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The Chinese in California: Archaeology and Railroads at the Turn of the Century

Evelyn Hildebrand

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THE CHINESE IN CALIFORNIA:
ARCHAEOLOGY AND RAILROADS AT THE TURN OF THE CENTURY

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Applied Archaeology

by
Evelyn Kay Hildebrand
December 2020

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Approved by:

Russell Barber, Committee Chair, Anthropology

Guy Hepp, Committee Member

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ABSTRACT

Research on Chinese sites in California have focused on ethnicity, ethnic relations, and the material expression of ethnicity all of which are key issues in overseas Chinese archaeology. Chinatown sites produced data that helped define Chinese culture and experience in historical California. One railroad construction work camp site identified in 2016 located in the Cajon Pass in the late 1800's offers the potential for insight into the lives of the workers. Chinese occupation in San Bernardino is not well understood, and the site may offer information on the culture, traditions, and integrations of the workers. Thousands of Chinese men left their impoverished villages; wrecked by the British Opium Wars, the Taiping Rebellion, and multiple clan wars, and were recruited by industries and immigrated to fill the demand for work as laborers, with wages lower than their white counterparts. Anti-Chinese racism and violence increased throughout the years in California, culminating in the Chinese Exclusion Act passed in 1882, denying citizenship and pushing out those who did not meet criteria. Part of the field of historical archaeology focuses on the history of the modern world, such as early colonial settlements on the East coast or early Spanish settlers on the West, and is able to give unbiased accounts using the material remains, offering a perspective outside of written history. These trends left the study of the Chinese in California much to be desired, with segregated and static attention given where there was any at all. Chinese immigrants brought many items with them to California, including traditional ceramics for

food storage, local currency, and leisurely items such as traditional games and smoking pipes. These and other objects can be found in archaeological sites throughout the western coast and states just further inland, like Nevada and Utah. Other kinds of work camp sites Chinese workers occupied were farming and agriculture, logging and mining. The framework of the project utilizes the theories of subculture group change, interactions between different ethnic groups and the expression of identity and other aspects through material culture remains, specifically the Chinese immigrant minority group, and their identity in the archaeological record. A surface survey and collection, along with several mostly sterile sample test pits, were the methods ultimately chosen for the Cajon Pass Work Camp site. Interpretations of the site and its artifacts, as well as suggestions for future studies, are presented along side tables and figures detailing the collection's contents.

DEDICATION

This thesis is dedicated to my mother, I wouldn't have finished otherwise.

TABLE OF CONTENTS

ABSTRACT	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER ONE INTRODUCTION	1
Chinese in California.....	1
The Work Camp Site.....	5
CHAPTER TWO CHINESE BACKGROUND IN CALIFORNIA AND THEORIES.....	10
Late Nineteenth and Early Twentieth Century Chinese Occupation	10
Immigration	11
CHAPTER THREE RESEARCH QUESTIONS AND METHODS	24
Purpose	24
Research Questions.....	24
CHAPTER FOUR WORK CAMP SITES	34
Camp Types	34
Railroad Camps	35
CHAPTER FIVE THE WORK CAMP SITE: FS#05-12-53-00220	39
Cajon Pass History	39
Site Discovery	43
CHAPTER SIX HISTORICAL ARCHAEOLOGY OF THE CHINESE IN NORTH AMERICA.....	44
Historical Archaeology	44
History of Research.....	45

CHAPTER SEVEN RESULTS AND CONCLUSIONS	61
Tables	61
Answering Research Questions	64
APPENDIX A Artifact Surface Collection Inventory	77
APPENDIX B Sample Test Pit Results.....	82
APPENDIX C The Royal Baking Powder Company and Others.....	87
REFERENCES	91

LIST OF TABLES

Table 1: The Total Quantity by Artifact Type	61
Table 2: The Results of STP Testing on Site.....	63

LIST OF FIGURES

Figure. 3.1. STP Locations within Site.....	30
Figure 3.2. Survey Maps of the Work Camp Site.....	32
Figure. 5.1. Route Map of California Southern Railroad Company.....	41
Figure. 5.2. 1888 Santa Fe Railroad Route	42
Figure. 6.1. Vessel with Double Happiness character circled.....	57
Figure. 6.2. Vessel with Four Season Design.....	57
Figure. 7.1. Artifact #47, Royal Baking Powder Company can	68
Figure. 7.2. A Newspaper Ad for Royal Baking Powder Company.	69
Figure. 7.3. Chinese Coin Discovered on Initial Survey.....	75

CHAPTER ONE

INTRODUCTION

Chinese in California

Chinese people immigrated en masse to California in the 1850's, spurred on by the Gold Rush (1848-1855), and this trend did not slow until the 1880's when U.S. federal law attempted to halt their immigration altogether, with little success. Primary accounts of their lives are next to non-existent, leaving their descendants and history buffs alike a mystery regarding what their daily lives were like during the transformative time of the construction of the first transcontinental railroad as well as other accomplished feats later on during the early nineteenth century in North America. Archaeological remains from historical sites within California are a key component in understanding the social and cultural changes among immigrant groups, such as the Chinese, during the eighteenth and nineteenth centuries. Of particular importance is archaeological information that helps reveal how immigrant peoples assimilated into the social and cultural systems of mainstream America, including the emergence and evolution of new ethnic groups, social hierarchies, and dominance-resistance strategies. One such immigrating group, and the focus of this project, the Chinese, came by the hundreds of thousands to the continental United States during the second half of the nineteenth century, bringing trade skills, craftsmanship and cultural values. While the Chinese had been emigrating from their homeland previously, these numbers grew exponentially around the time of

the California Gold Rush, dates listed previously. From the beginning of the Gold Rush (1848) until 1882, when federal law ended the influx of Chinese, approximately 300,000 had arrived. They remained longer than they had planned, mostly due to more opportunities to earn money in the U.S. than in China, despite racial hostilities (Brownstone 1991:62). It must be noted that census takers in the nineteenth century were not accurate in counting Chinese, especially women and children; many who were mentioned in newspapers for example, never appeared on a census list (Chang 2019:317). There were two major waves of Chinese immigration to the U.S. The first wave was when Chinese populations had been established during the Gold Rush followed by the second wave, thousands of railroad workers building the first transcontinental line (1863-1869) (Chang 2019:173, 98, 450). These are some of the things that can be observed through the archaeological record: in work camps, housing, fishing camps, and other types of sites where material remains are preserved. Some of the more well-known Chinese archaeological sites in California are fisheries and mining camps where research has focused on understanding ethnicity, ethnic relations, and the material expression of ethnicity, all of which are some of the key issues in overseas Chinese archaeology (Hardesty 1993:37). Later research broadened to include other topics such as gender, representation (such as in film, literature and media), oral history, foodways and practices, zooarchaeology, paleoethnobotany, bioarchaeology and more (Chang, 2019:512, Wegars 2016).

Much of the archaeological research about the Chinese in California focuses on Chinatowns (larger settlements where Chinese immigrants and their families congregated for protection) mining camps, and to a smaller degree, fisheries. Some examples are the Chinatowns of San Bernardino, San Francisco, and San Jose, fishing along the Channel Islands and coasts of mainland California, and the mining camps during and after the Gold Rush (Braje, 2016:102, 153, Great Basin Foundation [GBF] 1987:6, Kennedy, Rogers, Kaestle, 2018:135). While these sites have produced data that have helped define Chinese culture and experience in historical California, there is great potential for data from smaller sites associated with industries, such as the historic rail system in California, to provide additional data on material expression of ethnicity and ethnic relations. One intriguing Chinese work camp site, located along the rail lines in the Cajon Pass of the San Bernardino Mountains, offers the potential to learn more about the incorporation by Chinese immigrants of portions of mainstream American society and culture, their resistance to it, and the extent to which they were able to maintain traditional cultural lifeways while in this region, all the while battling the hostile racism. The Chinese immigrant work camp site (called simply “the Work Camp site” hereafter for the purposes of this project) has been designated 5-12-53-00220 by the United States Forest Service. Until now, there has been no official project undertaken to examine this site and the surrounding area. The history of Chinese occupation in San Bernardino during the nineteenth century is not well understood, and this site

provides data on how one camp was integrated into the larger Chinese network centered around the large Chinatown located in Riverside (GBF, 1987:437). The Riverside Chinatown is the most extensively documented and excavated Chinatown in California and provides an elaborate framework or foundation, in which a relationship with the smaller work camp site can be considered, as well as other work sites in the region. This Chinatown research included identification of inhabitants and their subcultural lifeways, their adaptations and resistances to assimilation (a subculture is a minority cultural group within a parent culture, in this case, the traditional Chinese culture existing within the larger American culture in California, maintaining their founding principles and adapting some aspects of the parental culture, not enough to assimilate fully, nor resisting it entirely. Subcultures develop their own norms and values, not only in culture, but in political, public, and private matters). A similar focus at the Work Camp site may provide information that can link the two sites through the cultural sphere, or possibly provide more context for the Chinese occupation in the San Bernardino county region, and the extent of the connection to more permanent settlements such as the Chinatown site. Artifacts recently observed at the Work Camp site help to define the ethnic and social identity of the Chinese people who most likely worked on the railroad(s) and provided clues on various issues ranging from extent of integration into the larger Chinese culture within the region, continuity of traditional lifeways, and to their extent that the Chinese at the Work Camp site integrated into mainstream American culture or remained a Chinese subculture.

A subculture is a cultural group within a larger culture, which often has beliefs or interests that vary from the larger culture. This can be reflected in the lifestyles of the subcultural group. In this case, it is the efforts Chinese immigrants put into bringing aspects from their home lifestyles and culture into their life in America. This includes traditional customs, beliefs, language, foodstuffs, tools, dress, hairstyles, children's toys, etc. The extent to which a subculture integrated into the mainstream culture can be gleaned in one way through considering the material they left behind. Other ways, as mentioned previously: oral histories- while Chinese immigrant workers did not leave behind personal journals or other first hand accounts; interviews with their descendants, great-grandchildren and even great-great-grandchildren have given documentation and insight into their ancestors' lives (Lee and Yu, 2019:14), zooarchaeology; a more detailed understanding of the Chinese workers meat diet than just pork, beef and fish, and include sheep, deer, goat and chicken (Chang, 2019:150), and bioarchaeology; studying the bones of Chinese railroad workers revealed that some were undernourished as children and benefited from an improved diet after immigrating (Chang 2019:119). For my thesis research, I studied the Chinese Work Camp site to address research questions related to its former occupants and their lives, as well as possible site eligibility under Section 106.

The Work Camp Site

The Work Camp site was first located by archaeologists from Applied Earthworks (AE) after the Blue Cut fire of August 2016. It was initially identified

by a potential rock alignment within the site boundary. After further inspection, the Forest Service and AE identified Chinese pottery of three distinct styles, along with a few other historical artifacts, including a coin and glass game piece. These artifacts date to the late nineteenth and early twentieth century, which coincides with the records of the railroad construction. The results of further investigation align the Chinese artifacts with the railroad construction, which potentially would make this site eligible for inclusion in the National Register of Historic Places. The site's connection to the railroad is important because the railroad is a significant component in the history of the United States and the industrialization of the West, specifically California. The railroad system in the history of the United States is vastly important as it made travel on a large scale possible in addition to transporting foods and material across the country, and facilitated international trade. The railroads literally and figuratively connected the entire country, from the Atlantic to the Pacific Oceans, and by extension to the rest of the world. The labor of Chinese workers is what made it possible to travel across the country in a matter of days instead of months, they brought America up into the world of a modern nation, creating wealth and opportunity to settle the West (Chang 2019:2, Manu 2019). If the site is not connected to the railroad, it may still be eligible due to its ties to Chinese immigration. The site's eligibility for the National Register of Historic Places under Section 106 could fall under any of the four National Register criteria

A: “The quality of significance in American history... archeology... and culture is present in... sites and objects that possess integrity...and are associated with events that have made a significant contribution to the broad patterns of our history or”

B: “That are associated with the lives of significant persons in our past or”

C: “That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or”

D: “That have yielded or may be likely to yield, information important in history or prehistory.”

There are very few Chinese sites known within San Bernardino County, one being the Gold Mountain Mine, also known as the Baldwin Mine, according to the Chinese Heritage Sites of the American West website. The Work Camp site has the potential to be significant because of this rarity in this particular geographic environment. The site was intensively surveyed, recorded, and evaluated by myself and others involved in the field work for eligibility to the National Register. The focus of this evaluation, and for this research project, is to determine whether Chinese immigrants maintained their ethnic identity and to what degree they resisted (or assimilated) into mainstream American society, and how connected the group at the Work Camp site was to the Chinatowns in

the San Bernardino and Riverside areas. Acculturation is considered one process of assimilation, one which eliminates behavioral patterns that identify an ethnic group, in the case of Chinese immigrants, they assimilated only a little during their first eighty years in the United States (Wegars, 2016).

The following chapters discuss various parts of the project in detail. In Chapter Two discusses the history of California and the Chinese immigrants who lived here and their tumultuous relationship, and some information on the known archaeological sites occupied by the immigrants and their families, as well as theories applied and the framework of the project. Chapter Three provides details about the methods used to conduct field work and after, and the research questions focused on in the project and while in the field. Chapter Four discusses some of the above mentioned sites and others, as well as current and past studies by archaeologists and historians, as well as details on some of the artifacts. Chapter Five discusses in detail the Work Camp site in the Cajon Pass, including its discovery. Chapter Six covers the interpretations of the artifacts and sites of Chinese immigrants in California and nearby states, and discusses the various types of physical labor work camps discovered in and around California that once employed immigrant workers in the nineteenth century. Chapter Seven includes the results of the completed field work, a summary of the project, possible future endeavors and concluding thoughts. This site was determined to not be eligible for inclusion in the National Register of Historic Places as it does not fit the criteria. The Work Camp site does not add new info about Chinese

occupation in America, the information given supports what is already known. It does not add anything new concerning the railroad construction, either in Calif or across the US. The Work Camp is most likely associated with the 1913 rail line construction more than the 1886 one.

CHAPTER TWO

CHINESE BACKGROUND IN CALIFORNIA AND THEORIES

Late Nineteenth and Early Twentieth Century Chinese Occupation

The importance of historical Chinese sites in California can be understood in part by knowing the history of Chinese presence in California. In the nineteenth century, California's economy was growing as the landscape of the countryside changed and cheaper labor from overseas filled the demand. The demand for labor stemmed from advances in technology and medicine; as people were becoming healthier and living longer, they were inventing new things and having more children; this in turn pushed them to move to larger and more populated cities and regions. The development of the Western coast of North America was new and presented opportunities to address these labor, health, and family demands. However, when attempting to fill the growing demand for labor, immigrants, especially the Chinese, faced many obstacles. Anti-Chinese movements, fueled by increasingly severe stereotyping and discrimination, developed in California and on many occasions collided with Chinese attempts to fill manual labor positions (Caldwell, 1971:125, Kennedy, Rogers, Kaestle, 2018, Reid, 2017, Sinn, 2013:43). From their homeland, Chinese immigrants brought their native customs, which differed greatly from those of the U.S., and only helped further prejudice and stereotypes. As prejudice against the Chinese increased over time, Americans came to classify all ethnic groups that differed from Caucasians together, resulting in an overall anti-color bias in California. In

turn, the social and financial challenges Chinese people faced during the late nineteenth and early twentieth centuries can be understood through this prejudicial context (Caldwell, 1971:126, Chang 2019, Jolly 2012, Pfaelzer 2008, Rose 2020).

Immigration

San Francisco was the only large city in California with an international port for many years (the area of what is now San Francisco was an initial Euro-American settlement in 1776 and the city was officially incorporated in 1850 [San Francisco museum website]), which placed it at the center for trade and skilled labor. A Chinatown in San Francisco was eventually established as thousands of Chinese men were recruited by industries and immigrated to work as laborers for wages lower than their white counterparts. These men left their impoverished villages in China which were wrecked by the British Opium Wars, the Taiping Rebellion, and multiple clan wars, with the intentions to build lives and business elsewhere. Pearl River Delta residents, for example, dealt with floods and crop failures as well, which led to financial crisis, and the opportunity for better prospects overseas, including connections to Hong Kong through established international markets, which made massive emigration possible (Voss, 2015:6). Most of these immigrants came from the southern area of China, specifically eight different provinces, each of which spoke a different Mandarin or Cantonese dialect. The different regions of China spoke a total of eight major languages, and were often at war with each other. It was the people in these provinces who

were most affected by the various wars, which caused them to depart for America (Voss, 2005:424). Just under 400,000 Chinese immigrated into the continental United States during the second half of the nineteenth century (Voss and Allen, 2008:6). Most of these men were unmarried and originated from different provinces of China. The violence and inter-regional wars they experienced at home continued in the communities they built in America, creating sometimes hostile situations in their work and living spaces.

Court decisions, such as the 1852 California Supreme Court decision that classified Chinese people as non-white (and so they could not prosecute against a white person) allowed anti-Chinese racism to escalate to large scale violence, such as burning Chinatowns mentioned previously (Voss and Allen, 2008:10). Anti-Chinese racism and violence increased throughout the years, culminating in the Chinese Exclusion Act in 1882, denying citizenship and pushing out any who did not fall under specific criteria, such as intermarriage between Chinese and another group.

Racism and Violence. The anti-Chinese movement expressed itself in numerous ways, through legislation, boycotts, hostile representations in news stories, and general harassment (Baxter, 2008:29). This in turn led to violence against them by the American communities, the most common, most damaging, and repeated offense being burning down the Chinese residential areas, forcing its occupants to relocate elsewhere, constructing walls with barbed wire fences, and erecting signs saying no trespassing (Baxter, 2008:29).

As prejudice spread within California, most Chinese workers were expelled from the many jobs they held. From 1850 to 1900, anti-Chinese sentiments resulted in the passing of discriminatory laws which remained until the mid-20th century. These negative laws forced many Chinese to emigrate back to China, although a small number stayed to eventually see these laws overturned (Chang 2019:309, 311, Reid 2017, *Saxton 1971*). Anti-Chinese prejudice is historically documented in the 1850s in California, as the immigration flow continued but stabilized to a steady, slower rate. At this time, most male Chinese immigrants worked in the mines during the California Gold Rush (Sinn, 2013:223). They eventually faced discrimination and intimidation and were pushed out of the mines and into agriculture, fishing, and other types of manual labor occupations (Voss and Allen 2008:9). By the 1860s, California proposed banning the Chinese from immigrating altogether. After the Civil War (1861-1865), the Chinese were blamed for the economic downturn that followed, which increased animosity towards them and other minorities. Eventually, the Chinese Exclusion Act was passed in 1882 (Voss and Allen, 2008:10). From legislation and boycotts, anti-Chinese sentiment grew to include general harassment in the streets and even violence in some cases in California. The racially-fueled violence the Chinese faced was eventually met with violence, as the Chinese established themselves and resisted the discriminatory treatment and laws across the country. Historian Chen notes: "...Chinese immigrants... maintained personal, economic, and political ties to China... these ties often empowered

their pursuit of the American dream and resistance to racial antagonism” (Chen, 2002:121).

According to a study by historical archaeologist Scott Baxter (2008:29) there is: “...evidence for this active resistance... in both the archaeological and historical records.” Historical accounts of Chinatowns reveal that their buildings were consistently and purposefully burned down by white vigilantes and rebuilt several times over by their residents (Baxter, 2008: 29-30). Archaeological data from a Chinese woodcutter’s camp in Truckee, California, suggests that the Chinese countered these violent acts and took measures to protect themselves. Numerous .38 caliber cartridges, which were used in revolvers small enough to fit in a front vest pocket, were recovered (Baxter, 2008:33, Walter, 2006:251), suggesting that the Chinese residents were not only armed but regularly carried and used firearms. In one particular historical account, several Chinese immigrants shot and killed a man in Jackson, California for unknown reasons and were caught within a few weeks of escaping the town, and were among the first people to be legally executed in California (Baxter, 2008:34).

Chinatowns. The history of the first Chinatown in Riverside, California began with laundries and washhouses clustered together in the 1880s (Great Basin Foundation [GBF] 1987:6). Laundry businesses increased over time and agriculture was introduced, as mining and railroad work decreased, especially when the transcontinental railroad was completed and these job types were no longer available. Aside from their work as laundrymen, Chinese immigrants

worked in orange groves and later as miners. Others were black-market merchants, selling alcohol when it was prohibited in the early 1880s. Later, Chinese labor helped construct irrigation canals and pipelines in San Bernardino, California. The Chinese also helped build the city by clearing land, farming cotton, and making bricks used in construction of the buildings (GBF 1987:40-41).

The second Chinatown in Riverside developed when attempts to evict the Chinese population in Pasadena eventually succeeded, spurred on by mass murder of twenty-eight miners in Wyoming, and other violent acts in Tacoma and Seattle, Washington. This Chinatown also began with washhouses and grew to become a significant aspect of Riverside life (GBF, 1987:51). The last of the original Chinese settlers of this town died in the 1930's. Since population flow had declined in the 1920s, this Chinatown was eventually abandoned altogether, and most of its buildings were razed (GBF 1987:309). The historical artifacts left behind at this and other Chinese sites have been studied by archaeologists and researchers and have allowed for interpretations of the lives of Chinese immigrants in California (GBF 1987, CRRWNA Stanford, Voss 2018, 2015).

Other Chinatowns in California include a Market Street in San Jose, a major fishing port in San Francisco (Braje 2016:22, Jorae 2009:217, Kennedy, Rogers, Kaestle, 2018:1). More details are in the Methods chapter, but briefly, I intended to use current known data on the prior work to better understand how the Work Camp fits into the larger Chinese community.

Understanding the background and context of life as a Chinese immigrant in 1800's California helps in the process of understanding the lives of those who occupied the Work Camp site during the railroads' construction. Their relationships with others, their access to care, and their access to food and work supplies were all impacted by the social and legal norms of the time, some of which can be interpreted from the site. Understanding what life was like for Chinese immigrants in early nineteenth century California, specifically adjusting to the social and cultural mainstream of America at the time- whether incorporating it or not- this site is an example of a crossroads meeting between cultures and people.

The nearest known Chinatown from the Work Camp site in the Cajon Pass was located in San Bernardino, with the next closest being in Riverside. These residencies of several hundred Chinese immigrants and their families would have acted as a network for all workers as well as a connection for trade from their homeland, such as for foodstuffs and other familiar items. Railroad work camps and their occupants throughout California most likely remained connected to their families and peers through these points as they moved quickly across the western United States.

Theoretical Framework. Archaeology is a social science, one that aims to better understand past culture and reconstruct its history. Past cultures can be interpreted by examining the social environment and the material remains of people. Historical archaeology offers the opportunity to study people who are

underrepresented in written accounts, such as immigrant laborers. Through studying the material remains of individuals from different ethnicities, namely the Chinese immigrants in American society; their interactions and any resulting culture change, underrepresented groups and their contributions to the multicultural roots of modern America can be explored and understood. Looking at concepts of ethnicity, material culture and how it is expressed within the archaeological record; interpretations of the lives of Chinese railroad workers can be made (Johnson 2019, Jolly 2012).

Ethnicity. Ethnicity is a culturally constructed identity associated with a particular group. This concept allows individuals to identify and interact within their own ethnic groups; and affects how individuals interact outside of their ethnic group (Jones 1997). Ethnic identity is a changing concept, based on whatever is the present situation. It is a form of identification that can reveal historical experiences. Ethnicity is subjected to change on a continual basis (Jones 1997: 13-14). Ian Hodder defines ethnicity as the “mechanism by which interest groups use culture to symbolize their within-group organization” to oppose and compete with other interest groups (Hodder 1979:452). What becomes meaningful is probably a function of an oppositional process (Spicer 1971:498), and the emphasis is placed on the ethnic boundary that defines the group (Barth 1969:15). Barth’s concept of ethnic markers is explained as follows:

“Identifying material markers of ethnicity has several steps. [first] step is to identify a potentially distinctive group, whether through a constellation of types or

styles, through names in historical documents, or through modern informants... then attempt to establish the social and geographical boundaries of the group by comparing distinctive practices or artifacts with those of neighboring groups... careful study of contexts of production and use... attempt to identify the kind of group that such a practice might mark. Finally, comparison of these results with analyses of other categories of evidence may support an identification of ethnic difference.” [1969:311].

It is this boundary maintenance expressed in a material form that is studied (Costello, 2010:76). Ethnicity is not limited to racial boundaries; it has a part in the everyday lives of individuals and can be an indicator within a social hierarchy. Ethnicity is an aspect of the social and cultural practices that become deeply rooted through different processes such as gender relations and identity formation. (Hardesty 1994, Jolly 2012:4).

Material Culture. Ethnicity is one way material culture can be expressed, either individually or by a community, and can be done in many different ways. Material culture studies have evolved from simply organizing artifacts into types and categories to allow for deeper interpretations, such as the possible social status of an object’s owner or of the object’s manufacturer. Personal adornments, decorative objects, and a few other artifact types can reveal more than superficial answers to questions in the archaeological record. Personal objects can provide details about an individual’s personal identity and potentially reconstruct the individual. Understanding how an ethnicity in the archaeological record was

constructed is possible through the interpretations of the material culture (Hardesty 1994). Cochran and Beaudry (2006:196) explain that in the view of material agency: "...material culture has the potential to shape our experiences of the world..." is meant to be taken both literally and metaphorically. New objects and technologies appear on a regular basis, and many people use them "in the creation of multiple and often intersecting identities" (Cochran and Beaudry, 2006:191). Material culture studies have grown to allow for interpretations of how people express themselves and interact through material culture. Personal adornments, decorative objects, and a few other artifact types can reveal more than superficial answers to questions in the archaeological record. Objects of personal adornment excavated from sites can provide a detailed portrait of an individual's life, as well as the construct of a personal and social identity (Cochran and Beaudry, 2006:192).

The varying types of ceramic wares and their abundance across most Chinese occupation sites in North America offer insight into the economic status of Chinese immigrants and their descendants. Records of costs from both America and China support this, along with the quantity and types of artifacts found in the sites. Artifacts at the Work Camp site reveal personal information about the lives of the railroad workers, which would be rare since railroad construction camps were temporary, and groups like these were highly mobile. Objects recovered from the Work Camp that might seem out of place as far as camping, mining and building equipment for the railroads and means of living and

working outside, could be indicators of the workers' individual identities, and might reveal more of their personal and social construction within the United States as a foreign immigrant. The relationship between people and things within a specific social context can emphasize the details of the production of material culture, such as the historical setting of industrialization and building the railroads.

A related example comes from Glassie's work on the production of diverse folk objects ranging from woven carpets to pottery (Glassie 1999, in Cochran and Beaudry 2006). From research like this, methods were developed that involved the detailed study of material culture forms and their placement within historically-situated folk practices. By integrating the sources of evidence, scholars produced nuanced, multi-tiered analyses centered on the production of particular objects by particular people, examining the production of form and style, how the processes of production play an active role in shaping individual producers' identities, and the broader contexts of producers' social and cultural identities. Such behavioral approaches to material culture understood objects as to some extent manifestations of their producers, carrying with them human cultural sensibilities bound to their materiality (194). This could also be applied to objects within the Work Camp, especially the various types of pottery. Their form and style could reveal numerous details about the lives of their owners, such as their social standing in China, or the area they may have emigrated from. The varying types of ceramic wares and their abundance across most Chinese

immigrant occupation sites in North America have offered insight into the economic status of Chinese immigrants and their descendants.

Ethnicity, Material Culture Expression, and the Work Camp. Even with the presence of local food containers found in work camp sites, Voss (2015) explains that their presence does not signify that the residents chose assimilation voluntarily. Railroad camps were temporary and geographically isolated, so the workers may have had a hard time maintaining connections with Chinatowns in the area, and so had to rely on non-Chinese subsistence (Voss, 2015:16). In considering space within work camp sites, Voss explains that the workers were separated by ethnicity in order to suppress labor organizing, and this produces spatially discrete sites of different ethnic occupants and racialized social categories (Voss, 2015:16).

As stated previously, an ethnic group is one which is set apart from another that they are interacting with. Within the Chinese American immigrant community, gaming is considered one expression of ethnic identity (Jones 1997:13-14). Ethnicity can be expressed in material culture and it is possible to interpret ethnic identity this way (Hardesty 1994). Chinese gaming pieces appearing again and again in the archaeological and historical records prove their popularity amongst the Chinese immigrant population in the American West. There is also no archaeological evidence to support that Chinese immigrants played American games and activities. This could be due to hostile attitudes, such as the Chinese Exclusion Act and segregations. This kind of setting would

not allow the Chinese immigrants to learn the American games, so they stuck with playing the games they already knew from China. Much like their food and containers, their game pieces had to be imported as well. Segregation and racism would also reinforce and prevent other ethnic groups from learning these foreign games from Chinese immigrants. Playing these familiar games would be a way to reinforce their own ethnic identity and help Chinese immigrants remain connected to China (Jolly, 2012:3). The glass game piece in the Work Camp site in the Cajon Pass is possible evidence of gaming/recreational activities of the Chinese workers. Following the theories outlined above, the data contained within the collection is gathered and analyzed for answers to the questions about Chinese workers on this site.

These are the concepts used to base interpretations around the Work Camp site. In historical archaeology, minority groups are often underrepresented, especially when considering the racially charged environment of California in the 1800's (Chang 2019, Chee-Beng 2013, Jolly, 2012, Karuka 2019, Lew-Willis 2018, Lu 2018, Young 2014) . As mentioned previously, Chinese immigrants are a subcultural group, a type of ethnic group, one which can be studied using a modified version of Fredrick Barth's ethnic studies (altered to study how this group lived). Not only the materiality and remaining material culture the objects the Chinese railroad workers used, but also the invisible aspects associated with the site, such as concepts of gender in the archaeological record (whether or not women were present, see Research Questions in chapter three), identity; both as

a part of the subcultural group and as an individual/personhood, as well as adaptations/assimilations such as playing traditional games from home and eating common American foodstuffs.

CHAPTER THREE

RESEARCH QUESTIONS AND METHODS

Purpose

The purpose of this research is to assess a Chinese Work Camp site originally identified by Applied Earthworks Inc., in 2016, and determine if the artifacts represent a Chinese settlement that coincides with the construction of the rail lines and to consider the degree of cultural retention and any connections with the Riverside and San Bernardino Chinatowns. This site was a temporary setting used exclusively for the rail line construction and may or may not have other associations; as mentioned before the Cajon Pass has a long history of use. The presence of the Chinese artifacts indicated Chinese presence, although there are other non-Chinese artifacts or features that indicate non-Chinese occupation at some point in time. Investigating this site potentially informs on the history of Chinese labor in California, specifically in San Bernardino County, where little regarding the Chinese occupation is currently known.

Research Questions

- 1). Are the artifacts associated with the construction of one or both of the historic railroads in the Cajon Pass? Is there archaeological evidence that suggests interactions between Native Americans and the Chinese in this Work Camp?

- 2.) How many people occupied this site, and were only laborers present? Were women and children present? Were any non-Chinese present?
- 3.) Did traditional Chinese tools and food continue to be used, or were American materials incorporated?
- 4.) Was this a temporary Work Camp or another type of ethnic oriented camp?
- 5.) What were the conditions like for the workers? What was the layout of the camp and social organization of the workers?

Comparing the ceramics to others found in railroad sites and the Chinatowns known in the area, particularly the Riverside and San Bernardino Chinatowns, can establish a connection between the two. The imported ceramics were brought overseas and made available for purchase through the nearby Chinatown. The ceramics and the game piece hint at the Chinese immigrants' retention of their culture, possible resistance into mainstream America, as well as their isolation. The metal food container suggests incorporation of the American diet into their own, as a result of this isolation.

Archaeological evidence from this site was compared with information on similar artifacts found in sites in California that also date to the late nineteenth and twentieth centuries. These comparisons help interpret the ethnicity of the occupants and possibly their resistance to and assimilation into American society, as well as a connection to the Riverside and/or San Bernardino

Chinatowns. The Riverside Chinatown would allow a better comparison as it is more heavily documented than others. Goods produced or imported there may have been brought into the site.

As an example: if each worker had only one ceramic bowl to eat from, the number of ceramic bowls and potsherds found within the site could possibly indicate the number of workers present. Racial segregation could influence the social/physical layout of the site, unless this site was used by a crew of all Chinese workers; Chinese imported ceramics found throughout the site could indicate this. Also, the geographic isolation factor could indicate a reliance on American diets more than the traditional diets of Chinese immigrant workers at the time, thus an increase in canned goods over traditional foods. In Hardesty's article (1994) on class and gender in the West, he mentions that although the material expression of Chinese women in mining towns and similar settings in the West is poorly known, items have still been recovered and identified. Jewelry such as gold earrings and hair ornaments, hair combs and picks, lice combs, cosmetics such as perfume bottles, jade rings, medicine bottles, fan handles, and small inlaid boxes which probably once held items like those mentioned above are some examples of recovered artifacts from mining towns of Chinese immigrants and their families (Scott, 1994:138). Hardesty also mentions a comparison Blee (1991, see Scott) made of artifact assemblages between those found in family households, brothels, and all-male households and was able to separate artifacts between genders; male-specific (suspender clasps, tobacco

pipes, pocket knives), female-specific (corset stays, garter snaps, perfume bottles) and child-specific (toys and diaper pins) and even though these artifacts made up only two percent of the assemblages, they still offered insight into the people present at these sites (Scott, 1994:137). This helps in identifying the presence, or absence, of women and children in the Work Camp site, should these or similar artifacts occur there. See Appendix A for the artifact collection inventory and Appendix C for all photos.

Methods. A site visit to the Work Camp, designated by the Forest Service as FS# 05-12-53-00220, was conducted on Friday June 9th, 2018 with myself, Dr. Gusick (Principle Investigator), Dr. Lyon, and J. Marshall of the Forest Service, who acted as our guide. A former faculty member of the History Department of California State University San Bernardino (CSUSB), knowledgeable in Chinese occupation in California, was also present.

The first step in assessing the Work Camp site was to determine the site boundaries and identify the scope of what was contained within the site. Using a Trimble GPS and pin flags, site boundaries, notable artifacts, and concentrations of artifacts were recorded and their positions were transferred onto a digital map in order to determine surficial artifact density. In the initial survey, the high number of metal artifacts was not conducive to individual artifact recordation, so unique metal artifacts were noted and large clusters of metal debris were marked as various loci within the site. Most of the individual recordings were on various

food containers, including turnkey tops and puncture cans; these are cans that were opened using a knife. Individual ceramic sherds were recorded and included fragments of soy pots and whiskey bottles. More decorative ceramics with circle and dragonfly designs were also noted, as well as three prehistoric flakes.

The next step was creating a map from the survey recorded with the Trimble GPS, and tribal consultation concerning the prehistoric artifacts. The San Manuel (Serrano) Band of Mission Indians and the Morongo (Serrano and Cahuilla) Band of Mission Indians were consulted before field work took place and were informed that the focus of this project is on the historic aspects of the site only. An Archaeological Resources and Protection Act (ARPA) permit was obtained for site evaluations and assessment for National Register of Historic Places eligibility. The survey map was completed, and one area seemed to have a concentration of ceramic sherds, as well as the glass game piece.

The site is roughly 60 meters from the south west to north east direction. To recover the materials from the site, a plan was formed to set up transect lines placed north-south at five-meter intervals, 25 meters in total length. Along those 5 meter interval lines, a shovel test pit (STP) was placed every 10 meters for a total of forty STPs. These were planned in areas with higher concentrations of artifacts within the 25 meter area, as noted in in the survey map in Figure 3.1. Transect lines were placed in areas where no Native American artifacts were identified on the surface. Based on the density of the material found in the STPs,

two or three 1 x 1 meter units were planned to be excavated using ten centimeter arbitrary levels. (No more than 4 cubic meters total would be excavated [STP's and 1x1 units combined] as stipulated by the ARPA permit.) However, this plan was altered once we had nearly completed the STP's, as detailed below.

Out of the 21 total STPs, 17 were sterile, as seen in Appendix 2 STP Results. If a feature had been encountered, excavations would have focused on exposure of the feature not extending more than two meters without additional consultation with Forest Service Archaeologists. The material recovered from STPs was screened with a 1/8-inch mesh screen. Details of these processes are included later in the chapter. It was estimated correctly that there would be enough artifacts recovered to fill two bankers' boxes, including all of the ceramic artifacts, the metal debris, especially the larger containers, the bullet, the game piece, and the button.



Figure. 3.1. STP Locations within the Siteite: 40 are labeled here as planned 21 of these were actually excavated. Column A(1) was the top right, column E(1) was the top left, with subsequent numbers descending down the map.

A subsequent pedestrian survey revealed that the Work Camp site is approximately an acre and a half in size and roughly blanketed with desert brush and plants. The site had abundant historic-age material as well as some likely pre-contact Native American material present. Many of the artifacts were noted as occurring in concentrated groups near the dirt roads (Fig. 3.2). The rock

alignment that was initially discovered at the site was determined to be within the site boundaries, as historic debris was located around this feature.

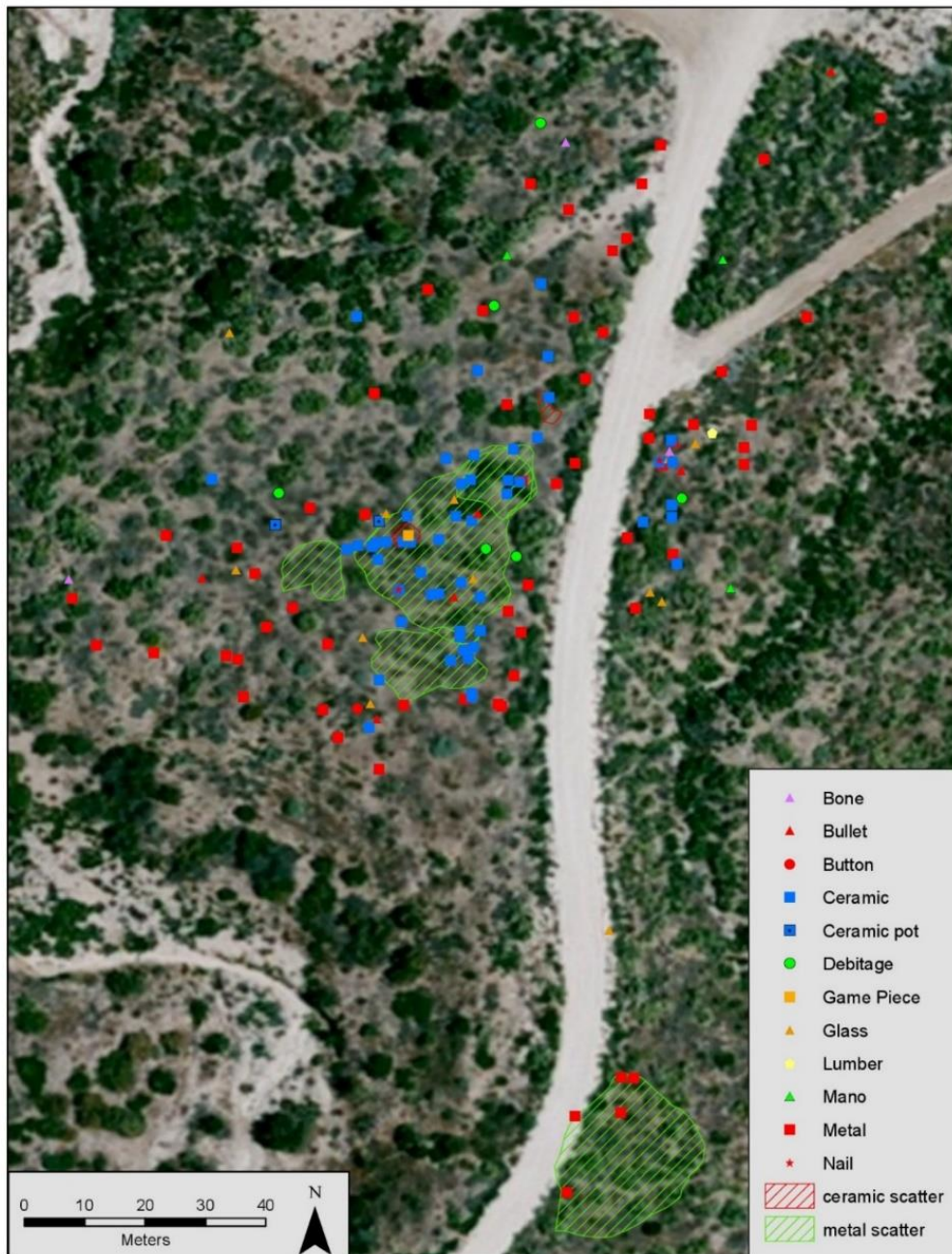


Figure 3.2A. Survey Map of the Work Camp Site.

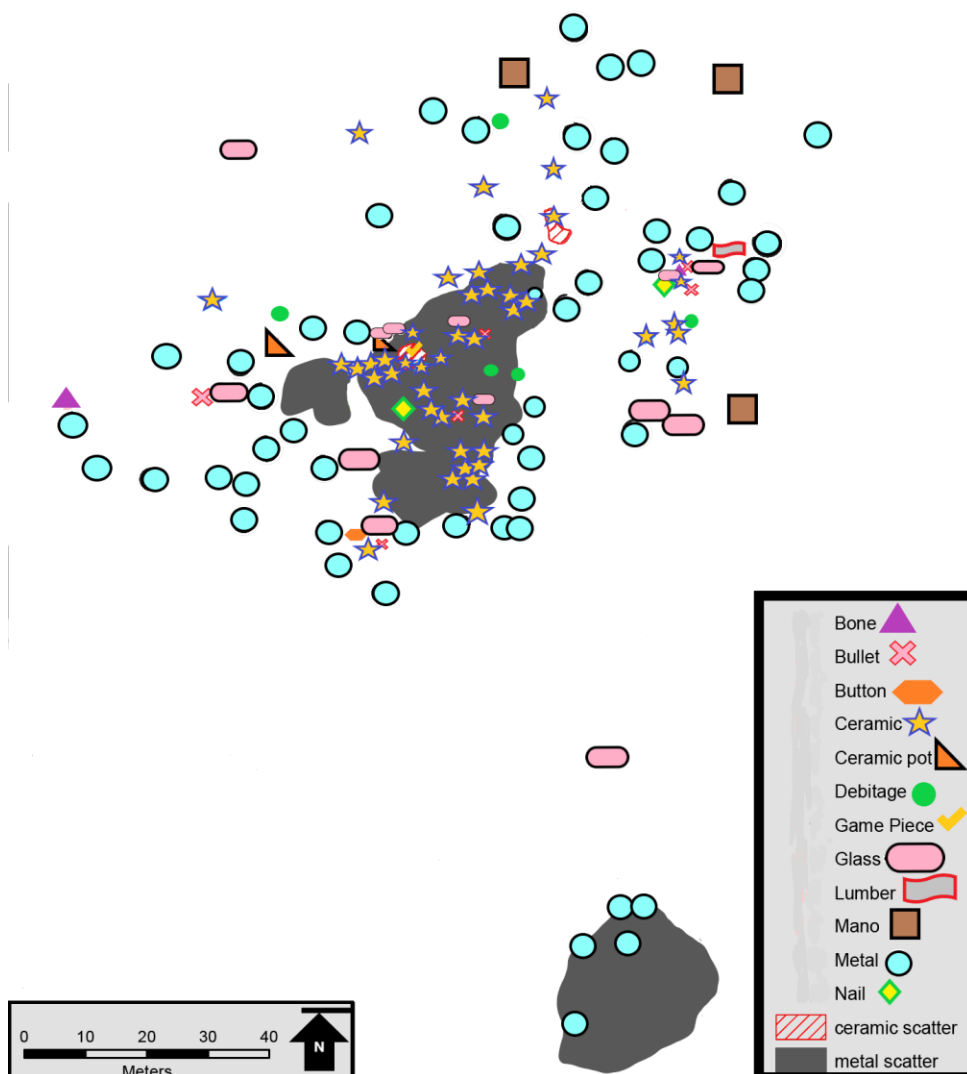


Figure 3.2B. Survey Map of Work Camp Site: with artifact concentrations.

The common types of ceramic analysis are form and function, technological, and stylistic. A vessel's form or shape could specify its use, while a decorative pattern, or the absence of one, could indicate a style. Discovering its composition is another means of analysis. (Miller 1980:4, Rice 1996:133).

It was expected that this project would take about a week to excavate, record and recover artifacts from the site. However, STP testing actually took

place over two days in July 2018, with most completed in the first day. Nearly all STPs were coming up sterile. Excavation was removed from the project and replaced with surface collection of potentially diagnostic artifacts. A surface collection of artifacts was conducted and recovered after their locations were recorded on the Trimble, in order to create a second map at a later date. As stated previously, protein residue analysis was the original chosen method to analyze what the containers might have held, to help answer the question of what the Chinese workers were consuming. However, this has since been determined to be ineffective, as heat from the sun damages the nature of proteins, making it impossible to determine what kinds of protein (animal or plant) were in the containers. Protein residue would only be able to determine, at this point, whether or not there is protein in the containers at all. It would be able to state that some kind of consumable was in the containers, but that is the extent of it (PaleoResearch Institute emails). Instead, the artifacts were analyzed compared with information from other artifacts in similar collections in California.

CHAPTER FOUR

WORK CAMP SITES

Camp Types

The work camps in which Chinese immigrants stayed when they came to America to fill the labor demand were likely occupied during specific seasons in a year, lasting from one to several years, depending on the purpose of the camp (CalTrans). Voss and Allen state: “Chinese workers who were engaged in mining, railroad construction, lumbering, charcoal burning, and similar activities occupied these [nonurban labor camps]” (Voss and Allen, 2008:5). Van Bueren has characterized a work camp as having a narrow economic focus, relative geographic isolation, temporary nature, and connection to and dependence on another economy elsewhere, whether local, national or in between (Van Bueren 2002:2). The workers were isolated and almost constantly on the move from one area to the next. They did dangerous work at probably a quick pace, in order to meet deadlines, in competition with other rail companies. They were not paid well, had little to no care for injuries or sickness, slept outdoors, and worked in all weather conditions (Leistman 1999; Patterson 1969, Polk 2015). The temporary nature of work camps limited their development and growth. Most were built intentionally incomplete and increased the occupants’ reliance on outside resources, supposedly to make packing and moving to another location easier. This is especially true for mining and railroad construction; when either the

resource was depleted or the track was completed, labor moved elsewhere. The remote locations of the camps contributed to their dependence on others for basic necessities, but also limited their interactions with broader society. In the case of railroad and mining camps, their isolation was not intentional; rather it was because they constructed the railroads on whatever path the tracks needed to be laid down and subsequently camped somewhere nearby. Railroad and mining camps were the most temporary, followed by logging and agriculture camps where occupations usually lasted longer, sometimes years. Eventually, however, the work was abandoned as resources were depleted. The isolation of the camps provides a unique look at themes like acculturation, assimilation, ethnicity and immigration, leisure, recreation and gender.

Railroad Camps

The first transcontinental railroad was completed at Promontory Summit, Utah in 1869. On its payroll were listed 12,000 Chinese immigrant workers (Polk, 2015:61). Archaeological inventory was conducted along the tracks of the promontory between 2002 and 2008, recording 19 railroad construction sites. Each site was recorded individually, including various features, hearths, and rock shelters. Excavations did not take place, as there was minimal to no vegetation to clear. The construction camps were located every three to five miles, with at least two definitively associated with a specific railroad (Polk, 2015:64). White and blue porcelain and other Chinese ceramic bowls were found at some of

these sites, as were rice bowls and liquor and soy sauce bottles. Patterns such as Double Happiness and Bamboo were identified on the ceramics, and one Chinese coin also was found. Comparisons were made between the findings here and at other construction sites in the area. The archaeological deposits were shallow and limited in their artifact quantities and functional types, which suggested a short-term occupation of a domestic nature; all were very similar findings between the sites (Polk, 2015:68).

Lumber Camps. Logging and lumber work camps moved around more often than railroad camps, as timber resources were depleted and supplies had to be procured from farther away. The technology associated with transporting lumber from the work area to the sawmill and then to lumberyards in towns was the greatest cost for companies, and was eventually replaced with railroad logging transport systems (CalTrans, 95). Diesel trucks would eventually replace these railroad systems in the 1920s. Lumber camps once held actual buildings, such as a mess halls and barracks, and have been the subject of study for social and economic status separation, and the importance ethnic differences played in the workforce at the camps. Excavations conducted at the camps revealed the efficiency of railroad logging systems and the changes in technology and innovations over time. A ranking system was eventually developed by archaeologists for evaluating railroad logging grades and associated camps used between the 1890s to the 1930s. Ranking variables included a property's

research value, interpretive potential, and integrity, with three categories from poor, good, to excellent and appropriate criteria for each (CalTrans, 96).

Chinese railroad workers' sites are a unique challenge to find and record but "...using broad horizontal exposures, metal detection, detailed mapping, functional analysis of surface artifacts, and focused excavation of features has proved to be an effective strategy for these types of sites" (Furnis and Maniery, 2015:83). The temporary nature of the camps contributes to their uniqueness as grading crews would typically camp for two or three weeks at a time and tracking crews only for a night or two (Goodwin, 1991:181). Also, it was a well-known practice to organize Chinese railroad workers into groups of ten, twenty, or thirty men at a time. Each crew was typically led by one English-speaking Chinese person who represented them and distributed wages (Furnis and Maniery, 2015:81). As for the layout, Chinese workers, while put into smaller groupings, were still segregated from other ethnicities overall. This segregation may make it possible to identify different activity areas within the sites, possibly utilized by groups with majority Chinese ethnicity.

Furnis and Maniery (2015:82) identified a Chinese work camp site in Lakeview, California that had artifact patterning suggestive of two central areas. Public spaces for two crews "centered on the stone features, where cooking, eating, and socializing took place" and private sleeping areas were located just outside of this area (Furnis and Maniery, 2015:82). Although this has been discounted as a feature since, a rock formation located within the site boundaries

was initially thought to be a representation of an area similarly used to the one described by Furnis and Maniery. The Work Camp site itself and the Cajon Pass is discussed in the following chapter. This is the text for the test chapter. This is the text for the test chapter. This is the text for the test chapter. This is the text for the test chapter. This is the text for the test chapter. This is the text for the test chapter.

CHAPTER FIVE

THE WORK CAMP SITE: FS# 05-12-53-00220

Cajon Pass History

The Work Camp site is located in the Cajon Pass, in the high desert region of San Bernardino county. The Cajon Pass is the gap that separates the San Bernardino and San Gabriel mountain ranges in southern California. The Spanish term 'cajon' refers to the boxlike canyons. At one time these two ranges were one, formed by the San Andreas fault. Two continental tectonic plates, the North American and the Pacific plates, pushed against each other. Over time, water eroded a low point, and additional faulting created the pass between the two (Hall, 2009:9). The pass was used extensively for thousands of years as a travel and trading route from the high desert into the San Bernardino valley by various Native American groups. Among them, the San Manual Band of Mission Indians (Serrano) has federal recognition in the Cajon Pass and adjacent area today.

During the 1820's–1880's, the Santa Fe Trail, the Mormon Trail, and John Brown's Turnpike (which functioned as a toll road) were all part of the Cajon Pass and used as a means of travel. In the 1870s the pass was surveyed and assessed for future railroad construction. The toll road was eventually paved as automobiles became more prevalent and was called the National Old Trails Highway. Eventually this highway was absorbed into Route 66. The turnpike was in operation until 1882 when it was destroyed in a brush fire. Cuts into the

summit of the Cajon Pass were made over time to widen the available space and eventually accommodate Highway 91 and later the Interstate 15 freeway (Hall, 2009:7–8). The San Diego Railroad museum lists construction on the first rail line as having begun in 1883. Figure 5.1 shows a route map of the California Southern Railroad Company and the rail line through the Cajon Pass upon its completion in 1885, and Figure 5.2 shows an 1888 map of the Santa Fe Route and connections.

Research took place at the Work Camp located about 65 m away from one of the two rail lines visible in this area of the Cajon Pass. These rail lines have a long history, with at least one being associated with this Work Camp site. The first transcontinental and local railroads were constructed in California in the mid-1800s and continued to expand until the early twentieth century. Networks of new cities, farms, and countless jobs opened up for middle class people. A subsidiary of Atchison Topeka and Santa Fe [ATSF], called the California Southern Railroad (Fig. 5.1), was the first to construct a rail route through the Cajon Pass, which was completed around September of 1884. This rail line was built to connect what are today the cities of Barstow (est. 1886) and San Diego. ATSF was eventually bought out by Burlington Northern Santa Fe [BNSF], which uses the pass today for rail service between Los Angeles and San Bernardino (Serpico, 1988:3). In February of 1891, about five miles of track on the Cajon Pass was flooded and washed out in Temecula Canyon, and that section of track was officially abandoned in January of 1892 (Dodge, 1959).



Figure. 5.1: Route Map of California Southern Railroad Company. (Waters, Leslie. 1950).

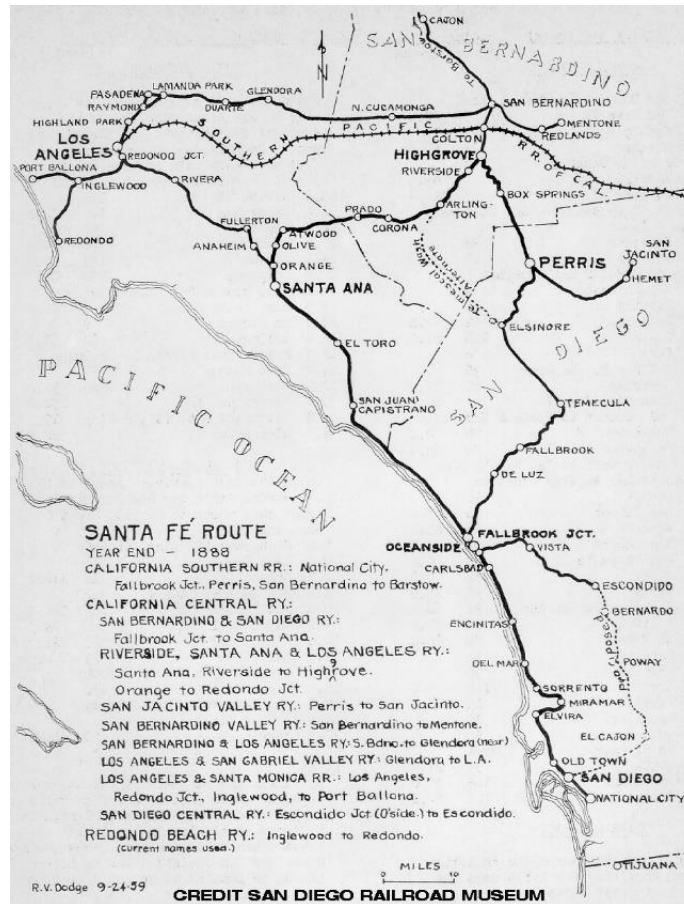


Figure. 5.2: 1888 Santa Fe Route (San Diego Railroad Museum).

The second rail line through the Cajon Pass was built in 1913 by ATSF. The line runs parallel with the first and at a lower grade, which is less steep than the first line. This means it required less power for the engine to pull the cars. This second ATSF line is also two miles longer than the BNSF line. The second line was eventually realigned in 1977, removing a small town named Summit. A third rail line was constructed in 2008 by BSNF and follows much of the same path as the ATSF line (Dodge, 1959).

Site Discovery

While conducting survey in the Cajon Pass, Applied Earthworks (AE) archaeologist Dennis McDougall discovered the Work Camp site. The site was initially identified due to a rock alignment on the outskirts of the project survey area, close to a known dirt road. While the site was noted, no site survey was completed, as it was outside the scope of the project area. McDougall was conducting a survey of an area affected by the Blue Cut fire of 2016, and assessing the conditions of any known archaeological sites in that area, as well as the potential for any new sites uncovered by the fire. Several fragmented Chinese ceramics of diverse types were identified, as well as a glass game piece, a foreign coin, historic glass, cans, and a pistol cartridge casing. No artifacts were collected at the time the site was originally identified. The Forest Service was interested in conducting further study on the site as there are only a small number of known Chinese archaeological sites in the San Bernardino National Forest and in the surrounding area (Marshall, personal communication).

CHAPTER SIX

HISTORICAL ARCHAEOLOGY OF THE CHINESE IN NORTH AMERICA

Historical Archaeology

Historical archaeology provides a framework for understanding the development of the United States as the result of the culmination and syncretism of a multitude of cultures. It offers a way to supplement written accounts, which are often biased towards a singular cultural perspective. Some historical archaeologists focus on European colonial expansion or the relationship between historical documents and actual sites and artifacts. “Historical Archaeology [is the archaeology of] ...European colonial expansion and post-Colombian peoples... of capitalism...the outcome of the...play between word and object, text and artifact...” (Hall and Silliman, 2006:1). Outside of the Americas, archaeologists label their work according to the geographical location or time period, such as Roman-era or Egyptology, while in North America, historical archaeology refers to the study of post-Colombian, literate colonial societies as distinct from precontact indigenous ones. This in itself is problematic, given the artificial boundary between “prehistoric” and “historic” as well as the presence of writing (Hall and Silliman, 2006:1).

A more organized concept is needed to frame this broad subject, and so historical archaeology can be framed one way as the archaeology of the modern

world. The combination of economic and political interests and technological advances allows for historical archaeology to be viewed as a process instead of an era or a condition (Hall and Silliman, 2006:2). Historical archaeology in California has been invaluable in its contributions to the history of the United States. One aspect focuses on interpreting the State's role during the 19th and 20th centuries, when great social and cultural changes were happening, along with identifying and describing the impacts of capitalism and consumerism. "Social and economic diversification of California... is historically visible" (Hardesty, 1993:39, Jolly 2012).

In other words, historical archaeology can provide where documentary history cannot. Some examples would be the underrepresentation of minorities in documents and everyday activities that wouldn't be reflected in a written record but instead in the physical remains. Physical remains cannot be manipulated like written accounts can, and the ability to quantify material remains may not concur with written documents. Documentary history often provides detailed descriptions of behavior-historical archaeology can fill gaps, correct distortions and confirm truths.

History of Research

According to Voss's (2005) overview of Overseas Chinese communities and historical archaeology, there are two distinct trends in past investigations of Chinese archaeological sites outside of China. The first is their marginalization within historical archaeology. Ethnic minority groups have not been a popular

subject for archaeological investigation until recent years, and this could account for why there is so little to no information regarding Chinese occupation and immigration into North America at the turn of the century. The second reason is that historical archaeologists have focused on the Chinese resistance to acculturation into the non-Chinese settings in which they lived.

Investigations into Chinese occupation sites did not begin until the mid-1980s in North America. Chinese communities, including households and labor camps, were documented primarily in 'gray literature' in cultural resource management (CRM) reports (Voss, 2005:425).

A review of the... reports, articles... and... booklets produced during the past thirty years of archaeological research at Overseas Chinese sites reveals two... trends. The first is the marginalization of Overseas Chinese studies within historical archaeology. The second is a recurring... interpretation of Overseas Chinese populations as traditional, bounded ethnic groups that resisted acculturation into the non-Chinese populations among whom they lived. These two distinct trends - one disciplinary, one interpretative may... be outgrowths of... an implicit acceptance of false oppositions between East and West [United States] and between tradition and modernity." (Voss, 2005: 245).

Most of the early work conducted on these sites through these CRM projects revealed a limited perspective and point of view on Chinese occupation and made it challenging to find unbiased facts in the literature. Voss (2018) notes

that, in the absence of comparable studies (of archaeological collections in China) most studies of Chinese communities have made interpretations of artifacts through other concepts, such as acculturation, tradition, ethnic boundary maintenance, and identity, and often rely on generalized and usually stereotyped notions of '*Chineseness*' to reference the material (Voss, 2018:410). To complicate matters, most CRM excavations "are necessitated by land developments, not by 'pure' archaeological research projects that intentionally target such features for investigation" (Downum 1999:228). A lack of interest in Chinese sites as a research focus left many project directors not adequately prepared for what they found, resulting in little insight or nuanced interpretations.

There are several other reasons for the lack of research on the Chinese occupations on in the western United States. Archaeological research was prioritized on the East Coast, especially in early colonial settlements, while those working on the West Coast were attracted to Spanish colonialism and historical events such as World War II, including the Japanese internment camps, thus leaving all others to collect more dust (Voss, 2005). The research that did occur portrayed Chinese communities as segregated, with minimal interactions with non-Chinese. Coupled with the fact that the cultural interpretations were static and traditional, more extensive Asian-oriented research was discouraged:

"...the failure of North American archaeologists to investigate Asian culture and history is attributable to these causes: (1) a historical tendency to prioritize research in the eastern United States; (2) in western North America, a temporal focus on earlier Spanish colonial settlements; (3) historical events such as the World War II internment of Japanese Americans and the rise of Communism in China; and (4) anti Asian racism (Orser 2004: 82-3). Bell... listed

four different reasons: (1) the greater comfort among archaeologists, most of whom are of Anglo-Celtic descent, with researching people who resemble themselves; (2) a desire to attribute the present success of Australia to the achievements of Anglo-Celtic forebears; (3) insufficient historiography on Chinese immigrants; and (4) the fact that the experiences of Chinese immigrants... were rarely recorded in English-language documents (Bell 1996: 13). Most archaeological studies have portrayed Overseas Chinese communities as insular, segregated enclaves in which residents had minimal interactions with non-Chinese people and cultures.” (Voss, 2005:426).

Recently, as more researchers are turning their attention to understanding the immigrant communities that were integral in the development of America, research has taken a community-based approach to studying ethnicity and historical archaeology. Past immigrant communities, and their reflections in the present, are viewed as integrated parts of a larger society. For research focused on Chinese immigrants, differences in cultural practices between Chinese communities and American society are seen as complementing one another, and both critical to a full understanding of historical society (Voss, 2005:425). In 2016, Voss and others participated in a survey of artifact collection, to compare data with international immigrant collections. To realize fully the Chinese immigrant experience in America and properly interpret the historical material left by these immigrants, recent research (e.g. citations) has expanded to include comparable studies of villages within China. In 2018, Voss published an article on data from a qiaoxiang (migrants’ home village) in the Pearl River Delta of the Guangdong province in China to the material found in North America in the nineteenth century, and expands upon the concepts and interpretations made about the people and how they lived. Voss explains that one particular village called

Cangdong, housed roughly 400 people in the nineteenth century, but international emigration reduced the permanent population to about 50 people by the early 1900s. Payments from clan (family) members living abroad (such as in California) allowed for the construction of new homes, markets, and schools. Cangdong is still occupied today. (Voss 2018:412).

Types of Investigations. The mining and fishing industries that developed in California during the late nineteenth century became the focus of regional historic archaeological research beginning in the 1990's. Some of the historical Chinese archaeological sites resulting from these industries that have been studied include: shrimp camps in San Francisco Bay and San Pedro, merchant communities in Sacramento, and mining camps across the state, some of which date to the Gold Rush era.

Schulz (1996) described the 'China Camp' shrimp fishery in San Francisco Bay and examined artifacts used to catch and process seafood, as well as artifacts that could inform us about the culture of the people who lived and worked there. Schulz aimed to assess the stability of the settlement and the economic status and living conditions of the immigrants in the San Francisco shrimp camp (Schulz, 1996:170). In this case, this work camp also functioned as a village, as residents occupied the space for longer durations, given that maintaining a wide variety of artifacts, such as ceramics, is possible outside of seasonal occupation (Schulz, 1996:172). At this site, over seventy percent of recovered ceramics matched one of the four styles commonly found in Chinese

sites: Four Seasons, Double Happiness, Bamboo, and Celadon. Chinese ceramics found here and at other sites could provide comparisons to the ceramics found during the survey of the Work Camp site in the Cajon Pass. These ceramics and the other artifacts recovered from the site suggested that site inhabitants continued using Cantonese types of food and containers, which included a higher quantity of pork over beef and a preference for Asian ceramic wares. The San Francisco site also included several charcoal braziers, one of which was stamped with a maker's mark of Chinese origin – and the remains of a wok and chopsticks (Schulz, 1996:172).

Another common type of Chinese worker camp site in California is the abalone fishing camp. These sites are located all along the coast of California and the Channel Islands. The most abundant species exploited in the 19th century was black abalone because it was easy to collect. Workers gathered black abalone in low tide areas and required only a pry bar and net to harvest them (Braje, 2016:102). Historical accounts, such as newspaper and magazine articles, describe the lengthy process Chinese workers went through to process the abalone. After removing the meat from the shell, they repeatedly dried and boiled it over several days, finally leaving it to dry on racks. The entire process took weeks or even months to complete (Braje, 2016:105). The equipment used to process the abalone included hearths, boiling pots, wood used for drying racks, and fuel. Natural and cultural transformation processes make it difficult to recover archaeological materials from along the coast of the mainland, but it has

been possible to see evidence of the abalone fisheries in old Chinatowns.

Fragments of abalone shell have been recovered in houses and stores as have other items commonly used by the Chinese: eating utensils, coins, and gambling pieces (Braje, 2016:110).

On the Channel Islands, preservation of archaeological materials is better as protection is extended through the National Park, the military, and conservation agencies working to protect the island landscapes. On these islands, Chinese abalone camps are found amid the Native American shell middens present on the islands but are distinguished from the Native American sites by the presence of almost exclusively black abalone shells. In rare cases, some abalone sites contain historical artifacts such as Chinese pottery sherds, cartridge casings, opium paraphernalia and other debris (Braje, 2016:111).

Large-scale survey conducted by Braje (2016) on the Channel Islands identified fourteen new abalone processing sites, two of which held chronologically diagnostic artifacts. These sites are considered to be highly specialized locations, occupied by fishermen for brief periods for collecting and processing abalone, and once the resource was depleted, the residents moved down the coast (Braje, 2016:132). These sites offer insights into the lives of nineteenth-century Chinese abalone fishermen, including the changing economic and social landscape as they were pushed out of the fishing industry in the latter half of the century (Braje, 2016:134). The amount of abalone and other fishing

products found here and in other sites across California may also help trace a trade network with the nearby Chinatown sites.

Agriculture and other Camp Types. In San Mateo County, Van Bueren (2008:80) conducted an investigation of a late nineteenth-century farm called Carnduff and focused on the lives of Chinese immigrants working on the ethnically mixed farm in an attempt to show adaptations and changes in Chinese life in agricultural work. Chinese ceramic jars, rice bowls, a coin, and several jars known to have stored liquids, especially hard liquor, soy sauce, and water, were recovered from this site on the farm. A Chinese cook's ledger was also recovered, which provided more information for interpretation of the farm material. The ledger details the diets and employment of the Chinese workers (Van Bueren, 2008:87) and provides evidence of some assimilation. Since the Chinese had been pushed into agriculture, they blended their traditional imported foods with mainstream American foods. This blending was also apparent with the mix of Chinese ceramics and nineteenth century American metal containers recovered from the site. The coin recovered from the site is interesting as Chinese currency was legal in California only until 1857. It may have initially been kept as a personal token, suggesting a tie to the Chinese homeland. However, as time progressed and the farm was abandoned, it may have been left behind as it had no monetary value (Van Bueren, 2008:85).

Various Chinese mining and railroad construction camps have also been investigated across California and Nevada. These studies have provided

reconstructions of past lifeways and acculturation based on the artifact types and features available (Voss and Allen, 2008:18). Most archaeological investigations that have been conducted were done by CRM companies that simply happened upon these sites which were not central to their original project (Voss and Allen 2008:5). This is similar to the reasoning mentioned earlier as to why so little research was focused on Chinese occupation (see Voss, 2008). CRM companies were not conducting surveys with the goal of finding Chinese immigrant sites, nor were they prepared to do so, but investigating for something else entirely. This was problematic, especially when the majority of Chinese occupied sites were stumbled upon by accident, and they were not prepared, and had little interest in, preparing to handle these sites (Voss and Allen, 2008:17). This has shown not only a lack of popularity for this kind of historical archaeology, but it also shows a lack of foundational interest, or else these sites may have been purposefully searched for and not simply stumbled upon.

In 1985, a dump site from hydraulic mining activities in the 1880's in northern California was recorded by a CRM company. They documented Chinese ceramic vessels, liquor bottles, rice bowls, and several opium pipe bowls and containers, all fragmented (Ritter, 1986:27). This project did not come about by setting goals prior to excavation and planning field methods and analytical techniques, but instead through the discovery of major features which led to mapping and evaluation through a comparative analysis (Ritter, 1986:1). Part of the research questions included issues of assimilation and acculturation.

They concluded that the mix of traditional and American foodstuffs and other items were evidence for a trade network with the local non-Chinese population and other workers nearby (Ritter 1986:77). Year-round occupation enhanced this, as workers would switch between mining and agriculture in off-seasons (Ritter, 1986:77). Twenty to thirty years of consistent, permanent contact with the local non-Chinese culture greatly affected their own culture. The technological pattern of Chinese mining behavior was assimilated to include the American mining equipment, although this would not show acculturation in a cognitive sense, in other words, a change in the mindset of the Chinese employees (Ritter, 1986:82).

Lumber sites are another example of an historic Chinese site in California. Douglas (2000) researched Miller's sawmill, which employed Chinese laborers to process lumber when it was in operation from 1872 to 1876. Details from the few existing historical accounts show that the average size of a lumber crew was 14 Chinese men. Since it was seasonal work, the men also engaged in abalone fishing during off seasons at the lumber mill (Douglass, 2000:128). Excavations at the site produced several Chinese ceramics, like food processing vessels and containers, rice bowls, alcohol and medicine bottle fragments, as well as the base of an opium pipe. Glass game pieces, probably used for gambling, a Chinese coin, and fragments of an imported lamp were also recovered (Douglass, 2000:130). Further studies are needed to look at the physical and

social mechanisms between the Chinese and Euro-American workers at this site (Douglass, 2000:132).

Chinese Artifacts in California Sites. Understanding the context of historical archaeological sites of Chinese immigrants in California allows the artifacts recovered from these to be understood and interpreted. Ceramics for example, can have a variety of uses in archaeological context. In historical settings, it is possible to see their use and re-use functions at times.

Variability and change in the use, function, and meaning of ceramics and other durable goods can be analyzed to understand the evolution of Chinese lifeways in the United States. For instance, Choy (2014) has focused on studying Chinese ceramics and their social use to better interpret the lives of Chinese immigrants in the nineteenth century. He presents information on ceramics found in nearly every site associated with nineteenth-century Chinese immigrants in North America, and offers classifications and details for future studies. Because Chinese ceramics, particularly porcelain, are associated with everyday activities, they are among the most commonly identified artifacts found in Chinese sites in the American West. These ceramics can be useful for site chronologies as specific designs were made during discrete periods of time in China. These same designs are found on the Chinese ceramics in America as none were specifically crafted to be exported.

There are five common styles of design on Chinese ceramics identified in sites located in North America (Figures 6.1-6.2). The Bamboo and Double

Happiness designs (Figure 6.1) of imprinted on ceramics stopped being imported at the beginning of the twentieth century, although the Double Happiness design style continues to be used today in China. The Four Season style (Figure 6.2) was no longer imported after World War II began and transportation across the Pacific Ocean halted. The Three Circle and Dragon fly designs (also known as the Three Friends design) are scarce, found in a northern California store's inventory ledger in the years 1871 to 1883 (Choy, 2014:3). The Bamboo and Double Happiness patterns were only used on bowls, while the Four Season and Three Circle and Dragonfly were used on bowls, plates, spoons, and cups (Choy, 2014:5–7). Some recovered rice bowls were found to be stamped with regional names in Chinese characters and decorated with a maker's mark and date. This has allowed identification to both the Chinese region in which they were crafted as well as the period in which they were made. As these maker's marks can point to a specific region in China, ceramics identified in an archaeological context may provide information about identities of the workers and their economic status. According to Miller, "the social status of any commodity is related to how much the object costs." Prices were determined by how they were decorated. Price fixing lists from the 1770's to the mid-1800's reveal a classification system according to how decorated the ceramic is (Miller, 1980:3). There were four different categories, with the third level containing Chinese wares: "...flowers, leaves or stylized geometric patterns...". Most painted wares from North American sites required minimal artistic skill to render, becoming more

commonplace and inexpensive, thus available to the working class (Miller,1980:4). The porcelain ceramic used by the Chinese emperor in the 1700's and 1800's was designated through the writing of the emperor's name, or simply the word emperor and the year (Choy, 2014:9).



Fig. 6.1. Vessel with Double Happiness character circled (Choy, 2014:4).



Fig. 6.2. Vessel with Four Season Design (Choy, 2014:7).

The term Chinese brown glazed stoneware, as it is often used by archaeologists, refers to the most commonly found kind of ceramic pottery in Chinese immigrant sites. Vessels of this type of stoneware were made in China,

filled with food items and imported to the Americas. There are no defining characteristics that differentiate stoneware vessels sold in China and ones that were shipped overseas. They were used in China and America mainly for food storage, and were very often reused (Choy, 2014:11; Yang, 1998:60).

Many of the same and similar types of artifacts as the ones discussed above were recovered from the Riverside Chinatown, including thousands of porcelain artifacts used for food processing and consumption. Some were decorative, others were utilitarian only, much like the ones recovered in other sites in California (GBF, 1987:259). Some of the names of the patterns mentioned above were reused in later variations of the same patterns, such as Double Happiness and Four Season, which led to some confusion in separating some patterns from others (GBF, 1987:260). As mentioned previously, the goals of the Riverside Chinatown project included identifying the inhabitants and their sub-cultural lifestyles, and the artifacts found at the site provided some clarification on ethnicity and economic function, as well as helping to identify other patterns of behavior, including trade with other Chinese communities and the extent of assimilation over time (GBF, 1987:438).

Another Perspective. Voss (2015) describes the remnants of Chinese workers as being representations of their experiences during their lifetimes (Voss, 2015:6). Archaeologists went beyond collaborating with each other to take into account other research disciplines in order to expand the perception of Chinese immigrants and their lives, especially in light of any documentations

given by the workers themselves. Chang (2015), by taking an interdisciplinary approach and pulling from many fields such as ethnic studies, political science, American studies, literature, and anthropology, was able to learn about the social relationships of Chinese workers, their work conditions and environment on the railroads, and their daily lives. Chen's (2002) research went beyond simple descriptive terms of the materials present in the site. He found it was possible to track populations from villages in China to different railroad construction sites across the American West (Chen 2002:2). The materiality of the daily lives of Chinese workers reflect their changing experiences as they entered new environments and landscapes, as well as the risks they endured on the job (Voss 2015:8).

The Chinese Railroad Workers' Project of North America (CRWPNA).

From the Stanford University website:

The Chinese Railroad Workers in North America Project at Stanford (CRRW) seeks to give a voice to the Chinese migrants whose labor on the Transcontinental Railroad helped to shape the physical and social landscape of the American West. Between 1864 and 1869, thousands of Chinese migrants toiled at a grueling pace and in perilous working conditions to help construct America's first Transcontinental railroad. The Project began in 2012 and is a multi-year endeavor to conduct and support research in North America and Asia in order to publish new findings in print and digital formats, support new and scholarly informed school curriculum, and participate in conferences and public

events. Publications as well as additional historical material are available at the project's website (Stanford).

Their collection includes payroll sheets from the Central Pacific Railway Company, ceramic sherds, and many other artifacts.

The Work Camp site in the Cajon Pass provides data to address questions related to the daily lives of the workers, how long they occupied the site, and their social relationships both to each other and to Chinese not living at the camps.

CHAPTER SEVEN
RESULTS AND CONCLUSIONS

The goal of this project was to investigate the Chinese Work Camp site in connection with Chinese immigrant workers and Chinatowns in the area and evaluate it for possible inclusion on the National Register of Historic Places. This goal was achieved by surveying and recording the site in the Cajon Pass, recovering and analyzing the data, and making interpretations and comparisons with similar collections. The Work Camp site is not eligible for inclusion in the National Register as it does not meet the criteria.

Tables

Listed below are the tables describing the results of the surface survey and recovery of artifacts, Table 1, as well as the results of the STP testing: Table 2. These tables can also be found in the Appendix section. Table 1 shows the number of ceramic artifacts in the collection, when counting the fragments as individual pieces.

Table 1: The Total Quantity by Artifact Type.

Type	Count	Reconstruct		
metal	30	no		
ceramic	79	Possible?		
Glass	11	Possible?		

Table 2 below presents an overview of the STP results. See Appendix B for details of soil quality and quantity of artifacts recovered. As seen here and in Appendix B, STP testing had very limited results, with the majority of pits being sterile. A few pits contained a small number of finds, with most being right below the surface, not visible to the naked eye. As Table 2 shows below, most STPs were sterile, so the plan was altered to exclude excavating. A surface collection was conducted instead.

Table 2: The Results of STP Testing on Site.

STP & depth	Sterile?	Findings
B1 0-37cm	NO	Modern glass
B2 0-24cm	YES	
B3 0-24cm	YES	
B4 0-40cm	YES	
B5 0-40cm	NO	Bone, shell, metal
B6 0-20cm	YES	
B7 0-20cm	YES	
C1 0-38cm	NO	Glass, bullet case
C2 0-20cm	YES	
C3 0-30cm	YES	
C4 0-40cm	NO	Glass
C5 0-20cm	YES	
C6 0-20cm	YES	
C7 0-20cm	YES	
D1 0-25cm	YES	
D2 0-20cm	YES	
D3 0-20cm	YES	
D4 0-20cm	NO	Glass
D5 0-20cm	YES	
D6 0-20cm	NO	Metal
D7 0-20cm	YES	

Answering Research Questions

Research Question One: Are the Chinese artifacts associated with the construction of one or both of the historic railroads in the Cajon Pass? Were there interactions between Native Americans & the Chinese in this Work Camp?

The ceramics are similar to other collections which contain Chinese ceramics from the same time period, both in nearby areas and in other states. The brown glazed stoneware, the white and blue painted ceramics with different shapes and colors, the black glazed stoneware; appear similar to the kinds of Chinese ceramics that have been discovered at other sites across California, including the Chinatowns in the cities of Riverside and San Bernardino, and other states like Utah and were dated to the same time period (Furnis and Maniery, 2015; Great Basin Foundation [GBF], 1987; Polk, 2015).

The similar collections of artifacts were tested and confirmed to contain residues of foodstuffs and were possibly reused for storage and cooking over and over, as told in an interview (Choy, 2014 and Yang, 1998). The composition (such as clay) and shape (rounded with lips/edges, flat bottoms, etc.) in this collection are again like other collections discovered both in the United States and China, dating around the 1800s and earlier. These were most likely mass produced and distributed from both China as well as older Chinatown establishments such as San Francisco, San Bernardino and Redlands.

In my estimation, the Chinese artifacts are associated with the construction of the second railroad, which was completed in 1913. Given the heavy reliance on Chinese immigrant workers in various kinds of hard, physical labor, the correlation with the time period and the similar site recordings in the U.S. and overseas in China, this seems to be the most likely answer. The second railroad started construction in the early 1900s, and was completed in 1913. The Chinese Exclusion Act was passed in 1882, which prohibited immigration from China for the next 10 years (this was eventually extended due to the Geary Act). It is possible that descendants of Chinese immigrants, or their relatives or neighbors already in California before the ban worked on the 1913 line. Due to the workers' mostly static and hostile environment at this time (the Exclusion Act only added fuel to the already racially charged fire of society), as the Chinese were still barred from entering the U.S. in the 1920s and those who were already there were denied citizenship. It wasn't until World War II that this changed (Chan, 1991; Gold, 2012; Gyory, 1998). Because of the above mentioned facts, I believe it is possible that Chinese people may have constructed the railroad in 1913, as it was still a dangerous job and the view of the Chinese in society had not improved in the 29-year gap between the two railroads' construction, giving them few opportunities to improve their livelihood and status.

The presence of Native American artifacts were identified and confirmed by Dr. Gusick. These three flakes were discovered within the boundary of the site and are prehistoric Native American (Gusick). They were not collected and left in

place within the site. It is likely these flakes are present due to previous activity of Native Americans prior to the use of the land for the railroad construction, making it its own separate archaeological site that overlaps with the work camp. This question was listed first because it encompasses the overall goal of the project itself.

Research Question Two: How many people occupied this site and were only laborers present? Were women and children present? Were any non-Chinese present?

According to Patterson, by the time the railroad tracks reached Nevada, a refined practice was in place where "...Chinese were organized into gangs of 12-20 men, with an English-speaking Chinese headman directly in charge... he worked with the crew [and] was responsible [for them]..." (Patterson, 1969:184). A Chinese cook was assigned to each 12–20 members in a group, and a white boss or overseer was in charge of each group, totaling approximately 200 Chinese (Patterson, 1969:189). It is possible across the nation, as the tracks were built, that this was a usual setup for the camp sites for the major, long tracks: a foreman directing groups, a translator, a cook, and someone who paid the workers. Everyone present would have been a laborer of some kind, with a different task to complete. For shorter-distance tracks like the Cajon Pass, it is possible a much smaller group of workers was employed, but was still organized like the one described above. Nothing like the objects described as indications of gender or children were recovered in the Work Camp site (one button is

debatable at best, as there are no obvious indicators of attributing to either gender). It was dangerous work so only men were employed; women and children worked other, safer jobs. The non-Chinese, if present, were more likely to have been Irish workers, at the time labeled the “dirty whites”, and a white foreman who paid the workers, although these people would not have been present the entire time the construction was taking place, like the workers. This was the second research question, as questions of ‘who was here before’ is part of the foundation of archaeology and a major goal of this project.

Research Question Three: Did traditional Chinese tools and food continue to be used, and were American materials incorporated?

I believe the answer to both parts of this question is yes. The ceramics and metal containers are evidence of both; with the ceramics most likely having been imported from China, containing traditional foods at some point, and the metal containers having been bought from a nearby area (such as a Chinatown in San Bernardino or Riverside) and brought to the Work Camp site. The most obvious American material identified immediately in the field being a metal can labeled “Royal Baking powder” (see Fig. 7.1), from an American company based out of the east coast. Another is a possible evaporated or condensed milk can.



Fig. 7.1: Artifact #47, Royal baking powder company: “full weight 1lb. Royal Baking Powder Absolutely pure” Royal Baking Powder Co., which used cream of tartar, took the tagline “Absolutely Pure,” meant as an indictment of powders made with alum.

Baking powder was invented in 1816, the Royal Baking Powder Company was formed in 1873 on the east end of the United States, eventually making its way west. It was absorbed into the Nabisco Company in 1981 and as of 2017, Royal is still marketed today (see Fig. 7.2 for a newspaper advertisement). This can more likely dates to around the 1890s and is associated with the 1913 rail line construction. See Appendix C for a background on baking powder and the Royal Baking Powder Company.



Fig. 7.2: A Newspaper Ad for Royal Baking Powder Company: ad is in bold in the top right corner and enlarged to the right.

To summarize regarding the baking powder can, with the information given above and the correlating dates, it is likely that this can was used in food preparation for the workers on the railroad (see Fig. 7.1 above for exact top found in the Work Camp site). This would show a use by Chinese workers, and possible reliance on mainstream American foods while employed in California, or a possible mixed group using the site. An example of cooking, such as pancakes and biscuits, would be easy to cook and very filling for workers. For four people it would take only a teaspoon of baking powder to make pancakes, and for a one pound can, such as the one found within the site, that held a lot of teaspoons.

When it comes to the possible evaporated or condensed milk can: these small, round cans, most crushed, all are rusted over, with a church key opening. These held some kind of liquid, but it can't be canned beer, which was first sold in 1935, (Barber, 2017:146). They could be a 16 ounce can, as this was a size sold in the 1800's, and it looks similar to modern shapes of the same size; most likely the shape has not changed, or not changed to a significantly notable degree.

It is possible the local foodstuffs were bought or traded, in order to supplement the workers' diets as well as to replace food as their own supplies was consumed. The nearby Chinatowns, such as those in Riverside and San Bernardino discussed in earlier chapters, may have been areas utilized by the Chinese workers for obtaining more traditional and familiar food and other items. As for tools, the only item recovered during field work were several rail spikes. It is possible the workers, upon being hired, were made to buy the tools needed to complete their tasks by the rail line owner company. Therefore, they used American railroad equipment and other containers needed to transport equipment, food, and clothing. Workers who purchased tools probably would not have abandoned them. As far as traditional tools, I have no answers except to mention the ceramic containers again. Nothing else was discovered to indicate a traditional tool, but that doesn't mean it wasn't there. This question is listed third as it directly relates to "Who was here?" and "What did they do?". It is based on

the materials recovered and the relationship between them, and the occupants of the site.

Research Question Four: Was this a temporary Work Camp?

Based on the findings during the survey and testing of the site, evidence currently supports that this was a temporary Work Camp. Aside from the ephemeral nature of the site itself that indicates temporary use, it can be compared with other known information about railroad work camp sites for support. According to Patterson (1969:182) "...as the railroads advanced eastward...the Chinese lived apart... in collections of small tents, wooden huts or holes and caves dug into the base of a hill..." This description matches other publications and shows how little in the way of housing the Chinese workers had, impermanent means that could be broken down and moved. The rusted nails and lumber discovered within the boundaries of the site could indicate modern, recent activity, but it could also be remnants of the supplies the workers had. The same could be true of food consumption. The littered containers and metal cans could be the workers' discarded waste they left behind when moving on to another area. The blue and white and brown glaze pottery are other indications of temporary use, as there are many other railroad archaeological collections in California and other states that contain similar pottery. In Utah, where the transcontinental railroad was completed, are various sites with similar artifacts, as well as in Nevada and Utah (Choy 2014, Hellman 1998, Patterson 1969, Polk 2015, Yang and Hellmann 1998). One example would be the duration during

which workers occupied Lakeview Camp in Nevada. Grading crews may have camped for two or three weeks and tracking crews for just a few nights.

Approximately forty to seventy Chinese workers in total were here, in groups of ten to thirty each (Furnis and Maniery, 2015:81). This question relates to the nature of the site itself and brings to focus human actions in a temporary setting in the archaeological record.

Research Question Five: What were the conditions like for the workers?

What was the layout of the camp and social organization of the workers?

The map of the site was created to better understand the layout for this project (Figure 3.2). While it is likely there are more artifacts outside the boundaries drawn for the project, which make the area occupied by the workers larger, the potentially diagnostic artifacts were determined to be most likely within the boundary and so that is where focus is given, but it is important to note the area was probably bigger than what is shown on the map. The various concentrations of artifacts, the metal scatter, and the ceramics and ceramic scatters across the site might have been disturbed over time. The modern dirt road for vehicle access cuts through the site, and the distribution of artifacts all over has made it difficult to guess what was happening where. This area could be where workers ate and socialized with others after finishing for the day, with other activities, such as hygiene and sleeping, happening elsewhere that has not been discovered yet. With the metal food containers, the metal scatter, the ceramics across the site, and the glass game piece, this could be the case.

There are several possibilities for social organization, depending on who was present (see Research Question #2). If it was Chinese people present, then the social organization would probably have been equal and it would probably be less likely to see indications of social status/variations in the site. Due to the known racism and hostility towards the Chinese at this time, it is likely that the person who distributed payment and goods was also Chinese who translated the English instructions from a white overseer or boss from the rail line company. Although perhaps with a cook or someone who simply acted as a translator available a slight variation might be present, given their roles in the workplace, and especially among the numerous other workers who shared the same role. If there were women and children present (again see Research Question #2) it is likely they would've been kept in a separate area from the rest of the workers, away from the dangerous activities. If people of other ethnicities were present, they too would have been in a separate area. Segregation among ethnic groups was an expected occurrence, which has been documented extensively across several fields besides archaeology (history, sociology, psychology, etc). Racism was high during this period and it would have been unusual to see ethnic groups stray from this, even in an isolated temporary setting.

This question was listed #5 as there are other documented accounts of railroad construction sites across the U.S. from the 1800's that have answered this and similar questions in those sites respectively. This is one other example supporting those findings as well.

In the preceding section, the presentation and analysis of data have been reported. This section consists of recommendations for further research, a summary of the study, and concluding thoughts.

Recommendations for Further Research. The coin pictured below could be one avenue of research in the future. Although it was not recovered, the picture above potentially offers diagnostic features, such as the style, size, and symbol visible on the side of the coin. The glass game piece is another potential opportunity, given the knowledge of traditional Chinese gaming in the eighteenth century and the transition to living in California.

The bullet casings are another possible area of further research, and a few had been recovered during fieldwork. Striations on bullet casings are unique, and if intact, it is possible to make a match and date them, although there could be casings from recent activities in the immediate area as well, which could be mixed in. This is assuming the ones recovered from the site are not deformed beyond the ability to allow this kind of testing to produce results. We did not have someone knowledgeable in guns, their mechanics and construction to make these determinations in the field.



Fig. 7.3: Chinese Coin Discovered on Initial Survey: the coin discovered after the Blue Cut fire. Unfortunately, it was not recovered at the time of this project (given the high level of traffic through the area, it is assumed it was found and taken between the time of the survey and field work).

Summary of the Study. The Chinese artifacts found at the Work Camp site are associated with the construction of the railroad which runs through the Cajon Pass. The presence of the Chinese artifacts points to the ethnic and social identity of the Chinese people who worked on the railroads, specifically the 1913 construction considering the Royal Baking Powder Company can. The varying types of ceramic artifacts found at the site, along with liquor bottles, could potentially indicate a more precise identity, such as a type and style of ceramic which came from a similar type of skilled laborer in China. There are very few known historic Chinese sites within the San Bernardino National Forest, which would make this very significant to the history of the San Bernardino area and to the history of the Chinese in California. This Work Camp site also show a connection between it and the larger Chinatowns in the San Bernardino and

Riverside areas. Ethnic identity and material culture combined is a less widely studied research topic, but it has become more common in recent years. While there is a lot of ethnohistoric documentation of Chinese laborers in various kinds of work, there is not as much in comparison to the archaeological record. The Work Camp site could potentially help this, by connecting material evidence to past events. This also benefits the history of Chinese Americans by bringing a tangible aspect of early immigration into the present. In addition, this could add to the history of California and how it entered the modern world, and both literally and figuratively connected with the rest of the United States.

Conclusion. This research contributed in bringing attention an overlooked ethnic group in North America, one which contributed heavily to the United States industrialization into the modern world, in that the construction of the railroads literally connected the country from the east coast to the west. Parallel to the goals of The Chinese Railroad Workers in North America Project (CRWNAP) at Stanford University, as discussed in previous chapters, this brings evidence and recognition to a group who previously had no recognition. Questions of who was present at the Work Camp site and how many, what they ate, what were their living conditions like, what methods did Chinese immigrants use to maintain their identities, and possibly adapt to in order to continue working in a foreign, segregated and hateful country, all the while working in an extremely dangerous environment, are all meaningful pursuits not only for the Chinese population, but for the history of California and the field of historical archaeology.

APPENDIX A
ARTIFACT SURFACE COLLECTION INVENTORY

Appendix A: Surface Collection Inventory

Artifact number	Material type	Description	Count	Photo number
1	metal	whole can, crushed, knife opened	1	747
2	metal	bullet casing, possible .22 caliber	1	748
3	ceramic	Chinese pottery, rim sherd, with design	1	749
4	ceramic	Chinese pottery, rim sherds, with design	2	750
5	metal	whole can, church key opening	1	751
6	metal	rectangular shaped can, possibly wit lid	2	752
7	metal	whole can, church key opening	1	753
8	metal	whole cans, one with crimped or sautered sides, one knife open	2	754
9	metal	turn key can	1	755
10	ceramic	Chinese pottery, one rim sherd, one body	2	756
11	metal	whole can	1	757
12	ceramic	soy pottery(?), body sherd	1	front-758, back-759
13	ceramic	soy pottery(?), body sherd	1	front-760, back-761
14	metal	whole can	1	762
15	metal	whole can minus lid	1	763
16	metal	can lid, possible Chinese writing	1	764

17	glass	bottle base	1	765
18	metal	rectangular can, notable seams	1	766
19	glass	purple/amethyst colored, triangle shaped	1	767
20	glass	green colored, bottle lip piece. Champagne finish, blob top	3	768, 768.A
21	ceramic	Chinese pottery, *only 2 in photo*	3	769
22	ceramic	white wear body sherd	1	770
23	ceramic	Chinese pottery, rim sherd	1	771
24	ceramic	white wear, with bluish-greenish color on one side	1	772
25	metal	folded sheets, edge has 2 broken dots (seam/seal?)	1	773
26	ceramic	soy pottery(?), body sherd	1	774
27	ceramic	Chinese white sherd, small blue decoration on one side	1	front-775, back-776
28	metal	whole cans	2	778
29	metal	rail spike	1	779
30	ceramic	chinese soy pot sherd, brown glazed	1	780
31	metal	nail	1	781
32	ceramic	brown pottery sherd	3	782
33	ceramic	soy pottery, base sherds	3	783

34	glass	black colored, game piece	1	784
35	ceramic	brown pottery sherds	6	785
36	ceramic	brown pottery	2	786
37	ceramic	white and blue decorated pottery sherd	1	787
38	ceramic	brown pottery sherds, (could have been dropped and broken in place, in photo rearranged)	19	788
39	ceramic	black or brown glazed pottery sherds	5	789
40	metal	container, crushed, with a faucet opening (?)	1	791
41	ceramic	black soy(?) pottery, 1 whole side, 2 small sherds	3	792, 793
42	glass	purple/amethyst colored	2	794
43	metal	buckle(?)	1	795
44	ceramic	brown pottery sherds, blue and white sherd	7-brown, 1- blue/white	796
45	metal	container with writing on one side	1	797
46	ceramic	black pottery, rim sherd	1	798
47	metal	can pieces, one lid with writing: "Royal baking Powder full weight 1lb. Absolutely pure"	2	799, 799.A, 799.B

48	ceramic	blue and white sherds, one rim, one body sherd	2	800
49	metal	whole can, minus lid	1	801
50	metal	whole can, knife open	1	802
51	glass	purple/amethyst	1	803
52	plastic? Metal? Other?	greenish colored button	1	804
53	ceramic	black/brown pottery sherds, white and blue sherd	9: 8-brown, 1-white.blue	805
54	metal	short, round, similar to a modern tuna can	1	806
55	metal	small, rectangular shaped, with round hole on one end	1	807
56	ceramic	blue and white pottery sherds, rim and body	8: 6-rim, 2-body	808
57	glass	brown colored, one whole bottle base in half	2	809
58	ceramic	blue and white body sherd	1	810
59	metal	rail spike	1	811
60	metal	cylinder, half circle shaped	1	812

APPENDIX B
SAMPLE TEST PIT RESULTS

Appendix B: Sample Test Pits Results

STP	Depth	Soil Description and Munsell	Material	By	Date	Photo no.
B1	0-20cm	sand, 10YR32 very dark greyish brown	less than 10 modern glass	A.G., E.H.	7/28/2018	708, 709
B1	20-30cm	sand, 10YR4/6	less than 5 modern glass	A.G., E.H.	7/28/2018	708, 709
B1	30-37cm	sand to gravel, 10YR5/4	sterile	A.G., E.H.	7/28/2018	708, 709
B2	0-24cm	sand, hitting medium to large rocks. Large rocks on bottom. Bottom coarse, sandy silt 10YR5/6 yellowish brown, top 5cm: 10YR3/4	sterile	A.G., E.H.	7/28/2018	713
B3	0-24cm	sandy, rocky, fine, sandy silt. 10YR6/6 brownish yellow. Top 5cm: 10YR5/2 greyish brown	sterile	A.G., E.H.	7/28/2018	715
B4	0-20cm	sandy, 10YR4/4 dark yellowish brown	metal can top x1, slag x1	A.G., E.H.	7/28/2018	717
B4	20-40cm	fine, silty, little sandy, 10YR5/6	sterile		7/28/2018	717
B5	0-20cm	0-15cm:10YR4/3, 16-20cm: 10YR4/6	bone x1, barnacle/shell(?) x1, metal shard x1, metal nails x2	A.G., E.H.	7/28/2018	718
B5	20-40cm	10YR4/6, silty	sterile	A.G., E.H.	7/28/2018	718
B6	0-20cm	10YR4/6	sterile	A.G., E.H.	7/28/2018	723
B7	0-20cm	0-6cm: darker yellowish brown	sterile	A.G., E.H.	7/28/2018	732
C1	0-20cm	0-8cm: 10YR3/2 very dark greyish brown, sandy silt, dry.	amber bottle glass x1, .22 casing embossed "c" x1	A.G., J.A.	7/28/2018	

C1	20-38cm	8-30cm: 10YR4/6 dark yellowish brown, coarse sandy silt, dry, compact. 30-38cm: 10YR4/6 dark yellowish brown, 80% medium angular gravel, dry compac	sterile	A.G., J.A.	7/28/2018	
C2	0-20cm	0-6cm:10YR3/4 dark yellowish brown, sandy silt, dry, friable. 6-20cm: 10YR5/6 yellowish brown, coarse, silty, sand w80% small round gravel, compact	sterile	A.G., J.A.	7/28/2018	
C3	0-20cm, 20-30cm	0-5cm: 10YR5/2 greyish brown, sandy, silt, dry/friable. 5-30cm: 10YR6/6 brownish yellow, coarse, sandy, silt, semi-compact, dry	sterile	A.G., J.A.	7/28/2018	
C4	0-20cm	0-3cm: 10YR3/2 very dark greyish brown, sandy silt, dry/friable	olive green glass x1	A.G., J.A.	7/28/2018	
C4	20-40cm	3-38cm: 10YR5/4 yellowish brown, sandy silt, dry/friable. 38-40cm: 10YR5/4 yellowish brown, 80% medium angular gravel w coarse silt, sandy, compact	sterile	A.G., J.A.	7/28/2018	

C5	0-20cm	0-6cm: 10YR 3/2 very dark greyish brown, sandy silt, dry-friable. 6-20cm: 10YR5/4 yellowish brown, coarse, silty sand 40% small round gravel, dry/compact	sterile	A.G., J.A.	7/28/2018	
C6	0-20cm	0-5cm: 10YR3/2 very dark greyish brown, sandy silt, dry friable. 5-20cm: 10YR5/4 yellowish brown, coarse silty sand 40% small round gravel, dry/compact	sterile	A.G., J.A.	7/28/2018	
C7	0-20cm	0-5cm: 10YR3/2 very dark greyish brown, sandy silt, dry friable. 5-20cm: 10YR5/4 yellowish brown, coarse silty sand 40% small round gravel, dry/compact	sterile	A.G., J.A.	7/28/2018	727
D1	0-25cm	0-9cm: 10YR4/3. bottom: 10YR5/6	sterile	A.G., E.H.	7/29/2018	746
D2	0-25cm	10YR4/4 sandy silt	sterile. On west side of burm with tire	A.G., E.H.	7/29/2018	744
D3	0-20cm	0-8cm:10YR4/3. 9-20cm: 10YR4/4 dark yellowish brown. Below 20cm is larger gravel, small rocks.	sterile	A.G., E.H.	7/29/2018	742, 743

D4	0-20cm	top 8cm is darker brown. Bottom: 10YR5/6	out of west side wall 5cm: thick olive glass x1.	A.G., E.H.	7/29/2018	740
D5	0-20cm	top 9cm: 10YR4/3. 10-20cm: 10YR5/6, gravel	sterile	A.G., E.H.	7/29/2018	738
D6	0-20cm	0-12cm: 10YR4/3 sandy silt. 13-20cm: 10YR5/6 silt w some sand, small gravel pieces	metal can lids x2 just below surface not visible. Burnt seed x1	A.G., E.H.	7/29/2018	736
D7	0-20cm	more compact than B or C. sandy. Top 10cm: 10YR4/3. bottom: 10YR5/6	sterile	A.G., E.H.	7/29/2018	734

APPENDIX C

THE ROYAL BAKING POWDER COMPANY AND OTHERS

Regarding the baking powder can and a brief background on baking powder in general: Baking powder was invented in 1816; it is a leavener that consists of a combination of baking soda, cream of tartar, and a moisture absorber (like cornstarch). It has the action of yeast but it acts much more quickly and is used in batters where there is no acid present. It acts immediately upon the addition of water, therefore a filler (usually cornstarch) is added to absorb the moisture and prevent premature activity. Various baking powders were sold in the first half of the nineteenth century. According to an article from Shelter Island, New York in 1866, Brothers' Cornelius (1828-1898) and Joseph Hoagland (1841-1899) formed a partnership to develop a baking powder company called Royal Baking Powder Company, formed in 1873 (Pacific Reporter 175). The business grew for three or four years, when it was discovered that alum and soda made a stronger, cheaper leaven. Worse still, alum was plentiful. Anybody could go into its manufacture, and many did. The Royal Company, to control the cream of tartar industry, had contracted to take from European countries immense quantities of argol, the wine-lees from which cream of tartar is made. They had to go on making the more expensive baking-powder or break a contract (Civitello, 2017: 45, Morrison, 1904: 589-594) Put in appendix: In 1929, the Royal Baking Powder Co., along with four other companies including the Fleischmann's Yeast Company, merged to form Standard Brands, the number-two brand of packaged foods in America after General Foods. Through a further merger, Standard Brands itself became part of

Nabisco in 1981. As of 2017, Nabisco is a subsidiary of Mondelez International; Royal Baking Powder is still marketed today. (Civitello, 2017:45; Morrison, 1904: 589–594).

Starting in New York and growing outwards several states such as Maryland (see Fig. 7.2 for an ad in Laurel, Maryland in 1897) the Royal Baking Powder Company grew to eventually absorb the Price Baking Company; all the way across the country in San Francisco, California by March of 1899. Some of the Price employees went East to work for Royal and vice versa. Given the dates of the rail lines construction, it is possible the container can be associated with either line, but the second rail line from 1913 is a more likely fit, due to company growth, mobility of groups of people, product availability, etc.

The company played on consumer fears of adulterated food, even lobbying to have alum varieties banned. In Missouri they succeeded, banning alum through bribery in the state Senate, and when word got out, an enormous scandal erupted. In the 1850s, the process of baking was further streamlined by the introduction of baking powder, which combined baking soda and cream of tartar into one product (Civitello, 2017: 45,46).

On evaporated milk can: By 1885, Meyenberg was producing the first commercial brand of evaporated milk at his Highland Park, Illinois plant, the Helvetica Milk Condensing Company. In the late 1880s, Eldridge Amos Stuart, an Indiana grocer in El Paso, Texas, noted that milk was spoiling in the heat and causing illness in children. Stuart developed a method for processing canned,

sterilized evaporated milk. In 1899, Stuart partnered with Meyenberg to supply Klondike gold miners with evaporated milk in 16-ounce cans.

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