).

Burned bone within the assemblage included partially burned specimens with black and grey burned sections (indicative of temperatures ranging from 100°C–400°C), grey/grey-blue-coloured specimens (indicative of temperatures ranging from 500°C–600°C), and heavily calcined white specimens (indicative of temperatures ranging from 700°C–1000°C; Ellingham et al. 2014).

Figure 1. Chopmarks synonymous with marrow extraction, indicated by spiralling perimortem fracture patterns.

The taphonomic damage to the assemblage (apart from perimortem and antemortem butchery and burning) include general decay and degradation as well as some trowel trauma. Overall, the assemblage was in good condition for analysis, with many diagnostic indictors still present.

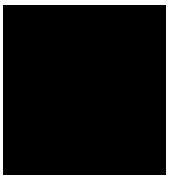
Conclusion

The faunal assemblage recovered from the Morrissey Internment Camp second-class POW privy was subjected to a preliminary analysis to understand the breadth of fauna disposed of within the second-class privy. The assemblage was dominated by the Bovinae and Caprinae subfamilies, followed by the species *Ovis aries*. Eight specimens of Meleagridinae were identified within the assemblage; however, these specimens were notably smaller in overall size than the domestic Meleagridinae comparative collection (the specimens were otherwise identical), which may indicate a wild species of Meleagridinae. One specimen of *Odocoileus hemionus* was identified within the assemblage when compared to the comparative collection of Caprinae. Additional specimens of *Odocoileus hemionus* may be present throughout the collection (Appendix I); due to the lack of diagnostic indicators and

the limitations of the domestic comparative collection, these specimens could not be identified to species level. The presence of the smaller, possibly wild Meleagridinae specimens and the single *Odocoileus hemionus* specimen indicate that wild game was likely augmenting the diet of the POW camp occupants at the time these remains were deposited.

Further analysis of butchery tool type, taphonomy, and additional bone modification, as well as identification of each element to species-level classification could be undertaken if allotted more time to do so.

Sincerely,



Morgan Bartlett, BA
Archaeologist
[redacted]

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Master Faunal Table
Kleanza Consulting Ltd.

Site Name: Morrissey Second Class Privy
Program: Morrissey POW Camp Excavations (Beaulieau PhD)
Location: Morrissey, BC
HCA Permit: N/A

Totals:		
	NSP	1333
	NISP	412

Unit	Level (cm)	Date Excavated	Bag Number	Genus/Species/Family	Common Name	NSP	Side	Element	Comments	Burned Bone?	Unfused epiphysis observed?	Butchery Type
Unit 4	40-50	15-Jul	1-A	*Mammalian*	Mammal	3		Unidentified	2 burnt fragments			
			2-A	*Bovinae*	Cattle/Bison Subfamily	1	L	Radius	Distal epiphysis		Y	
						1	L	Radius	Distal portion		Y	Saw cut
Unit 4	50-60	15-Jul	1-A	*Mammalian*	Mammalian	5		Unidentified	All burnt specimens	Y		Chopmarks/saw cut
Unit 4	60-70	18-Jul	1-A	*Bovinae*	Cattle/Bison Subfamily	1	L	Scaphoid				
						1		Caudal Vertebra	Tail vertebra - Likely Ca 2 or 3			
						1		Lumbar Vertebra	Articular facet			Saw cut
			2-A	*Caprinae*	Sheep/Goat Subfamily	1	L	Metacarpus	Proximal head			
						1	L	Tibia	Proximal epiphysis		Y	
						1	L	Calcaneus			Y	
						1	L	Tibia	Distal portion		Y	Chopmarks
						1	L	Astragalus				
						1	L	Tibia	Distal head			
			3-A	*Mammalian*	Mammal	14		Unidentified				Chopmarks/saw marks
			4-A	*Mammalian*	Mammal	25		Unidentified	All burnt specimens	Y		Chopmarks/saw marks
Unit 4	90-100	19-Jul	1-A	*Bovinae*	Cattle/Bison Subfamily	1	R	Radius	Distal portion			Saw
						6		Rib fragments				Saw
						1		Thoracic vertebrae				Saw
						2		Lumbar Vertebrae	1 specimen is in 2 pieces, 3 pieces in bag total			Saw
						1	R	Magnum				
						1	R	Cuniform				
						1	R	Pisiform				
						1	R	Intermedium				
						1	R	Scaphoid				
						1	R	Unciform				
			2-A	*Caprinae*	Sheep/Goat Subfamily	1	L	Radius	Distal head			Chopmarks
						1	L	cuniform	Likely one foot			
						1	L	Unciform				
						1	L	Scaphoid				
						1	L	Magnum				
						1	L	Calcaneus		Y		
						1	L	Lunate				
						1	L	Metacarpus	Distal portion			Chopmarks
						1		Metacarpus	Proximal head	Y		Chopmarks
			3-A	*Ovis aries or Odocoileus hemionus*	Domestic Sheep or Mule Deer	1	R	Femur			Y	
			4-A	*Mammalian*	Mammal	46		Unidentified				Chopmarks/saw cut
			5-A	*Mammalian*	Mammal	49		Unidentified	all burnt specimens	Y		Chopmarks/saw cut
			1-A	*Bovinae*	Cattle/Bison Subfamily	1	R	Radius	Proximal end, joined to ulna			
						1	R	Ulna	Proximal end, joined to radius			
						1		Atlas Vertebra	in 2 pieces, only transverse process present			saw
						1		rib				
			2-A	*Sus domesticus*	Domestic Pig	1	R	Humerus	Distal portion			Chopmarks
						1	L	Humerus	In 2 pieces		Y	Chopmarks
			3-A	*Ovis aries*	Domestic Sheep	2	R	Astragalus				
						1	L	Astragalus				
						1	L	Humerus	Distal portion			Chopmarks/saw cut

Unit	Level (cm)	Date Excavated	Bag Number	Genus/Species/Family	Common Name	NSP	Side	Element	Comments	Burned Bone?	Unfused epiphysis observed?	Butchery Type
Unit 4	100-110	20-Jul	4-A	*Ovis aries*	Domestic Sheep	2	L	Ulna	Saw cut on both ends			Saw cut
						2	R	Radius	Proximal portions			Chopmarks
						1		Cervical vertebra	Transverse portion only			
			5-A	*Ovis aries*	Domestic Sheep	1	R	Navicular				
						1	L	Navicular				
						1		Metatarsus	Distal epiphysis		Y	
						1	L	Radius	Proximal portion			Chopmarks/saw cut
						1	R	Calcaneus				
			6-A	*Ovis aries*	Domestic Sheep	1	R	Tibia	Distal portion			Chopmarks
						1	R	phalanx				
						1		Cervical vertebra			Y	Saw
						1		Lumbar Vertebra			Y	Saw
			7-A	*Meleagridinae*	Turkey Subfamily	1	R	Femur	Possibly wild Turkey			
						1	L	Femur	Possibly wild Turkey			
			8-A	*Mammalian*	Mammal	3		Vertebrae	Likely goat or Ovis aries but too degraded to tell		Y	Chopmarks/saw cut
			9-A	*Mammalian*	Mammal	76		Unidentified	6 burnt fragments	Y	Y	Chopmarks/saw cut
Unit 4	100-110	20-Jul	1-B	*Bovinae*	Cattle/Bison Subfamily	1	R	Radius	Proximal end, articulates with ulna and humerus		Y	Saw
						1	R	Ulna	Proximal end, articulates with radius and humerus		Y	Saw
						1	R	Humerus	Proximal end, articulates with ulna and radius		Y	Saw
						R	R	Lateral Malleolus				
						R	R	Cuniform Pes				
						1	R	Astragalus				
			2-B	*Bovinae*	Cattle/Bison Subfamily	1	R	Naviculo-cuboid				
						1	R	Tibia	Distal head			Saw
						1		Lumbar Vertebra				Saw
						1	R	Calcaneus				
						3		rib fragments				Saw
			3-B	*Ovis aries*	Domestic Sheep	1	R	Metatarsus (3 &4)			Y	
						1	R	Tibia	Distal portion			Chopmarks
						1	L	Tibia	Distal portion			Chopmarks
						1	R	Calcaneus				
						1	L	Calcaneus			Y	
						1		phalanx				
			4-B	*Mammalian*	Mammal	7		Unidentified				Chopmarks/saw cut
Unit 4	100-110	20-Jul	1-C	*Bovinae*	Cattle/Bison Subfamily	1		Rib				Chopmarks
						1		Cervical vertebra	Axis Vertebra (C2)			Saw
			2-C	*Sus domesticus*	Domestic Pig	1	R	Scapula	Sawn off just behind scapula neck across the scapular spine			Saw
						1	L	Scapula	Sawn off just behind scapula neck across the scapular spine			Saw
						3	R	Ulna			Y	
						1	L	Ulna			Y	
						2	R	Radius	One specimen is juvi and one is fused		Y	
						1	R	Radius	Proximal radial epiphyses		Y	
						1	L	Radius	Proximal radial epiphyses		Y	
						2	L	Radius			Y	
			3-C	*Poss. Sus domesticus*	Domestic Pig	1		Cervical vertebra	Atlas (C1)			Saw
			4-C	*Ovis aries*	Domestic Sheep	2	R	Radius	Distal portion and shaft of same bone			Chopmarks
			5-C	*Caprinae*	Sheep/Goat Subfamily	3		Thoracic vertebrae			Y	Saw
						1		Cervical vertebra	Atlas (C1)			Saw
						1		Cervical vertebra	Axis Vertebra (C2)			Saw
						3		Cervical vertebra			Y	Saw

Unit	Level (cm)	Date Excavated	Bag Number	Genus/Species/Family	Common Name	NSP	Side	Element	Comments	Burned Bone?	Unfused epiphysis observed?	Butchery Type
						5		Vertebral epiphyses			Y	
			6-C	*Meleagrididae*	Turkey Subfamily	1	L	Femur	Femoral Head			
						1		Rib				
			7-C	*Mammalian*	Mammal	10		Vertebrae	Likely *Caprinae* but too degraded to tell			Chopmarks/saw cut
			8-C	*Mammalian*	Mammal	36		Unidentified	3 burnt specimens	Y		Chopmarks/saw cut
						1		sternum	Unfused segement		Y	
						1	L	cuniform				
			1-A	*Caprinae*	Sheep/Goat Subfamily	1	L	illum				
						1		Sacrum	Likely S1			
						5		Cervical vertebrae	heavily butchered		Y	
			2-A	*Caprinae*	Sheep/Goat Subfamily	11		Lumbar Vertebrae			y	saw
			3-A	*Ovis aries*	Domestic Sheep	1	R	Astragalus		Y	N	
						1	R	Ulna	Proximal end			
						1	R	Tibia	proximal epiphysis		Y	
Unit 4	110-120	20-Jul	4-A	*Caprinae*	Sheep/Goat Subfamily	1	L	Scapula	Missing head - body only			
				Caprinae	Sheep/Goat Subfamily	1	R	Innominate			N	Saw marks
				Ovis aries	Domestic Sheep	2	L	Humerus	Proximal end, missing epiphysis		Y	Saw marks
			5-A	*Caprinae*	Sheep/Goat Subfamily	7		Vertebrae epiphysis			Y	
						8		Thoracic vertebrae	heavily butchered		Y	saw
			6-A	*Caprinae*	Sheep/Goat Subfamily	1	L	rib	Distal end broken		N	
						3		rib	no side, distal end broken			
			7-A	*Bovinae*	Cattle/Bison Subfamily	4		rib fragments				
						2	R	Thoracic vertebrae	cut in half, right side remaining		Y	saw
						1	R	Intermedium				
			8-A	*Mammalian*	Mammal	84		Unidentified	9 burnt fragments			Chopmarks/saw cut
						2	R	Humerus	Distal portion			Saw cut
Unit 4	110-120	20-Jul	1-B	*Bovinae*	Cattle/Bison Subfamily	1	R	Tibia	Distal epiphysis			
						1	R	Tibia	Distal portion			Saw cut
			2-B	*Caprinae*	Sheep/Goat Subfamily	1	L	Scapula				
						1	R	Femur	Distal portion		Y	Saw cut
			1-C	*Bovinae*	Cattle/Bison Subfamily	1	R	Femur	Distal epiphysis, in 2 parts		Y	Saw cut
						1	R	Astragalus				Saw cut
						1		Rib				
						2	L	Metatarsus				
						1	R	Metatarsus				
						1	R	Metacarpus				Chopmarks
						1	L	Metacarpus			Y	
						1	L	Tibia	Distal portion			Chopmarks
						1	R	Radius	Distal epiphysis			
Unit 4	110-120	20-Jul				1	R	Radius	Distal portion			Chopmarks
			2-C	*Caprinae*	Sheep/Goat Subfamily	1	L	Astragalus				
						1	R	Humerus	Distal portion			
						1	L	Navicolo-cuboid				
						1	R	Scaphoid				
						1	R	Magnum				
						1	L	Cuniform				
						1		phalanx				
						1		Lumbar Vertebra				Saw cut
						1		Cervical vertebra				Saw cut
			3-C	*Mammalian*	Mammal	21		Unidentified				Chopmarks/saw cut
			4-C	*Mammalian*	Mammal	8		Unidentified				Chopmarks/saw cut
						2	R	Ulna	Proximal portion		Y	Saw cut
			1-D	*Bovinae*	Cattle/Bison Subfamily	2	R	Radius	Proximal portion			Saw cut
						2	R	Humerus	Distal head sawn off bone			Saw cut
Unit 4	110-120	20-Jul				1		Scapula				Saw cut
			2-D	*Caprinae*	Sheep/Goat Subfamily	1	L	Humerus	Proximal head		Y	

Unit	Level (cm)	Date Excavated	Bag Number	Genus/Species/Family	Common Name	NSP	Side	Element	Comments	Burned Bone?	Unfused epiphysis observed?	Butchery Type
			[illegible]	[illegible]	[illegible]	1	L	Tibia	Distal portion missing		Y	Saw cut
			3-D	*Mammalian*	Mammal	9		Unidentified				Chopmarks/saw cut
Unit 4	110-120	20-Jul	1-E	*Sus domesticus*	Domestic Pig	1	L	Ulna			Y	
						1	L	Humerus	Shaft		Y	Chopmarks
						1	L	Humerus	Distal head		Y	
						1	L	Radius	Distal portion sawn off			Saw cut
			2-E	*Bovinae*	Cattle/Bison Subfamily	1	R	Radius	Distal portion, specimen shows oxidization			Chopmarks
						1	R	Rib fragment				
						2		Cervical vertebra	Sawn in half		Y	Saw cut
						1		Lumbar Vertebra	Sawn in half		Y	Chopmarks
			3-E	*Odocoileus hemionus*	Mule Deer	1	R	Femur				Chopmarks
			4-E	*Caprinae*	Sheep/Goat Subfamily	6		Rib fragments			Y	Saw cut
						4		Cervical vertebra	Including Atlas (C1)		Y	Saw cut
						1		Sacrum			Y	Saw cut
						1		Thoracic vertebra			Y	Saw cut
			5-E	*Mammalian*	Mammal	15		Unidentified	Burnt specimens	Y		Chopmarks/saw cut
			6-E	*Mammalian*	Mammal	37		Unidentified	Oxidized specimens		Y	Chopmarks/saw cut
			7-E	N/A	N/A	3		N/A	Oxidized metal fragments			
Unit 4	110-120	20-Jul	1-F	*Bovinae*	Cattle/bison Subfamily	1	L	Humerus	Distal head sawn off bone			Saw cut
						1		Caudal Vertebra				
						3		Rib fragment				Chopmarks
						1		Lumbar Vertebra				Saw cut
			2-F	*Caprinae*	Sheep/Goat Subfamily	1	R	Tibia	Distal portion missing			Chopmarks
						2	L	Ilium	Portion of the acetabulum is attached			Chopmarks
						1	L	Scapula	Only spine remaining			
						7		Rib fragments				
						1	R	Humerus	Distal head			Chopmarks
						1	R	Astragalus				
						1	L	Astragalus	Burnt	Y		
						1	R	Tibia	Proximal head			
						1	R	Cuniform				
						1	L	Ulna	Proximal head		Y	Chopmarks
						1	R	Radius	Proximal head			Chopmarks
						6		Thoracic vertebra	Oxidized specimens		Y	Saw cuts
						3		Lumbar Vertebra				Saw cuts
						5		Cervical vertebra	Including 2 Axis Vertebrae (C2) and 1 Atlas (C1)			Saw cuts
			3-F	*Ovis aries or Odocoileus hemionus*	Domestic Sheep or Mule Deer	2		phalanx				
			4-F	*Mammalian*	Mammal	213			19 burnt specimens	Y		Chopmarks/saw cut
			5-F	*Meleagridinae*	Turkey Subfamily	1	L	Ulna	Distal portion			Saw cut
Unit 4	110-120	20-Jul	1-G	*Caprinae*	Sheep/Goat Subfamily	1	R	Ishium				
						1	L	Acetabulum				
						1	R	Ilium				Chopmarks
						1	R	Scapula	Scapula body			Saw cut
						2	L	Scapula	Glenoid fossa and neck with partial spine			
						1	R	Scapula	Glenoid fossa and neck with partial spine			
						2	L	Humerus	Distal portion			Chopmarks
						2	R	Humerus	Distal portion			Chopmarks
						1	L	Metacarpus	Distal portion missing			
						1	R	Ulna	Proximal portion		Y	Chopmarks
						1	L	Ulna	Proximal portion			Chopmarks
						1	R	Radius	Distal portion missing			
						1	R	Humerus	Proximal epiphysis		Y	
						1	L	Humerus	Proximal epiphysis		Y	

Unit	Level (cm)	Date Excavated	Bag Number	Genus/Species/Family	Common Name	NSP	Side	Element	Comments	Burned Bone?	Unfused epiphysis observed?	Butchery Type
						1	L	Humerus	Proximal portion		Y	Saw cut
						5		Lumbar Vertebra			Y	Saw cut
						3		Thoracic vertebra			Y	Saw cut
						5		Cervical vertebra	Including Atlas (C1)		Y	Saw cut
						7		Rib fragments				
			2-G	*Bovinae*	Cattle/Bison Subfamily	1		Lumbar Vertebra				Saw cut
						3		Caudal Vertebra				
						1		Thoracic vertebra				
			3-G	*Aves*	Bird	4		Unidentified	Likely turkey (based on size)			Chopmarks
			4-G	*Mammalian*	Mammal	128		Unidentified	12 burnt specimens			Chopmarks/saw cut
			1-H	*Sus domesticus*	Domestic Pig	1	L	Humerus				Chopmarks
						1	L	Ulna				Chopmarks
						1	L	Radius				Saw cut
			2-H	*Bovinae*	Cattle/Bison Subfamily	1	R	Humerus				Saw cut
						1		sternum				Saw cut
						4		Thoracic vertebra	Vertebra fragments including articular facets and spinous process			Saw cut
Unit 4	110-120	20-Jul				2		Rib fragments				Saw cut
			3-H	*Caprinae*	Sheep/Goat Subfamily	1	L	Radius	Proximal portion			Chopmarks
						1	L	Radius	Distal epiphysis		Y	
						1	L	Scapula	Glenoid fossa and neck with partial spine			Chopmarks
						4		Cervical vertebra	Including Atlas (C1)		Y	Saw cut
						2		Rib fragments				
			4-H	*Mammalian*	Mammal	79		Unidentified	Oxidized specimens, 20 burnt specimens			Chopmarks/saw cut
			1-i	*Bovinae*	Cattle/Bison Subfamily	1	R	Tibia	Distal epiphysis		Y	
						1	R	Tibia	Distal portion		Y	Saw cut
						1	R	Astragalus				
						1		Sacrum	Vertebrae S4 and S5			Saw cut
						1		Caudal Vertebra				
						1	R	Cuniform				
						1	R	Pisiform				
						1	R	Lateral Malleolus				
Unit 4	110-120	20-Jul				1	R	Calcaneus				
			2-i	*Caprinae*	Sheep/Goat Subfamily	1	R	Metacarpus				
						1		Lumbar Vertebra				
						1		Cervical vertebra	Atlas (C1)			
						2		Rib fragments				
			3-i	*Meleagridinae*	Turkey Subfamily	1	R	Ulna				
						1	R	Radius				
						1	L	Humerus				
			4-i	*Mammalian*	Mammal	35		Unidentified		Y	Y	Chopmarks/saw cut
			1-A	*Bovinae*	Cattle/Bison Subfamily	1	R	Scapula	In 3 parts			Saw cut
						1	R	Radius	Distal epiphysis		Y	
Unit 4	120-130	20-Jul				1	R	Talus				
						1	R	Tibia	Distal portion			Saw cut
						1	R	Innominate	Acetabulum			Saw cut
			1-B	*Bovinae*	Cattle/Bison Subfamily	1	R	Calcaneus				
						1	R	Humerus	Proximal end		Y	Saw cut
						1		Sacrum	Sacrum verabrae S1, S2, and S3, cut down spine			Saw cut
Unit 4	120-130	20-Jul				1		Lumbar Vertebrae	Fragments		Y	Saw cut
			2-B	*Ovis aries or Odocoileus hemionus*	Domestic Sheep or Mule Deer	1		Innominate	Acetabulum			
			3-B	*Caprinae*	Sheep/Goat Subfamily	1	R	Metacarpus				Chop marks
						1		Thoracic vertebra			Y	Saw cut
			4-B	*Mammalian*	Mammal	1		Unidentified				Chopmarks/saw cut

Unit	Level (cm)	Date Excavated	Bag Number	Genus/Species/Family	Common Name	NSP	Side	Element	Comments	Burned Bone?	Unfused epiphysis observed?	Butchery Type
Unit 4	120-130	20-Jul	1-C	*Bovinae*	Cattle/Bison Subfamily	1	R	Ilium	Oxidized sections on articular facet			Saw cut
						1	R	Humerus	Proximal epiphysis		Y	
						1		Cervical vertebra			Y	Saw cut
						1	R	Rib				Saw cut
						3		Lumbar Vertebra				Saw cut
						1		Thoracic vertebra				Saw cut
			2-C	*Ovis aries*	Domestic Sheep	1	R	Scapula				Saw cut
						1		Lumbar Vertebra				Saw cut
						1		Rib				
			3-C	*Mammalian*	Mammal	14		Unidentified				Chopmarks/saw cut
Unit 4	120-130	20-Jul	1-D	*Bovinae*	Cattle/Bison Subfamily	1	R	Innominate	Acetabulum and ilium in 3 parts		Y	Saw cut
						1	R	Femur	Proximal portion		Y	Saw cut
						1		Cervical vertebra	Axis Vertebra (C2)		Y	Saw cut
						3	R	Rib			Y	Saw cut
						1	R	Pubic	Cut at the acetabulum and pubic synthesis			Saw cut
			2-D	*Caprinae*	Sheep/Goat Subfamily	1		Thoracic vertebra				
			3-D	*Mammalian*	Mammal	2		Unidentified	Likely bison/cow			Chopmarks/saw cut
Unit 4	120-130	20-Jul	1-E	*Bovinae*	Cattle/Bison Subfamily	1	R	Femur	Femoral Head			
						1	R	Femur	Proximal portion		Y	Saw cut
						1	R	Ishium	Acetabulum and ishum			Saw cut
						1	R	Magnum				
						1	R	Cuniform				
						1	R	Cervical vertebra	Cut in half			Saw cut
						3		Lumbar Vertebra	Transverse portion only		Y	Saw cut
						1		Femur	Distal portion		Y	Saw cut
						1		Tibia	Proximal portion		Y	Saw cut
			2-E	*Ovis aries*	Domestic Sheep	1	L	Scapula				
						1	R	Humerus			Y	Saw cut
			3-E	*Mammalian*	Mammal	2		Unidentified	Likely bison/cow			Chopmarks/saw cut
Unit 4	120-130	20-Jul	1-F	*Caprinae*	Sheep/Goat Subfamily	1	L	Innominate	Pubis and ishium		Y	
						1		Thoracic vertebra			Y	Saw cut
			2-F	*Bovinae*	Cattle/Bison Subfamily	1	R	Ilium	Sawn off just below crest/wing			Saw cut
						1	R	Ishium	Acetabulum and ishum			Saw cut
						1	R	Pubic	Acetabulum and pubic bone			
						1	R	Rib				Saw cut
						1	R	Scapula				
						1	R	Scaphoid				
						1	R	Intermedium	Oxidized sections			
						2		Cervical vertebra				Saw cut
			3-F	*Mammalian*	Mammal	8		Unidentified	Likely bison/cow			Chopmarks/saw cut
Unit 5	40-50	15-Jul	1-A	*Caprinae*	Sheep/Goat Subfamily	1	L	Metatarsus	Proximal portion			

Appendix C

Ethics Approvals

SFU
OFFICE OF RESEARCH ETHICS
dore@sfu.ca
http://www.sfu.ca/ore

Director 778.782.6593
Associate Director 778.782.9631
Manager 778.782.3447

Minimal Risk Approval – Delegated

Study Number: 2016s0182
Study Title: Archaeology of Internment at the Morrissey WWI Camp

Approval Date: 2016 May 03
Expiry Date: 2017 May 03
Principal Investigator: Beaulieu, Sarah
Supervisor: Jamieson, Ross
SFU Position: Graduate Student
Faculty/Department: Archaeology

SFU Collaborator: n/a
External Collaborator: n/a
Research Personnel: n/a
Project Leader: n/a

Funding Source: CFWWIRF
Funding Title: Canadian First World War Internment Recognition Fund

Funding Source: Social Sciences and Humanities Research Council
Funding Title:

Document(s) Approved in this Letter:

- Study Details, version 2, dated 2016 April 24
- Consent Form, version 2, dated 2016 April 24
- Interview Questions (Descendants), version 2, dated 2016 April 24
- Interview Questions (Community Members), version 2, dated 2016 April 24
- Newspaper Advertisement, uploaded 2016 April 28
- Nature Conservancy Contract, dated 2016 February 15
- Heritage Conservation Act Permit Application, dated 2016 April 11
- Application Referral letter, dated 2016 April 22

The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human participants.

The approval for this Study expires on the **Expiry Date. An annual renewal form must be completed every year prior to the Expiry Date. Failure to submit an annual renewal form will lead to your study being suspended and potentially terminated.** The Board reviews and may amend decisions or subsequent amendments made independently by the authorized delegated reviewer at its regular monthly meeting.

This letter is your official ethics approval documentation for this project. Please keep this document for reference purposes.

This study has been approved by an authorized delegated reviewer.

SFU OFFICE OF RESEARCH ETHICS
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Annual Renewal Approval

Study Number: 2016s0182

Study Title: Archaeology of Internment at the Morrissey WWI Camp

Annual Renewal Date:	2018 February 13	**Expiry Date:**	2019 February 13
Principal Investigator:	Beaulieu, Sarah	**Supervisor:**	Jamieson, Ross
SFU Position:	Graduate Student	**Faculty/Department:**	Communication

Research Personnel: n/a

External Collaborators: n/a

SFU Collaborators: n/a

Funding Source: CFWWIRF

Grant Title: Canadian First World War Internment Recognition Fund

Funding Source: SSHRC

Grant Title: Social Sciences and Humanities Research Council

Document(s) Approved in this Application:

- Annual Renewal Report

The approval for this study expires on the **Expiry Date**. **Failure to submit an annual renewal form will lead to your study being suspended and potentially terminated.** If you intend to continue to collect data past the term of approval, you must submit an annual renewal form at least 4 weeks before the expiry date.

This letter is your official Annual Renewal Approval documentation for this project. Please keep this document for reference purposes.

The annual renewal for this study been approved by an authorized delegated reviewer.

Appendix D

Supplementary Artefact Data

Description:

The accompanying Excel spreadsheets are an exhaustive list of the artefacts excavated from the Morrissey WWI Internment Camp between 2015-2017.

Filename:

Beverage Containers.xlsx

Clothing apparel and shoes.xlsx

Construction materials.xlsx

Food Containers.xlsx

Hand tools.xlsx

Hygiene.xlsx

Miscellaneous.xlsx

Pharmaceutical Bottles.xlsx

Rifle Cartridges.xlsx

Tableware, Food and other storage containers.xlsx

Tobacco Tins.xlsx

Tunneling Artefacts.xlsx