



*FAN AND TSAI: FOOD,
IDENTITY, AND
CONNECTIONS IN THE
MARKET STREET
CHINATOWN*

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*FAN AND TSAI: FOOD, IDENTITY, AND CONNECTIONS IN THE MARKET STREET
CHINATOWN*

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Jonathan Ryan Kennedy

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CHINATOWN*

This study explores food consumption in the Market Street Chinatown, a 19th-century Chinese migrant community in San Jose, California. I use data collected from archaeologically-recovered animal and plant remains to address two primary goals: understanding the intersections of food and identity within the Market Street Chinatown and exploring how the community's food choices connected its members to other people and places. To address the first goal I compare food remains from trash pit features utilized by both merchants and laborers within the community, and I demonstrate that while food-based differences existed several shared food practices that cross cut social classes served to reinforce community cohesion in the face of rising anti-Chinese sentiment in the 19th-century United States. I draw upon the growing body of literature on migrant food studies as well as transnational approaches to Chinese migration put forward by Madeline Hsu and others to highlight the many ways that food consumption contributed to the formation of complex identities simultaneously rooted in both China and the United States. Key to these interpretations is my contextualization of the Market Street Chinatown food data within the broader flow of people, goods, and ideas occurring throughout the 19th-century Pacific world. To begin tracing these flows and achieve my second goal, I use the biological concept of indicator groups to link fish remains recovered from the Market Street Chinatown to numerous Chinese-operated fisheries throughout North America and China; though these data only scratch the surface of the exchange of goods between China and the United States, they reveal how deeply entangled Market Street's residents were in these trade networks. Ultimately, I not only demonstrate the importance of food in emerging Chinese migrant identities and its ability to drive multiscalar connections, I challenge previous

archaeological interpretations of Chinese migrant food practices which frame interpretation within binaries of continuity and change and do not fully acknowledge the generative potential of migration.

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Chapter 1. Introduction

A plethora of recent studies have examined the history of Chinese food in the United States, and the subject matter is gaining popularity in both academic and popular discourse (e.g., Chen 2014; Coe 2009; J. Lee 2008; Roberts 2002). A number of themes have emerged in this body of literature including the evolution of Americanized Chinese food through the adaptation of southern Chinese cookery to American tastes, the racism and prejudice surrounding descriptions of Chinese cooking by 19th- and 20th-century observers, the complexity of Chinese cooking in China, and the importance of Chinese restaurants in the culinary landscape of the United States. Academic authors have approached the subject with eyes towards the experience of Chinese migrants and common themes include the connection between food and identity and the various roles Chinese restaurants play in migrant life (e.g., Anderson and Wang 1985; Bao 2011; Liu 2009; Liu and Lin 2009; Wu 2011). Archaeologists working on Chinese sites in the United States have also delved into migrant foodways, often in attempts to understand continuity and change within Chinese migrant culinary practice via models of acculturation (see Chapter Three). While some of this work highlights the hybridity and nuance present in migrant communities, more often than not Chinese communities and their representative foodways have been implicitly exoticized and cast as separate and unique from corresponding Anglo practices. This has the unfortunate side effect of privileging static models of continuity and change (e.g., acculturation), which do not acknowledge the creation of complex, transnational identities amongst many migrant populations. Recent ethnographic work emphasizing the food experiences of migrants in many communities suggests that the Chinese migrant experience in the United States is less unique than has been portrayed in archaeology, and this literature serves as a starting point to reframe archaeological understandings of the food practices of Chinese migrants in the United States.

Food and Identity

Anthropologists have long understood that food is a cultural construction (Caplan 1997). Food plays important roles in marking holidays and special occasions, and people often long for the foods and flavors of childhood and home while traveling abroad or in times of stress. The plethora of regional cuisines and the (sometimes) lighthearted rivalry exhibited between them suggests that food is more than just food, and that it instead carries a deeper cultural significance. The structure of dishes and meals alongside their associated cultural etiquette are distinctive to individual cultures (Douglas 1972). Likewise, food taboos and restrictions surrounding the consumption of certain ingredients or dishes are culturally mediated, even if they have some basis or connection to ecological or environmental concerns (Douglas 1993; Harris 1985). Even the classification of which substances are considered to be either food or not food is driven by cultural preferences, as cuisines across the globe variously include or discount the nutritional acceptability of the same ingredients (Meigs 1997; Levi-Strauss 1964, 1966).

Food's position as a culturally defined material substance utilized and consumed on a daily basis ultimately provides it a powerful position in creating and maintaining social relationships and boundaries (Belasco and Scranton 2002; Mintz and DuBois 2002). Food practices, through the repetitive preparation and consumption of food, serve as key influences in the processes of cultural and social distinction and the formation of social identities (Barthes 1979; Bourdieu 1979; Dietler 2007; Hastorf and Weismantel 2007:309; Voss 2008). Food's role in the production of habitus privileges it as a key component of identity construction (e.g., Atalay and Hastorf 2006; Hastorf 2012), and it has an undeniable importance in the punctuation of daily life making it the "ultimate social glue" (Braudel 1981; Giard 1998; Hastorf 2012:65; Parker Pearson 2003; Twiss 2007). Thus, food practices become ingrained in conceptions of self and

community and provide a unifying connection within social groups. Conversely, differences in food practices can become markers of cultural and social distinctions (Bourdieu 1984). Food-based differences between groups can hinge on profound or subtle differences in the actual foods consumed (Messer 1984; Tam 2001), the organization or structure of meals (Douglas 1972), and the social rules that govern who can partake in meals or other forms of consumption (Beaudry 2010; Douglas 1972). In all of these cases, differential food construction and consumption thus become perceived markers for cultural differences more broadly.

While food provides the basis for differentiation and connection between cultural and ethnic groups and a significant portion of food and identity studies focus on this relationship, it also functions as a line that divides within groups as well. Perhaps the most readily visible and well-recognized intragroup food-based distinction lies along the line of social class (Bourdieu 1984). Examples of class-based differences mediated through food abound, often based on of what Appadurai (1986) terms the “turnstile effect” in which social elites and the lower classes engage in a culinary arms race in the consumption of exotic foods. Ingredients such as sugar (Mintz 1985; Smith 1995) begin as costly treats consumed by the social elite, and as they become cheaper and more readily available to the lower classes the elite search out new, expensive foods to re-differentiate themselves (Lentz 1999). Additionally, one’s social class seems to correlate in a more general way with food preferences, suggesting a strong link between food practices, class-based identities, and learned tastes preferences (e.g., Bourdieu 1984; Lupton 1996; Warde 1997). Thus, while food practices provide useful tools in enacting class-based hierarchies and for attempts at social mobility (Cruwys et al. 2015; Gillete 2004), they also link the flavors of one’s experiences growing up with conceptions of self and the desire to consume familiar foods.

Food also plays important roles in internal differentiation along other lines including gender, which has been the focus of a number of in-depth studies (e.g., Counihan 1999; D'Sylva and Beagan 2011; Kahn 1986; Weismantel 1988; Whitehead 2000), and themes in this research include the use of food to mitigate relationships between genders, the role of food in sexuality and access to sex, and the symbolism and meaning of food as gendered material (Counihan and Kaplan 1998). Age also features prominently in some analyses of food, especially as it relates to the construction of generational identities (James et al. 2009; Plastow and Gilhooly 2015) and the differential use of food in social settings by people of different ages (Abarca 2004; Mandy 2004). Abarca's (2004) work with Mexican American cooks in particular emphasizes age as a factor in how individuals view change in food practices, with older informants being skeptical of the seeming lack of authenticity of dishes prepared with "twists" on recipes by younger cooks.

Food-based constructions of identity can occur at a number of different scales, and recent scholarship emphasizes everything from individual ingredients to entire cuisines. In some cases, a single food item plays a profound role in the construction of group identities (e.g., Ohnuki-Tierney 1993). This is especially true in the case of migrant communities who are often logistically restricted to a subset of ingredients regularly consumed in the home cuisine. The use of mint amongst Lebanese migrants in New York (Rowe 2012) and a longing for *ntsambu* by Comorian migrants abroad (Walker 2012) provide two such examples. In these cases, mint and *ntsambu*, respectively, become not only valued ingredients, but also facilitate a connection to and identity with home. Likewise, individual dishes of myriad kinds may become tied to identities. In these cases, a particular dish may be important in the construction of national or other identities (e.g., Mincyte 2008; Raviv 2015), and in other cases variations on the same dish not only provide a foundation for identity construction, but also serve to mark notable differences between "our"

version of a dish versus “their” version (Wilk 2012). Entire meals, especially feasts of various kinds, also provide opportunities for identity creation at different scales, simultaneously creating community identities, while also reinforcing differences along lines of social class, gender, etc. (Dietler 2001; van der Veen 2003). In these cases, while the connection between food and identity may be most apparent at one level, the intersections are more complicated with individual foods and dishes representing different things in different times or places, highlighting gender relationships in some contexts, class differences in others, and so on (c.f. Weismantel 1989). Meals and foods that play important roles in the negotiation of identities within households may also play important roles in the creation of community, regional, and national identities (e.g., Appadurai 1988; Lockwood and Lockwood 1990; Nugent 2010).

Just as food can mark distinctions within and between groups, it can also provide opportunities for the creation of new culinary and social identities (Wilk 2001) and be actively used in attempts to effect upward social mobility or display wealth. This idea is at the heart of many class-based studies such as Mintz’s (1985) exploration of sugar, whereby particular foods are markers of social status giving their acquisition and consumption within changing market systems the potential to likewise increase the social standing of those who can afford to eat them. There is a tension here whereby elites continually search for new exotic goods to consume while the lower classes play an endless game of catching up. Changes in food practices may also be active attempts to create new culinary and social identities, allowing an individual social mobility (perceived or real) through the manipulation of culinary practices. For instance, English colonists in Jamestown feasted on dolphins, deer, and other animal foods typically consumed only by elites in England, simultaneously enjoying these exotic foods, while also attempting to live a higher status life (Bowen and Andrews 2000). Numerous examples abound in the study of

migrant populations (see below), and it is clear that, especially in cases of social upheaval or disruption (e.g., Thomas 2007), people will actively use food practices as a way to shift their corresponding social identities.

Though anthropologists have frequently emphasized the importance of food in identity construction through shared cultural beliefs about food, meals, and related social norms, this linkage is not free of criticism. Goody's (1982) exploration of the creation of high and low cuisines and Mintz's (1985) work on sugar emphasize the importance of history, economics, and politics in the origin and change of food practices. In both of these cases, food is shown to not be dependent solely on internal cultural dialogue, but instead to be intimately linked to a broad web of connections and events that often highlight the internal diversity of food beliefs within any given culture. Appadurai's (1988) discussion of how regional cuisines and cookbooks are used to create national cuisines extends this thread by demonstrating the effects that the complicated political relationship between urban cookbook readers and regional cooks has on the subsequent national cuisine. Likewise, recent projects exploring the evolution of Indian cuisine (Collingham 2006) and the creation of a national cuisine of Mexico (Pilcher 2012) further emphasize the importance of historical events and relationships, again showing that linkage between food and identity is not a simple, straightforward one. Recent anthropological work has also picked up this thread, providing greater contextualization of food practices and highlighting the complex relationships between food, identity, and other aspects of daily life. Weismantel's (1988) study in Ecuador helped moved anthropological approaches to food beyond structuralist models, and it highlights the number of ways food intersects with culture outside of simplistic symbolic and structural constructions. A plethora of recent works present similar themes, highlighting the historical and contextual nature of food practices (e.g., Ohnuki-Tierney 1993; Pilcher 2006a;

Swislocki 2009; Wilk 2001, 2006; Wu and Tan 2001), and it is clear based on these and other works that food's relationship to identity does not exist in a vacuum but instead is directly tied to the historical circumstances of any given context.

While food provides boundaries upon which to mark and build identities, it is not immutable and static but instead shifts and changes through time. In some cases this is due to the incorporation of new ingredients such as those introduced through colonial projects, those obtained through long distance trade, and even shifting definitions of what constitutes edible food. In these cases, the underlying structure of foods (c.f. Douglas 1972) may not change and the new additions can be incorporated into existing cooking, serving, and eating patterns (e.g., Debevec 2003; James 1997). In other cases, such as with the addition of the tomato to Italian cookery, the new ingredient or cooking method can have wide ranging implications for culinary identities (e.g., Dietler 2007). The local incorporation of globally available foods in particular has garnered interest under the umbrella of "glocalization" studies (Ritzer 1998, 2000; Wilk 2006:7). While much of this work is concerned with the effects of modern globalization, Wilk (2006:8) has provided a historical component by arguing that the Caribbean has been effectively global for centuries. Similar exchanges of goods across long distances and between multiple sources have been happening elsewhere, including amongst Chinese populations, suggesting that glocalization processes have happened elsewhere as well (Wu and Cheung 2002).

It is likely that change rather than continuity is the norm in food practices, either through the powerful effects of large-scale processes such as colonialism and globalization or through the creative actions of individual cooks. A focus on constant change in food practices raises questions and problems for the identification of supposedly traditional and/or authentic culinary practices. It is important to note that daily production of food and meals is not done in relation to

strict ideals of tradition and authenticity, but is instead the result of active decisions and choices made by cooks and chefs (c.f. Abarca 2003). The cook's role in the creation of cuisine allows for the incorporation of new ingredients, creative twists in the preparation of dishes, and a continual shift in the suite of dishes and techniques that constitute a cuisine. Change in food practices does not immediately signal a shift in identity; instead, change is expected and can be taken as not only the result of experimentation in the kitchen, but also the long series of historical events and connections which lead up to the act of cooking in question. It is also not necessary for entire food systems to change; instead, some ingredients and preparations may remain static while others undergo significant alterations. This is particularly salient in colonial contexts where the introduction of new ingredients (alongside massive social disruption) led to significant changes in local cuisines and the creation of many creole cuisines and cultures (e.g., Mintz 1996; Tookes 2015). That traditions can (and indeed need to) be invented is not surprising (Hobsbawm 1983), however, in the context of food, tradition is often over-emphasized and even created via the publication of cookbooks and other media codifying particular dishes or preparations (Appadurai 1988). In this light, the study of the traditional as conceived of in popular thought may be more accurately described as a study of cookbooks, food literature, and culinary authorities (e.g., Pilcher 2014). Authenticity in daily cooking, however, should instead be viewed from the subjective perspective of the cook and the eater; if the foods prepared and consumed are considered authentic, despite changes in ingredients, methods, serving, etc., then they are in fact authentic (Tookes 2015). This follows Abarca's (2003) suggestion of moving from "authentic" to "original" to de-emphasize the static nature of authenticity applied to food by cultural authorities.

Finally, while food practices contribute to identity construction via their key and repetitive role in daily life, food also maintains its importance due to its strong connection with memory. On one level, the connection of food and memory stems from positive and negative biological responses that follow the consumption of particular foods and lead to future preferences and avoidances driven by the biological drive to survive (Rozin 1987). However, food has also been shown to produce intensely sensuous social memories which can in turn be re-experienced through the consumption of familiar foods that trigger past feelings (Counihan 2004; Holtzman 2006; Sutton 2000, 2001). Particular foods can not only trigger particular memories, they can be intentionally employed to affect a desired narrative (e.g., Lockwood and Lockwood 2000; Shortridge and Shortridge 1998) or to mark specific, repetitive events such as holidays important amongst cultural groups (e.g., Bahloul 1989; Gabbacia 1998). Certain foods may be regularly consumed to reinforce particular aspects of identity, and these need not be drawn from strictly pleasant or positive memories (e.g., Diner 2003). The emphasis on food's relationship to memory and nostalgia is particularly common in the study of diasporic or migrant populations, who draw explicitly on food's capability to evoke memories of distant times and places, and to maintain and/or manipulate cultural identities while away from home (Holtzman 2006:367). Just as the memories that food evokes can be drawn from events experienced by the eater, they may just as likely function to produce powerful social memories by drawing on "a longing for times and places that one has never experienced" (Holtzman 2006:367). Such "armchair" nostalgia for distant places (Appadurai 1996:78) drives the creation of fictionalized histories and invented national/other identities (e.g., Appadurai 1988), and they provide eaters with a powerful way to change and shift their identities through the consumption of food.

Food, Identity, and Migrant Lives

The process of migration creates ruptures between individuals and their homelands, and it simultaneously provides challenges and opportunities in the recreation of food practices. Owing to food's strong connection with identity, migrant populations tend to try to recreate and conserve the food practices from home, however this is rarely possible in a literal sense (Gabbacia 1998; Vallianatos and Raine 2008). Instead, migrant populations make compromises including substitution of locally available ingredients, importation of a subset of valued foodstuffs, reliance on a limited range of dishes/ingredients from home, and incorporation of new dishes or ingredients into the culinary repertoire. The various strategies used by migrants provide opportunities to maintain diasporic cultural ties through the trade of ingredients, to build new social groupings by interacting with local food producers and sellers, to engage host populations through sharing of food, and to establish new divisions within and between communities. Food is perhaps doubly important amongst migrant communities (Janowski 2012a; Koc and Marte 2012; Welsh 2001). Notions of authenticity and tradition take on heightened meaning amongst cooks and eaters abroad (Belasco and Scranton 2002), and eating food from the homeland serves as an effective way of signaling a shared identity with others from the same home area (Schuchat 1971; Sutton 2000; Tookes 2015). However, given the difficulty of recreating all aspects of the home cuisine, the compromises necessary in new locales, and the experimentation of individual cooks (c.f. Abarca 2003), the dishes that ultimately come to be consumed in migrant communities are often noticeably different than equivalents in the home country despite them being viewed as authentic by the people preparing them (Tookes 2015). In these cases, the "feel" of the meals seems to be what causes eaters to view them as authentic

(Walker 2012), suggesting that the social context of meals, including how and with whom they are consumed, is itself enough to maintain nostalgic ties to home.

As with the link between food and identity more generally, much of food's importance in migrant communities comes from its strong connection to memory. Social memories encoded in the flavors and smells of certain foods can evoke nostalgic memories of home (Sutton 2000), and these mechanisms also draw heavily on food's connection to place (c.f. Trubek 2009). Thus, for first generation migrants familiar dishes serve as reminders of the homeland, a linkage made stronger by the importation of food items which connects them to family and friends at home (Weller and Turkon 2015). Abbotts' (2011) study of highland Ecuadorian migrants in New York demonstrates how the importation of cooked guinea pig meat from Ecuador not only meets migrants' nostalgic desire for home-cooked food but also keeps them connected via the shipment of money to and meat from family members at home. Likewise, Rowe's (2012) ethnographic work with Lebanese migrants in the United States reveals how mint, whether consumed in dishes or simply present in home gardens, connects Lebanese migrants and their families to home. In this case, mint's distinctive flavor and smell and its use in home-cooking is seen as a driving force behind nostalgic food memories. Other similar case studies abound (e.g., S. Lee 2015; Marte 2008; Naidu and Nzuza 2013; Stowers 2012), and they all highlight the role of nostalgia-driven food consumption in a cultural "eating back" at home (Duruz 2012).

It is important to note, however, that food consumption within migrant communities can be just as much about maintaining connections to home as about creating community amongst a group of people who may not share a single history and heritage. In this case, the creation and repetition of shared food practices allow migrants to bond over a created identity, one that emphasizes a connection to a shared homeland but which de-emphasizes differences that may

have existed between individuals before migration (c.f. Parasecoli 2014). In such a case, migrant identities are centered on life in the new home country, and while nostalgia may play a role in structuring food practices the meaning of the linkages nostalgia evokes are likely to be different for different individuals within a migrant community. This opens the possibility, and indeed likelihood, that individuals within migrant communities view shared community food practices differently, and that community food practices factor into individual identity constructions differently. This argument fits with efforts to theorize migrant communities as hybrid groupings rather than essentialized, monolithic ones (Chin et al. 2000; Falck 2003; Meskell 2002; Prashad 2001; Riccio 2001), and serves as a reminder that the same foods can mean very different things depending on their specific contexts of consumption within migrant communities.

Food practices also provide impetus and opportunity for migrants to build and enact transnational identities, simultaneously connecting them with groups in both the home and host country. Chapman and Beagan (2013) demonstrate how food practices reflect multiple identities amongst Punjabi-Canadian families. They argue that the use of food to express a Canadian identity is not an indication of acculturation or the loss of Punjabi identity; instead, both of these identities coexist and are expressed in different ways through food. Additionally, Tookes (2015) shows how Barbadian migrants in the Atlanta, Georgia consciously use Barbadian foods as a way to signify their ethnic and national identity, as well as a way to connect with white Americans by consciously differentiating themselves from African-Americans in mixed settings by cooking Barbadian dishes for social events.

In some cases, attempts to emphasize connections with groups in the new host country can be detrimental, as in the case of Asian migrant populations consuming unhealthy snack and fast foods to fit in with Americans, while suffering increased rates of obesity and diabetes as a

consequence (Guendelman et al. 2011). Finally, migrant-run restaurants also provide a public venue to create inroads in the host country. In some cases, migrant chefs serve adaptations of their home cuisine to suit local tastes, a common example being that of Americanized Chinese food (Liu 2009; Liu and Lin 2009). In other cases, such as in the many Greek-run cafes and diners in the United States and Australia (Risson 2014), migrant cooks prepare food most directly related to the cuisine of their host country. In both cases, restaurants serve as loci for connections to be made between migrant chefs, restaurant staff, and local customers, and they provide important venues for cross-cultural interactions that might not take place otherwise. Restaurants also serve as a key influence in the creation of transnational migrant identities focused on public/restaurant food practices, in addition to private/home cooking more in line with food in the home country (c.f. Kuah-Pearce 2006). These examples highlight how migrants construct transnational identities that are simultaneously connected to their home and host countries (c.f. Hsu 2000), as well as ways that culinary practices can mitigate relationships at local and international scales.

Just as food practices can help create community identities and generate connections with surrounding populations, the culinary practices of successive migrant generations may change for a variety of reasons (Vallianatos and Raine 2008; Weller and Turkon 2015). These can include different strategies amongst generations to fit in or avoid negative stereotypes, increasing inability to source necessary ingredients, or changing conceptions of self. Mandy's (2004) ethnographic work in Vietnamese communities in Australia demonstrates a generational divide in the use of food, with older, first-generation Vietnamese people more likely to consume foods from home and second- and later-generation individuals being more open to not only eating new foods, but intentionally consuming them in attempts to form interconnections with non-

Vietnamese people. Other examples include Polish refugees consumption of snack foods to create relationships in the United Kingdom (Janowski 2012b), Comorian migrants avoidance of eating foods that are “too Comorian” to better fit in in France (Walker 2012), and the importance that “acquiring a taste for fried chicken and hot biscuits” played in allowing Jews in the American South to more easily navigate social politics in the region (Ferris 2005:146). In some cases, second- and later-generation descendants may also use food and cooking to rediscover their heritage and identity (Weller and Turkon 2015). Here, food practices center on nostalgia for an imagined past built upon family histories, relationships with family and community members, and an individual search for identity, and it plays an important role in the creation of successive migrant community identities.

Similarly, migration also provides opportunities to improve one’s social or economic standing through corresponding changes in the foods one consumes, especially through the addition of previously expensive or exotic ingredients that become readily available following migration (Diner 2001). This is particularly relevant for populations fleeing starvation or food scarcity, and easier access to food and higher quality food both figure prominently in many conceptions of migrant life (Carney 2015; Parasecoli 2014; Richter 2012; Stowers 2012). This process can also be more subtle, with changing food practices providing opportunities for individuals to reposition themselves in relation to social hierarchies in the home country or within migrant communities. For instance, colonists at Jamestown dined on dolphin, deer, and other high class foods generally reserved for consumption by the elite in England, allowing them to experience a way of living that was unlike that possible to them prior to migration/colonization (Bowen and Andrews 2000). Likewise, food can fill a similar role when migrants are fleeing violence, war, or other situations. For instance, Janowski (2012b) has shown

how Polish refugees in the United Kingdom use bread consumption to create an idealized sense of Polishness following their flight from the Soviet Union in 1940.

Just as migrants use food in a variety of ways for a number of different goals, they frequently employ a wide range of strategies to cope with problems accessing foods and ingredients they consumed in their home countries (Tookes 2015; Vázquez-Medina and Medina 2016). Pilcher (2006b) describes a general pattern seen amongst Chinese migrant communities whereby migrants initially directly import valued food ingredients and attempt to transplant crops, with this followed by the opening of specialty grocery stores and restaurants once populations reach a high enough level to support them. Direct shipment of foods is the first and probably most common of these strategies, and numerous examples of this exist in the study of migrant foodways (e.g., Abbots 2011; Bajic-Hajdukovic 2013; Walker 2012; Zanoni 2014). Not only does this strategy allow migrants to access desired ingredients, it also keeps the migrant eater in direct contact with food providers at home, often family members or close friends. These relationships maintain a connection to home, foster the maintenance of transnational migrant identities, and provide a material link to home that goes beyond pure nostalgia-driven longing. A more formalized way of importing ingredients occurs with the creation of specialty grocery stores catering to migrant populations (e.g., Alhabshi 2013; Vázquez-Medina and Medina 2016; Walker 2012). Likewise, in some cases restaurants serve a similar role by functioning as meeting places and suppliers of nostalgic flavors in migrant communities (e.g., Liu and Lin 2009; Mandy 2004; Tan 2002). While migrants sometimes personally import food items directly from family and friends (e.g., Abbots 2011), specialty stores and restaurants provide a more formalized and readily accessible means of enjoying food from home. These establishments, however, require a

large enough migrant population to support the business and these strategies are thus restricted to relatively large migrant communities (Pilcher 2006b).

When it is not possible to import important ingredients, migrant communities often substitute locally available alternatives (Lockwood and Lockwood 2000; Pilcher 2006b). Jamieson and Sayre (2010) argue that the incorporation and/or substitution of new food items into the culinary repertoire rests on the familiarity of cooks with the properties of both new and old ingredients, which fits with the notion of meal structure as conservative within cultural groups (e.g., Douglas 1972). This seems true at least in some cases amongst migrant communities, with substitutions often taking place along culturally appropriate lines (i.e. starch for starch, Pilcher 2006b). And it is notable that while migrants often view dishes with substitutions as perfectly authentic versions (Tookes 2015), in other cases the addition of new ingredients can be seen as having the opposite effect by at least some subset of the population (Abarca 2003). Thus, there seems to be no set rule for how substitutions are viewed in migrant communities other than that they often happen conservatively within existing culinary rules (e.g., Trigg 2004).

Ultimately, the food practices migrant communities employ and the way they play out in any given context are a result of localization, or the adaptation of culinary practices to the unique economic, cultural, and environmental conditions in which migrants find themselves (Kennedy 2015; Tan 2001, 2011). Thus, migrant food practices are not only the result of nostalgia and a variety of food-based strategies and goals, they are also tied directly to local conditions and the resulting restraints these place on the ability of migrants to fully enact their food preferences. Migrants may variably reproduce portions of their home cuisine, recreate or change their cooking and eating practices to fit cultural or political goals, adapt dishes to constraints in availability or

acceptability of ingredients or cooking techniques, and incorporate new ingredients and methods from the host population. Conditions that present barriers to the importation of ingredients include expense, logistical problems, cultural/dietary restrictions, pressures placed on migrant food practices by host populations, and restrictions placed on particular food items such as prohibitions or taxes. Some of these barriers, such as expense and logistical problems, are exaggerated within small migrant populations that lack the consumer demand to support investment in food infrastructure seen in larger communities. In other cases, local cultural or religious factors restrict the food practices of migrants, as seen in the adaptation of Chinese pork dishes to utilize other meats in predominantly Muslim countries (e.g., Tan 2001; Tan 2002). Localization strategies can change through time based on shifting local conditions, the passage of laws targeting migrant populations and their food practices, and changes in the population level or makeup of migrant communities. For instance, while Asian communities in the United States were previously able to import and consume live snakehead fish, an important species used for medicinal and culinary purposes, invasive species laws now prohibit the sale of live snakehead and markets have turned towards selling frozen snakeheads alongside additional, legal live fish instead (Mason 2003). Likewise, as Pilcher (2006b) has described, migrant communities tend to follow general patterns related to the support and supply of food practices, beginning with the direct importation of desired ingredients and ultimately the opening of stores and restaurants only when population levels are high enough to support them.

While the results of localization may be viewed as short-term adaptations, they have the potential to become ingrained in the food practices of migrants and successive generations of their descendants. In some cases, specific foods from home become “solidified” and remain part of the culinary repertoire of migrants despite often significant changes in other aspects of their

foodways (Janowski 2012a). Such solidified foods often play particularly important roles in nostalgia and memory making, and they may be described as “soul foods.” While many food practices and dishes may fall out of daily practice, migrant populations often make special efforts to consume solidified foods and they figure especially in festivals, feasts, and other important occasions where the foods mark cultural identity and belonging. Amy Rowe’s (2012) ethnographic study of the Lebanese diaspora in New England shows this, as a large garden of mint signals to a Lebanese couple that the prior home owner must have been Lebanese; mint, a common ingredient in Lebanese cooking, in essence becomes solidified as a marker of a diasporic Lebanese cuisine and identity. Solidified foods are subject to the conditions that determine localization, as in the case of Comorian migrants (Walker 2012) who choose specifically *not* to focus their attention on the foul-smelling *ntsambu* important at home but instead turn to other ingredients that are more accepted by their French neighbors. The solidification of only a subset of foods ultimately provides a marker of differentiation between migrant foodways and the foodways of the home country, though these do not necessarily signal corresponding shifts in identity (Tookes 2015). However, the changes driven by localization and codified by solidification enacted by first generation migrants likely do have the potential to become the foundation for identity constructions amongst later descendant generations that mark migrant communities as something unique and different than home communities.

Diasporic Chinese foodways

A number of recent studies have explored the connection of food, identity, and migration specifically amongst Chinese populations, and a brief review will provide context for the

chapters that follow. Three edited volumes figure prominently in this literature, and they bear special attention.

The first, Wu and Tan's (2001) *Changing Chinese Foodways in Asia* is concerned with the role Chinese food practices play in the creation and maintenance of multiple regional and ethnic identities in China, Hong Kong, and other locales in Southeast Asia. The chapters highlight the cultural and culinary diversity in China, and provide case studies on changing food practices in response to globalization, modernization, and migration in a variety of contexts including a village in the Pearl River Delta (Jianling 2001), in both Hakka and Chinese restaurants in Hong Kong (Cheung 2001; Tam 2001; Wu 2001), and in several other nearby countries. While this volume engages with the movement of Chinese food and people throughout Southeast Asia, it is primarily concerned with how Chinese foodways are practices in a variety of contexts within China and several surrounding countries.

The second, Wu and Cheung's (2002) *The Globalization of Chinese Food* emphasizes the movement of Chinese food out of China throughout the Pacific world. The chapters in the volume are concerned with several themes including the historical context of the spread of Chinese food (Ismail 2002; Yifeng 2002; Wu 2002a), the globalization of food practices within China amongst Chinese consumers and migrant populations (Augustin-Jean 2002; Cheung 2002a; Kongshao 2002; Wu 2002b), the localization of Chinese food practices around the Pacific (Cheung 2002b; Fernandez 2002; Tam 2002; Tan 2002), and the creation of restaurants serving Chinese food reinvented for the taste preferences of the host population (Cheung 2002b). As a whole, the volume demonstrates the importance of context and historical particularities in the way that food practices play out on a local level. It also emphasizes food's importance in identity formations and the transnational identities that form through migrants' food practices as they

localize their foodways to create and maintain connections between themselves and both home and host populations.

Finally and most recently, Tan's (2011) edited volume on Chinese foodways in Southeast Asia and beyond has explicitly dealt with the spread of southern Chinese food practices along with migrant populations leaving China. Many of the volume's authors directly engage with the concept of localization (e.g., Pollock 2011; See 2011; Tan 2011; Ying 2011), and the volume as a whole demonstrates many of the contextual factors that constrain and expand migrant food practices. These include local economic pressures that limit food choices, environmental constraints upon what crops can be grown, a variety social and religious pressures including pork taboos amongst host populations, and ultimately population level within migrant communities as it relates to sustaining particular services (stores, restaurants, etc.). The authors stress not only local adaption but also the inherent hybridity in migrant Chinese cuisine, showing how the melding of southern Chinese food practices, local ingredients, and customs entangled both migrant and host via newly emerging foodways. Examples include non-pork versions of dishes that ultimately spread from Chinese migrant kitchens to the broader host population. The works in these three volumes provide the most detailed and visible thinking on Chinese migrant foodways and identity, however a number of individual case studies from them and elsewhere provide more specific examples of the localization of Chinese migrant food practices.

Tam (2002) uses the changing availability of *yumcha* (tea service with *dim sum*) in Australia as an avenue into understanding the localization of Hong Kong migrant culinary practices. Following initial migration from Hong Kong to Australia, migrants did not have access to *yumcha* restaurants and instead made do with locally available ingredients and a few specialty imports from home. Once populations reached a high enough level to support them dedicated

yumcha restaurants began to appear, replete with tightly packed tables and a cacophony of clanging dishes and chopsticks as would be seen in Hong Kong establishments. Hong Kong migrants also used *yumcha* as a way to connect with local Australians, opening up quiet, spacious restaurants that specifically catered to white Australians. Additionally, Tam notes the popularity of *dimsum*, locally available food items that she believes are localized versions of Cantonese *dim sum* transplanted and adapted by 19th-century migrants during the gold rush. While *dimsum* provided options for Hong Kong migrants, they did not fully address the nostalgic longing for the flavors of home because they were not exact matches to the recipes popular there. Finally, she also mentions the recent import of frozen *dim sum*, the most recent strategy in bringing Hong Kong flavors to migrant populations in Australia one only made possible through the ever increasing globalization of food. Tam's work ultimately shows the centrality of *yumcha* to Hong Kong migrant identities in Australia: first, through nostalgic longing for an inaccessible food amongst Australia's early Hong Kong migrants and then as a central component to social life with younger generations who have an easier time accessing *yumcha* restaurants.

Wu (2011) provides a brief history of Chinese food practices following migration to Papua New Guinea. Here, early migrants imported the basic equipment and seeds to begin creating local farms to grow Chinese food crops including cabbages, taro, ginger, and Chinese parsley. They also imported a tremendous variety of specialty products unavailable in Papua New Guinea such as dried mushrooms, dried seafood, bean curd, and Chinese sausages, which also helped to maintain direct connections to home. Papua New Guinea's Chinese migrant population also incorporated a number of new ingredients, including locally available fruit bats and native pigeons which they melded into existing preparations found in Traditional Chinese Medicine practices (Wu 2011:78). Due to low population levels, Chinese restaurants never

opened here, and migrants practiced Chinese cooking in home kitchens; restaurant meals instead became venues for interaction with non-Chinese and opportunities to eat Western food. Chinese migrants in Papua New Guinea based their Chineseness on home cooking and a collection of new and old ingredients that could grow easily in local gardens. In recent years they have been reimagining a stronger pan-Chinese culinary identity by taking newly offered classes in northern Chinese cooking which, interestingly, does not reflect the food practices of Papua New Guinea's earliest Chinese communities.

Other examples of studies examine food and Chinese migrant identities. Tan and colleagues (2015) explore the relationship between daily and ancestral prayer foods and identity amongst Chinese migrants in Malaysia. In this case, Chinese migrants view their daily foods to be similar to what local Malaysians eat while they see the foods they provide for ancestral prayers as traditional Chinese foods. As Tan and colleagues demonstrate, however, there is significant hybridization and localization in the dishes used in both settings. It is clear that Chinese migrant identities and beliefs about food are constructed around the social meanings of different dishes rather than their preparation, and the ways Chinese migrants view daily food as Malaysian and ancestral prayer food as Chinese mirrors the transnational identities of these individuals. Avieli (2005) also explores ritual food consumption amongst a Chinese migrant community, in this case Chinese residents in Hoi An, Vietnam. Here, during festivals Chinese cooks prepare a mixture of Vietnamese foods and dishes from China including roasted pig and *bao*. Notably, the Chinese dishes that are served at festivals are not actually dishes typically consumed by the Chinese migrants' home population, but instead are well-known pan-Chinese dishes that have been popularized at a national or international level. Avieli argues that this culinary pattern highlights the complicated transnational identities generated through migration,

and citing Hobsbawm (1983) she casts the consumption of pan-Chinese dishes over those of home village/regional origin as an intentional creation of Chinese migrant culinary identity which privileges belonging to a pan-Chinese community over any individual regional or ethnic differences present in the population. Here, migrants straddle both local and home identities through food, however the home identity migrants perform (at least in festival contexts) is an invented pan-Chinese identity that serves in part to mask internal difference.

As demonstrated from the above examples, there is no single story for the localization of Chinese migrant cooking practices and their connections to identity. However, there are general trends and as Pilcher (2006b) has argued the prototypical transplantation of Chinese cooking begins with initial farming of staple crops and the importation of ingredients not available locally, followed by the opening of specialty stores and restaurants once population levels reach a high enough number. Migrants employ a wide range of strategies during localization to meet their culinary needs, and they frequently reinvented dishes and create hybrid forms of cooking through exchange with host populations. Pollock (2011) has argued that the effects of localization of Chinese cooking throughout the Pacific world has made great contributions not only to individual dishes and cuisines, but also to the culture of cooking and eating; in particular, she argues that the process of migration helped spread Chinese notions of meal structure and commensality to numerous countries in the Pacific. While Pollock's argument is a bit Chinese-centric, it does highlight the entangled nature of migration and the effects it has on both migrant and host food practices. Localization has also resulted in the creation of numerous local Chinese cuisines throughout the Pacific world (Tan 2011; Wu 2002) as well the spread of creolized dishes, such as a variety of different kinds of *laksa* (e.g., Tan 2011b). Both Tan (2011a) and Wu and Cheung (2002) point out that different Chinese ethnic groups populated different areas,

specifically Hakka primarily in South Asia and Cantonese in Australia and the United States (see Chapter Two). This further contributes to variety in the localization process, the ways that individual Chinese populations have adapted their foodways to local conditions, and the nature of connection and trade of valued food items from home.

Archaeological Approaches to Food and Identity

Archaeological approaches to the relationship between food and identity vary greatly, but recent work has approached the topic in a number of nuanced ways (e.g., Silliman 2004; Trigg 2004:126-130; Twiss 2007; Voss 2008a). Many of these studies focus on colonial settings (e.g., Dawdy 2010; Dietler 2007; Silliman 2009; Stahl 2002), and archaeologists have explicitly attempted to break away from acculturative models that dichotomize continuity and change and ignore the hybridity that often occurs in colonial contexts (Dietler 2007:225; Silliman 2009; Voss 2005:424). In these cases, changes in food practices are not taken as evidence of either culture loss or culture maintenance as they would be in acculturative studies (e.g., Diehl et al. 1998; Piper 1988), but instead serve as entry points into understanding the complexity, hybridity, and entanglement inherent in colonial settings. These same ideas can be extended to understanding transnational identities and their influence on migrant food practices, though transnational approaches to archaeology are in many ways still in their infancy (though see Brighton 2009; Ross 2013a; Voss 2016).

Archaeologists have also drawn on food as a key avenue through which to understand the processes behind social differentiation in the past (Hastorf and Weismantel 2007). Twiss's (2007) edited volume *The Archaeology of Food and Identity* presents a number of chapters dealing with the subject, and it highlights the variety of approaches used in studying food and

identity in archaeological contexts. The volume demonstrates the wide array of analytical techniques used by archaeologists to study food including ceramics, faunal and floral remains, and paleofeces analyses. It also highlights several broad trends in research questions including interest in class difference and social change (Scott 2007; Thomas 2007), dichotomies of feasting and daily meals, and food consumption at multiple scales including household and community. Other recent volumes also explore similar threads, though none as explicitly as Twiss'. Graff and Rodríguez-Alegria's (2012) *The Menial Art of Cooking* explores the often unappreciated and under-theorized role of cooking and food preparation (as compared to consumption) in archaeological interpretation, and chapters explore topics including differential butchery practices within a community along ethnic lines (Stein 2012), the role of the cook in the creation of dishes and ultimately community identities (Hastorf 2012), the creation of recognizable cuisines (Chase 2012), and the importance of individual agency in the generation of cooking traditions and community cohesion (Pezzarossi et al. 2012). In other works, Warner (2015) uses faunal data to show how African American families in Annapolis and the Chesapeake used food practices to maintain their autonomy in the face of oppressive racism despite engaging in broader consumer culture. Frantzen (2014) has drawn a wide array of material culture and documentary resources together to illustrate the role that everyday food has in creating social identities at all levels of Anglo-Saxon culture in the Middle Ages.

Some additional case studies have explored food and its relationship to different aspects of identity in archaeological contexts, particularly in colonial settings. Scott's (1996) work at Fort Michilimackinac in northern Michigan has shown distinct faunal signatures correlating to differences in diet amongst the fort's Native, French-Canadian, British, and Jewish inhabitants. Scott's identification of a shift away from pork consumption through time in faunal remains from

a Jewish trader's household is intriguing, and it highlights the potential for archaeology to identify not only difference in food practices but also shifting change through time. Trigg (2004) has made a similar argument about the Spanish use of chili peppers as a substitution for expensive black peppercorns in colonial Spanish sites in North America; for Trigg, this substitution allowed Spanish colonists to enact familiar food practices from home with only minimal changes, thus allowing them to construct and maintain a distinctly Spanish colonial identity. Finally, Bowen and Andrews (2000) illustrate how Jamestown residents feasted upon highly valued wild animals until the "starving time" occurred and they were forced to turn upon their pets, horses, and each other. While potentially seen as opportunistic use of local resources, food consumption in Jamestown had profound class implications as the animals being consumed initially (dolphins/porpoises, deer, etc.) were considered to be solely within the domain of elites in England; by consuming these animals in North America English colonists were able to attain upward mobility via food practices.

Likewise, populations on the receiving end of colonialism have also been subject to frequent archaeological inquiry. Sarah Kennedy and VanValkenburgh (2015) have shown how food practices amongst indigenous Peruvians changed following the Spanish Invasion, with native Peruvians in *reducción* villages incorporating a number of Eurasian animals into their diets and focusing more on cooking and food collection strategies that were less time-intensive than indigenous Peruvian techniques. Likewise, Jamieson and Sayre (2010) explore the adoption of barley by indigenous people in Riobamba following the arrival of the Spanish. While barley is not an indigenous crop, it was widely adopted in some contexts, and Jamieson and Sayre argue that its adoption was contingent on three factors: the familiarity of cooks with its culinary properties, its ability to increase crop yields, and, most importantly, its ability to slot into existing

culinary models. In this case, barley could be readily absorbed into the cooking methods of indigenous people without upsetting other important cooking and social practices. Similarly, Lightfoot and colleagues (1998) have examined food consumption using a model of daily practice to demonstrate how local Pomo women and Alaska male seal hunters negotiated foodways within multiethnic households through faunal evidence from Fort Ross in coastal California. This work ultimately shows that Pomo women prepared new foods such as cattle and seals though they dealt with them by using Pomo butchery and cooking techniques, thus creating a hybrid approach to these foods.

As in the broader literature exploring food and identity, archaeologists have identified a number of dividing lines in studies examining differentiation via food. These include sex and gender (e.g., Brumfiel 1991; Frink 2007; Wadley 1998), politics (e.g., LeCount 2001; Lewis 2007), power (Gifford-Gonzalez and Sunseri 2007; Koch 2003; Scott 2007; Wesson 1999), class (Goody 1982; Peres 2008), and race and/or ethnicity (Cheek and Friedlander 1990; Crabtree 1990; Gust 1993; Phung et al. 2009; Stein 2012) among others. Acknowledging this diversity allows food practices to be seen as flexible ways of enacting ever-changing notions of identity and relative place within a broad and inter-connected social world. It also speaks to the many simultaneous roles that food plays within the construction of (often multiple) identities. In a distinct but related vein, Curet and Pestle (2010) have made efforts in codifying ways to identify high status foods in the archaeological record via scarcity and other attributes, making identification and quantification of high status food items an avenue through which to explore community difference. This and similar approaches are particularly popular amongst archaeologists due to the resulting material difference that often emerges from the production of two different cooking styles, especially ones with different butchery, preparation, or service

methods. However, it should be noted that assuming differences in food remains always correlate to differences in identities is dangerous, especially given the previous discussion of the localization of migrant foodways.

Relatively few archaeological studies have directly addressed the food practices of migrant populations outside of colonial settings, and when they do, they do not typically engage in broader discussions of food, migration, and identity. Several studies have addressed changing food practices amongst Irish migrant populations, demonstrating a slow but identifiable shift over time from heavy pork consumption typical of 19th-century Ireland to a meat diet consisting predominantly of beef and lamb and resembling that of non-Irish New Yorkers (Brighton 2009; Milne and Crabtree 2001). Likewise, there are several Italian migrant case studies centered in New York. Fitts (2002) argues that Italian migrant meat diet leaves an identical signature to other European-style food systems, and that (following Schulz and Gust 1983:51) food practices in European migrant contexts is limited more by access to food items than by cultural preferences for particular ingredients.

Setting the Table

This chapter has explored linkages between food and identity within migrant communities, and the rest of this dissertation explores this topic in the context of 19th-century Chinese migration to the United States. This project focuses specifically on the Market Street Chinatown, the home of a thriving Chinese community in 19th-century San Jose, California. As will be discussed in Chapter Four, the Market Street Chinatown was excavated in the 1980s following heritage activism by San Jose's Chinese community that prevented the destruction of the archaeological remains of the site (Lum 2007). My dissertation project is one of several

studies involving specialist analyses under the umbrella of the larger Market Street Chinatown Archaeological Project (MSCAP), a collaborative, community-based research and education program established by the Chinese Historical and Cultural Project (CHCP), History San Jose (HSJ), Environmental Science Associates (ESA), the Stanford Archaeology Center, and the Stanford University Department of Anthropology (Voss et al. 2013). As an Affiliated Research with the MSCAP, I have kept a collaborative focus at the heart of my dissertation.

Throughout project planning, I participated in multiple meetings and public events with members and leadership of CHCP (a Chinese heritage organization founded to tell the history of the Chinese in San Jose), employees of HSJ (a nonprofit historical and cultural heritage organization), Rebecca Allen of ESA (a for-profit company providing archaeological services), and Barbara Voss of Stanford University (Principal Investigator for the MSCAP). The dialogue that developed around these relationships helped generate several research questions that ultimately drove my project in new directions. My participation in a MSCAP workshop in September, 2012 commemorating the 10th anniversary of the MSCAP (Voss et al. 2013) was particularly important. During this event, I spoke with leaders and members of the MSCAP partner organizations about the nature of zooarchaeological data, the kinds of questions zooarchaeologists often ask, and the kinds of research questions the MSCAP member had interest in that zooarchaeological data might be able to address. Through conversation, it became clear that many of those present had interest in the medicinal and symbolic values of food, the relationship between changes in food and ethnic identity, and the geographic origins of the faunal remains I had put on display. These themes came up again in public conversation at the close of the event as well as in other meetings with MSCAP project partners, and these discussions led me to incorporate them as major research foci in this project.

I have also had countless discussions and meetings with Barbara Voss in her role as Principal Investigator of the MSCAP. Although many of these conversations dealt with the methodological hurdles of working with a previously excavated collection, the most formative concerned the theoretical underpinnings of my study and the future direction of the subfield generally referred to as Overseas Chinese archaeology. In particular, Voss' push for a multidisciplinary and transnational approach to the archaeological study of Chinese migration (alongside conversations following similar lines with Kelly Fong, Douglas Ross, and others) encouraged me to begin incorporating these ideas into my own work. I also met regularly with Rebecca Allen of ESA, who encouraged me to incorporate, amongst other things, comparative analyses in my work; while I did not go as far along this road as Allen recommended in relation to other North American archaeological projects, these discussions laid the foundation for my efforts to compare Chinese migrant and Chinese home village food practices. Discussions with Connie Young Yu, a historian who has written about the history of San Jose's Chinese communities (Yu 2001), helped bring the Market Street Chinatown to life in ways that reading books and articles never could. Yu also drew on historical and familial knowledge in our conversations about food practices, and she simultaneously normalized Chinese food practices and gave me insight into the practical nature of 19th-century Chinese food practices as they related to, for instance, incorporating new ingredients.

This dissertation has also been influenced by several important research collaborations, most notably my partnership with paleoethnobotanist Virginia Popper. Early in project planning, my involvement in a botanical pilot study using soil samples from the Market Street Chinatown (Cummings et al. 2013) quickly made me realize the importance of plant data in any discussion of food practices at the site. I ultimately contracted Popper to analyze additional macrobotanical

remains from the Market Street Chinatown after being awarded funding from the Wenner-Gren Foundation for Anthropological Research, and I received the resulting technical report in 2015 (Popper 2015). Popper's emphases on the diversity of the agricultural practices of Chinese migrants, the import of a tremendous variety of Asian taxa, and multiple roles of plants in Chinese migrant daily life led me to more fully consider these same issues in relation to animals. Although Chapter Eight presents the results of our work on the Market Street Chinatown, we continue to explore similar themes in several ongoing collaborative projects.

My participation in the Chinese Railroad Workers in North America Project (CRWNAP) also heavily influenced my thinking. Headed by Gordon Chang and Shelley Fisher Fishkin and based out of Stanford University, the CRWNAP is a multidisciplinary collaboration between Asian and North American scholars to study the important role that Chinese railroad worker played in building the Transcontinental and other railroad lines in 19th-century North America. I first became involved in the CRWNAP when I was invited to participate in an October, 2014 workshop organized to explore the extent of archaeological knowledge of Chinese railroad worker sites. This workshop ultimately led to the creation of the CRWNAP Archaeology Network (headed by Voss) and the publication of a 2015 thematic issue of *Historical Archaeology* focusing on Chinese railroad workers, in which a version of Chapter Five appears. I was also fortunate to be invited to participate in a CRWNAP-sponsored conference on Chinese railroad workers at Sun Yat-sen University in Guangzhou, China in October 2014. During the conference, Barbara Voss, Kelly Dixon, and I presented what we believe to be the first historical archaeology papers given in China (Voss 2015b), and we made several important research connections. In particular, we toured rural Chinese *qiaoxiang* (home villages) including Cangdong Village, where Selia (Jinhua) Tan of Wuyi University directs the Cangdong Village

Project, a historic preservation and research project focused on rural life in Guangdong. This visit developed into a formal research partnership between the CRWNAP and Wuyi University, and I participated in a subsequent research trip to Cangdong Village and Overseas Chinese-related museums and other resources in November 2015. These trips demonstrated to me the diversity of food practices in Guangdong, the incredible variety of preserved foods that could have been shipped to the United States in the 19th-century, and the stark contrast between the food of rural Chinese villages and the urban Cantonese cooking most often presented as the food of Chinese migrants in archaeological writing. I also had multiple discussions about rural Chinese food and medicine practices with Tan during both of these trips, and our conversations helped highlight to me the vast differences between the food practices of 19th-century Chinese *qiaoxiang* and migrant Chinese communities in the United States.

The above experiences and connections helped shape the orientation of my work, and the dissertation presented here has, I think, benefited greatly from them. The following chapters present my current thinking on 19th-century Chinese migrant foodways, although I am sure this will continue to evolve in the future, especially as I continue cross-disciplinary collaborations with colleagues in both North America and China. Chapter Two provides a brief review of 19th-century Chinese migration, the food practices Chinese migrants brought with them from Guangdong, and a discussion of the localization of Chinese food practices to the United States. Chapter Three provides an overview of existing archaeological literature on Chinese migrant sites with an emphasis on studies exploring food practices through faunal and floral remains. Chapter Four covers the history of the Market Street Chinatown and associated archaeological work, and presents the materials and methods used in this study including a summary of the features analyzed, an explanation of the zooarchaeological methods utilized, and a presentation

of several overarching questions that guide the chapters that follow. Chapters Five through Eight represent article-length treatments of individual topics and serve to address the research questions presented in the previous chapters. Chapter Five explores the theoretical concept of localization, which I use to guide my understanding of why particular foods may or may not have been eaten by Market Street's residents. Chapter Six presents a broad overview of the zooarchaeological data and explores how the localization of Chinese food practices in California served to create not only new culinary practices but also new senses of self. Chapter Seven draws on fish bone data to better understand how the food practices of Market Street's residents connected them with fisheries throughout the West Coast and in China. Chapter Eight brings together zooarchaeological and paleoethnobotanical data to demonstrate that the foods eaten in both mixed merchant/laborer households as well laborer tenements in Market Street were, from an archaeological perspective, quite similar; while class-based differences in food practices did exist, shared food practices between these two domestic settings served to reinforce a broad community identity. Finally, Chapter Nine offers avenues for future research based on the findings of this research project.

Chapter 2. Historical Background

This chapter summarizes the movement of people from southern China to the United States, beginning in the middle of the 19th century. First, I describe conditions in 19th-century Guangdong and some of the important push factors driving large numbers of people to migrate to other parts of the world. Next, I discuss the specifics of Chinese migration to the United States from the mid-19th century through the beginning of the 20th century. Finally, I summarize broad culinary trends in 19th-century Guangdong as well as documentary evidence regarding the localization of these practices to California and other parts of the United States.

19th-century Chinese migration

While southern China has a long history of migration dating to as early as the seventh century, out-migration rates increased dramatically in the latter half of the 19th century (Liu 2002:30; Voss and Allen 2008:6). During this period, over 2.5 million people left China and of these roughly 370,000 arrived in the mainland United States (Liu 2002; McKeown 2004; Takaki 1998:32). The vast majority of these migrants arrived from Guangdong province in southeastern China, home to the port city of Guangzhou (known in English as Canton). While migrants arriving in the United States came from throughout Guangdong, around 80% were from the Siyi district southwest of Guangzhou (Figure 2-1; Hsu 2000; Lai 2004; Voss and Allen 2008:6). This district included Taishan County which contained the many villages from which the majority of Chinese migrants to the United States came (Hsu 2000). The remainder of Chinese migrants left primarily from the Sanyi district or from Zhongshang County, which were surrounding and just south of Guangzhou respectively. While the majority of Chinese people coming to the United States were Taishanese in origin and thus the study of Chinese migration may be viewed as the



Figure 2-1: Map of China highlighting the location of Guangdong Province in yellow and the city of Guangzhou in red.

study of Overseas Taishanese (Hsu 2000), it is important to consider the diverse origins of Chinese migrants whose material traces are potentially present in archaeological contexts. Despite the fact that the vast majority of residents originated from a single province in China, Chinese migrant communities were often not homogenous but instead were socially, economically, and culturally heterogeneous (Praetzelis and Praetzelis 1997: 295). Further, even Chinese migrants hailing from the same region often belonged to different clans and families, and when new arrivals made their way to Chinatown communities, they were often initially

greeted and assisted by people from their own villages or regions who spoke the same dialect that they did (Yu 2001:4). While identifying subtle differences in corresponding regional and local Chinese cuisines may be impossible given the coarse nature of many archaeological methods, the internal diversity present in Chinatowns opens up the possibility of multiple meanings behind and preparations of the same food items by different people in the same community. However, as will be argued below public consumption of shared foodways masked some of this difference and helped members of Chinatowns deal with racially-motivated violence and prejudice through the development a shared community identity through repeated, similar experiences in which food likely played a central role (c.f. Yaeger and Canuto 2000).

There was not a single reason driving all migrants to leave China, in part due the outgoing population's diverse origins, but primarily owing to the turbulent social conditions in the country in the 19th-century. There are several overarching themes that helped lead to the large-scale migration from Guangdong to destinations around the Pacific world in the 19th century including war, rebellion, famine, and economic depression. By the early 19th century, the power of the ruling Qing Dynasty (1644-1911) had begun to decline, due in part to both internal fracturing and series of external pressures from foreign powers. The British Opium Wars (1839-1842, 1856-1860), the Taiping Rebellion (1851-1864), and the Punti-Hakka Clan Wars (1855-1867) all took their toll on the Qing Dynasty's ability to maintain control over China, particularly the southern reaches of the country including Guangdong, as did general resistance by people within Guangdong province itself. The region was also subjected to increased taxation, local warfare and violence, famine, and other hardships that were the result of both governmental crackdowns and increased governmental disorganization (Lawton 1987:159; Voss and Allen 2008:9). These problems were compounded by two important factors: a tripling

in China's population between the early 1700s and the middle of the 1800s (Spence 1977) and a general shortage of arable land in Guangdong (Hsu 2000:21). These two points combined for even greater effect in Taishan County, where people had less than half the land per capita needed to grow enough food for "bare subsistence" given 19th-century population levels (Hsu 2000:21). Without adequate ability to produce enough food for their own survival, many in Taishan County supplemented their agricultural produce with imported food purchased from profits they made working additional jobs. In these contexts, migration was a valuable strategy for increasing the financial resources and well-being of families, and clans and familial relationships became a primary source of protection and support against economic uncertainty. Clan and familial connections also helped to solidify relationships that would structure subsequent family and clan-based work groups among overseas migrants (Hsu 2000; Lawton 1987:159; Liu 2002).

It would be wrong, however, to characterize violence and poverty as the sole driving forces behind migration from southeastern China. Guangdong's port of Guangzhou (Canton) was the only port open to American trade vessels following the Treaty of Wang Hya in 1844, and Chinese people even in rural areas of this region gained valuable experience in dealing with Westerners and international markets (Liu 2002: 26). Guangdong as a whole was also one of the richest agricultural regions in the country and its farmers enjoyed a degree of upward mobility not typically found in other regions of China. Even in Taishan County, the arable land was relatively productive and capable of producing a wide variety of vegetables (Hsu 2000), however the topography severely limited the total amount of land that could be productively farmed. Residents of Guangdong also had relatively high literacy rates and, in many cases, the motivation to improve social standing as well as the personal or familial economic resources necessary to raise the \$40 passage fee needed to sail to the United States (Lawton 1987:143; Liu 2002).

Immigrants from China were, more often than not, not the poorest of the poor: they had the money, connections, and motivation to seek new opportunities in new places. The role of village and kinship networks in creating these opportunities cannot be understated, and related institutions made possible not only the mass migration of Guangdong Chinese, but also their economic success around the Pacific world (Hsu 2000). In addition to potentially gaining personal and familial wealth, Chinese migrants abroad often financially supported families at home and were responsible for funding many public works projects including the construction of roads, schools, hospitals and other infrastructure (Dehua 1999:28-29; Hsu 2000:40-54; Voss 2012:183). The strong connection between migrants with family and home villages led to their leading transnational lives, as they simultaneously lived in North America, while also maintaining sustained, meaningful relationships with communities in China (Hsu 2000). These strong connections to home have led to Chinese migrant communities being stereotyped as insular and unwilling to assimilate with broader American culture, though connection to home and experience of a transnational life is in no way unique to Chinese migrants. Further, the propensity for Chinese migrants to return home after working for a period in the United States has led to the classification as “sojourners,” however it is important to note that return rates amongst Chinese migrants were comparable to those for European migrant populations (Liu 2002; Takaki 1998:11; Yang 1999:62). This categorization is instead directly related to the stereotyping of Chinese migrant communities as forever foreign and unable to assimilate in the same way European migrants were seen as doing (e.g., R. Lee 1999; Lowe 1996).

As mentioned above, migration was often a clan- or family-driven enterprise that took advantage of the importance of these already existing relationships. Merchants and other successful migrants passed along information about new opportunities and often encouraged

their kin to join them, sometimes even paying their way to their new homes and jobs in the United States (Liu 2002:29). Chinese cultural institutions such as the Six Companies and Chinese labor contractors also paid to bring Chinese laborers to the United States, often subsidizing and maintaining work groups from the same family, clan, or village (Wormser 1987:183). These individuals would work a set amount of time for labor contractors to pay off the cost of their debts, and the labor contractors would in turn “hire” the workers out to local or regional businesses, such as various farms within California’s agricultural industries. This labor system set up unique residency patterns in which some workers spent time in Chinatowns only between jobs, on weekends, and during festivals or holidays (Voss 2008). Once free of debt requirements, Chinese migrants continued to draw on these networks for support and, especially as anti-Chinese sentiment rose in California and elsewhere, protection. Chinese migrants in the United States found themselves employed in a number of different jobs and industries, and they frequently worked as miners, railroad workers, farmers, personal servants or chefs, or in the service of local Chinese-run business such as restaurants or laundries (Spier 1958a).

Community life for Chinese migrants in the late 19th century was quite different than that in southern China. Though Chinatowns were found in many urban centers in California, migrants’ labor requirements often took them out “into the field” for much of their time. The populations of a Chinatown would often swell over weekends or during holidays, with stores, restaurants, and other available spaces converted into living quarters for the many workers on break (Chen 2014; Voss 2008:44). Chinatowns served as hubs of Chinese-owned businesses, and aside from owning stores and restaurants many merchants in these communities also functioned as labor contractors who organized the efforts of other community members (Wormser 1987:183). Chinese migrants could also buy meat, produce, and a variety of material goods as

well as specialty items imported from China in these communities as well. Perhaps one of the most striking characteristics of many, but not all, of these communities was the vastly different gender and age demographics compared to those in their homeland of Guangdong. Chinese migrant populations were dominated by young male laborers, and in 1870 there were 14 Chinese men per every woman and by 1890 the disparity had risen to 28 men per woman (Hsu 2000; McKeown 2004; Voss and Allen 2008:13). Legislation and economic realities prevented all but a few women from more financially secure families from migrating, and large numbers of married Chinese men sent money back to Guangdong to their wives, often referred to as “Gold Mountain wives” (Hsu 2000). The preponderance of Chinese men created homosocial communities in which Chinese men performed many of the day-to-day activities and functions typically performed by women in Chinese society (Voss 2012).

Further, as Williams (2008) has argued, Chinese men were feminized by Anglo observers due not only to their long hair, unfamiliar style of dress, and habit of drinking (quite strong) liquor from dainty porcelain cups, but also because they frequently took jobs undesirable to white male workers such as in laundries and as household servants. With few women in most Chinese migrant communities and many Chinese migrant men having wives and families at home in mainland China, ideas of family/household structure would not have been as relevant in Chinatowns; instead, connections based on broader kin and labor lines would have taken precedence. In this case, kin, village, and labor groups all would have played important roles in forming social connections, but because of their importance in economy and community building the village-based Chinese district associations may have had the most overall influence (Yu 2001; Voss 2008:45). As Voss (2008:44) has suggested, all of these relationships likely affected the spatial organization of Chinatown communities in various ways, with individuals from the

same village or clan grouping together within certain areas of a Chinatown and people from individual work groups at times staying in the same business or tenement.

Outside factors also played an important role in the lives of early Chinese migrants in the United States. Numerous pieces of anti-Chinese legislation were passed, particularly in California where the bulk of migrants from China settled (E. Lee 2003; McClain 1996). These include the 1875 Page Act barring the entry of Chinese women (under the assumption that they were prostitutes) into the country and the broad-reaching 1882 Chinese Exclusion Act. While these were powerful pieces of legislation, Chinese migrants engaged in an intricate and often successful game of cat and mouse with immigration officials and they were still able to gain access to the United States by skirting this legislation (Hsu 2000; E. Lee 2003, 2006). The most well-known strategy of avoiding Exclusion was the practice of adopting “paper sons.” Under this strategy, Chinese people coming to the United States would, for a fee, claim relation to someone already in the country, memorizing the answers to numerous standard questions about their shared past asked by immigration officials, and ultimately attempting to gain entry under someone else’s name. While this method was fairly successful (due in some part to a lack of competent translators – see Ngai 2010 for an example), it was not foolproof and individuals who could not sufficiently convince immigration officials of their sincerity were sent back to China. As Erika Lee (2003) describes, while Chinese exclusion was enacted at the Federal level, enforcement was the responsibility of local officials; this encouraged the racialization of Chinese migrants through the application of “common sense” standards towards identifying what constituted Chineseness (e.g., Pascoe 2009). Racist treatment of Chinese people also extended beyond entry into the country and included racist rhetoric in popular media (R. Lee 1999; Tchen 1999), conflict centered on competition between Chinese and white laborers (Saxton 1975; Jung

2006), and perceptions of Chinese people as sources of filth and disease (Anderson 1987; Shah 2001). Though anti-Chinese racism occurred from the beginning of Chinese migration to the United States, the situation became more pronounced in California after the completion of the transcontinental railroad in 1869, and the simultaneous economic slowdown in California, which helped to ignite racially-motivated actions (Baxter 2008:31; Saxton 1975). Chinese exclusion went hand-in-hand with growing anti-Chinese sentiment that focused on a broad range of perceived problems with Chinese migrant populations. In addition to government-sanctioned racism, Chinese communities also had to contend with mobs of angry, vigilante United States citizens who attacked Chinese migrants and burned multiple Chinatowns to the ground (e.g., Courtwright 2002; Storti 1991; Yu 2001).

By the latter portion of the 19th century, Chinese district associations had begun to offer protection to their members, Chinatowns became better defended and fortified, some communities even installed their own hydrant systems to guard against arson attacks, and Chinese migrants began to directly challenge racism through legal action and protests (Baxter 2008). Under these circumstances, the built environment of Chinatowns changed and linkages to family, clan, and village once again served as important sources of support.

Aside from racism and violence, opportunity and success was also possible for late 19th-century Chinese migrants in the United States. Chinatown-based merchants and shops thrived, selling Chinese goods, foods, and medicines to community members, while restaurants and businesses such as laundries catered to both Chinese and non-Chinese customers alike. Chinese entrepreneurs started entering the fishing and shrimping industries to feed the culinary desires of migrant Chinese for both fresh and dried seafood in the United States and to export preserved foods back to mainland China (Schulz and Lortie 1985; Bentz and Schwemmer 2002). Chinese

farmers grew a variety of Asian plants for sale to Chinese migrant communities and they also marketed both Chinese and European/American crops to non-Chinese customers as well (Gunther 1987; Kent et al. 1987). Thousands of Chinese laborers also worked on the construction of railroads, especially the Transcontinental Railroad, and many others worked in mining throughout the West. Jobs in these and other industries provided income for Chinese migrants and produced foods and other goods for their consumption, and communities on the whole were prosperous enough to import a wide variety of specialty goods and foods from mainland China (Spier 1958b; Diehl et al. 1998).

19th-century Chinese foodways in Guangdong

The food and cooking practices of 19th-century Guangdong have been explored in numerous scholarly works (e.g., Anderson 1988; Anderson and Anderson 1977; Chang 1977; Simoons 1991). Generally speaking the food of this region was characterized by flexibility and adaptability, owing in large part to the challenge of feeding high populations with relatively limited resources and the consistent exposure to new ingredients introduced through centuries of long-distance trade and migration. This resulted in a food system which utilized a wide variety of plants as well meats including pork, chicken, duck, turtles, shellfish, and fish (Chang 1977:8; Simoons 1991). There were also numerous medicinal and culinary uses for insects and other organisms, as well as ginseng and a wide variety of other plants and herbs. Two notable exceptions were water buffalo and cows, which were too highly valued as draught animals to be eaten with any regularity (Anderson 1988:119-120; Chang 1977). Cooks in Guangdong were especially open to the addition of new, exotic ingredients, particularly in port cities such as Guangzhou which were opened to Westerners following the Opium Wars; this flexibility likely

aided Chinese migrant cooks as they localized their food practices in new places with correspondingly new ingredients.



Figure 2-2: Steamed Cantonese-style Chinese perch with scallions and soy sauce served in a restaurant in Guangzhou, China.

While food practices across Guangdong share many commonalities, as with dialects and ethnic groupings multiple culinary styles exist in the region. The most well-known cuisine of Guangdong is Cantonese cuisine, considered to be one of the major cuisines of China (Chang 1977; Simmons 1991). Cantonese cooking is typified by mild preparations intended to enhance rather than obscure the natural flavors of ingredients, short cooking times to retain the crispness of vegetables, the use of a wide range of ingredients in individual dishes and meals, and a

particularly heavy reliance on salted and preserved fish, seafood, and vegetables as seasonings and ingredients in dishes (Anderson and Anderson 1977:355; Kan 1980; Simoons 1991:54-57). Fish consumption was notably high where fresh fish was available in Guangdong, and inland populations tended to consume freshwater taxa including a variety of farm-raised Asian carp, while coastal populations drew more heavily on a wide range of mild, white-fleshed marine taxa. Core seasonings in Cantonese cooking include soy sauce, fermented black beans, salted seafood products, garlic, ginger, tangerine peel, and sesame oil. Common dishes include stir-fried preparations combining vegetables and smaller amounts of meat, gently steamed fish and poultry, steamed rice accompanied with sausages or salted fish, a wide array of roasted meats broadly labeled as Cantonese style barbeque, and numerous kinds of dumplings and small dishes collectively known as *dim sum* (Figures 2-2 to 2-5). Many more dishes exist including a wide range of soups, but those listed above are common preparations that appear with some regularity in Cantonese restaurants. Cantonese cuisine is also known for its use of a variety of high-priced specialty ingredients, the most notable of which are dried sea cucumbers, shark's fins, and bird's nests, though many others including bear paws make appearances in multi-course feasts eaten by social elites (Anderson and Anderson 1977:373; Cheng 1954; Simoons 1991:428-436). Though other Chinese cuisines have risen in popularity over recent years, gourmets have long considered Cantonese cooking excellent and Cantonese chefs were frequently sought by elites in other areas of China throughout the 19th-century.

Most migrants arriving in the United States would not have been eating high class Cantonese cooking in Guangdong, but instead would have subsisted on of rural versions or closely related regional variations such as Taishanese, Fukkien, or Hainanese (Anderson and Anderson 1977:355-358). Taishanese cuisine, which would have been the home cuisine of



Figure 2-3: *Dim sum* served at a restaurant in Guangzhou, China.

roughly half of the 19th-century Chinese migrants to the United States, gave rise to the highly-adapted *chop suey* that quickly spread and gained popularity amongst 19th- and 20th-century Anglo diners in the United States (Anderson and Anderson 1977:355-356; Liu 2009), in addition to numerous other more highly refined dishes and preparations. Compared to Cantonese cuisine, the cooking in these styles focuses similarly on a diversity of fresh and salted vegetables, pork, poultry, and fish, but non-elite consumption patterns typically include significantly less meat and fewer individual ingredients in individual dishes and meals.

Buck (1956:402) suggests that rural Chinese farmers in the early 20th century could only afford to eat meat sparingly and on rare occasions, and other historical sources confirm this trend (Spence 1977). However, I am aware of no English-language 19th-century accounts that address

rural meat consumption specifically in Guangdong or Taishan. While local land was not as productive as in other areas of China, the remittance payments sent home by 19th-century Chinese laborers often kept families in Guangdong living more comfortable lives than rural populations in other parts of the country (Hsu 2000). It is thus possible that family members of successful Chinese migrants abroad could afford to eat more meat than the average rural Chinese farmer, however the numerous famines and bandit raids targeting food supplies in Guangdong during this period suggest that food, and likely meat in particular, was still limited. Thus, while no hard numbers exist regarding meat consumption amongst the populations from which Chinese migrants to the United States originated, it is reasonable to expect most meals focused more heavily on rice and vegetable dishes and used meat sparingly as a seasoning and on special occasions. This assumption deserves further investigation via archaeological and archival work in the future.



Figure 2-4: Salt fish stand selling Cantonese-style salt fish in Kaiping, China.



Figure 2-5: Salted and cured Cantonese-style meats, including sausages, bacon, quails, duck legs, and chickens in Kaiping, China.

This assumption fits with multiple meals I have eaten prepared by rural Chinese cooks, in which locally grown vegetables feature prominently and meat such as chicken and salt fish is used primarily as a seasoning and only rarely as a standalone dish (Figure 2-6). A special mention should be made of Hakka cuisine, which is notable for an even greater emphasis on quick cooking and ultra-crisp vegetables than that seen in high Cantonese cuisine, as well as a general lack of the use of heavy spices including garlic which are more common in other Cantonese variants (Anderson and Anderson 1977:354, 356). Hakka people are also considered as distinct from the Han Chinese majority living throughout Guangdong (Lai 2004:11-12), and though they also arrived in the United States, the identification of this unique cuisine

archaeologically will be difficult as it uses a similar set of base ingredients as does Cantonese, Taishanese, and other closely related cuisines.



Figure 2-6: Dishes prepared by residents of Cangdong Village, Guangdong, China.

While southern Chinese cooks use a wide range of ingredients and cooking methods, the cuisine follows several broad rules that structure dishes and meals (a la Douglas 1972). Perhaps the most importance of these is the distinction between starchy foods such as rice or noodles, termed *fan*, and vegetable or meat side dishes, termed *tsai* (Chang 1977: 6–7, 10; Simoons 1991). Under this dichotomy, meals are not complete unless they contain both *fan* and *tsai* elements, and in the 19th-century rice or other starches typically provided the bulk of a meal even in upper class homes. This practice was upended in feasts, festivals, and restaurants, where *tsai*

dishes would surpass *fan* dishes in both number and quantity, with rice or other *fan* foods provided at the end of the meal to insure that diners had both a complete culinary experience as well as the opportunity to eat more if they were not full from the more savory *tsai* courses. Beyond the starch/non-starch dichotomy, southern Chinese cooking practices also involved the idea of hot and cold humors intimately connected to the idea of *yin* and *yang*, as well as a rich history of the use of foods for specific medicinal purposes (Simoons 1991; Heffner 2013, 2015). Hot and cold foods allowed diners to address general balance and health through eating, and depending on one's state of health, particular ingredients could be seen as either beneficial or detrimental. In the case of specific-use medicinal foods, either individual ingredients or a combination of ingredients could be prescribed and/or obtained from a Chinese doctor for the treatment of particular ailments.

Localization of Southern Chinese Cooking to the United States

After the beginning of Chinese migration to the United States in the 1860s, Chinese migrants quickly localized aspects of their cuisine to life in California and other areas of the American West. As noted previously, scholars of Chinese cuisine have observed that the spread of Chinese foodways usually involves initial farming of Asian staple crops, followed or paralleled by the creation and maintenance of supply networks for Chinese culinary and medicinal food items, and ultimately the opening of Chinese specialty grocery stores and restaurants (Pilcher 2006b). This pattern broadly describes the adaptation of Chinese foodways in the United States, and the specifics of how this process played out directly affected the ways that Chinese migrants were able to implement their food practices.

By the mid-1800s, Chinese merchants were importing a variety of Chinese foods into urban Chinatowns. Historic ship manifests indicate that although a wide range of ingredients were imported from China to the United States, most were products unavailable in North America; these included tea, soy sauce and other condiments, tofu and various bean curds, Cantonese-style salt fish, myriad salted and pickled vegetables, Chinese cooking oils, and, perhaps most ubiquitously, rice (Coe 2009; Evans 1873; Layton 2002). Rice is particularly noteworthy as California did not have a rice industry until the early 1900s, and thus a continual flow of rice from China to the United States was necessary to supply Chinese with this staple grain (Hettiarachchy et al. 2000). The majority of these goods made their way to San Francisco before being either sold in the city's large Chinatown or re-distributed by Chinese merchants throughout North America to smaller Chinese communities, ensuring at least limited access to valued foodstuffs even in rural locations such as small mining and railroad campsites (Hsu 2000, 2006; Kennedy 2015). Spier (1958a, 1958b) describes the 19th- and early-20th-century food supply of San Francisco's bustling Chinatown, which by the 1880s was the largest in the country with over 20,000 permanent residents.

While likely an outlier compared to the many smaller Chinatowns throughout the West, San Francisco residents enjoyed access to a plethora of imported ingredients such as dried seafood, noodles, dry ducks and other preserved meats, and ginger. San Francisco's Chinese merchants also shipped goods throughout the West, particularly along railroad lines to dispersed Chinese communities and railroad workers themselves as lines began to be constructed to link major markets. Nordhoff (1873:190) describes the goods available for purchase in a supply car run for Chinese workers on the Merced Railroad in California, and the ingredients he notes include:

dried oysters, dried cuttle-fish [sic.], dried fish, sweet rice crackers, dried bamboo sprouts, salted cabbage, Chinese sugar (which tastes to me very much like sorghum sugar), four kinds of dried fruits, five kinds of desiccated vegetables, vermicelli, dried sea-weed, Chinese bacon cut up into salt cutlets, dried meat of the abalone shell, pea-nut oil, dried mushrooms, tea, and rice. They also buy pork of the butcher, and on holidays they eat poultry.

Even in Chinese communities not directly linked by rail such as rural mining and farming communities, Chinese consumers still found ways to access prepared Chinese-style foods such as sausages, hams, and salted vegetables. In the case of Chinese farmers in the California Mother Lode, Van Bueren (2008) describes a Chinese cook's 1857 ledger containing notations for ingredients to be ordered including salt fish, rice alcohol, ginger, citrus peel, rice noodles, mung beans, and black fungus. While accessing a wide variety of familiar Chinese ingredients would have no doubt been easier in large, urban communities (and especially in San Francisco), even rural Chinese communities in the United States had at least sporadic access to imported goods. However, life in rural communities would have required more frequent adaptation and substitution in cooking than in large, urban Chinatowns, making it more difficult to fully transplant the cuisines from home in these contexts.

Numerous firms and shipping houses in China contributed to the movement of goods to and from North America. As Hsu (2000, 2006) has described, there were two primary kinds of shipping firms operating in Guangdong: *nanbeihang* (north-south firms) which moved goods from northern to southern China, supplying Guangdong with products which could not be produced locally; and *jinshanzhuang* (gold mountain firms), which shipped goods from Chinese shipping ports such as Guangzhou and Hong Kong to customers in North America and

elsewhere. Acting together, these firms facilitated the supply of goods from throughout China to customers overseas. They often also handled the shipment of money from Chinese migrants abroad to their families and villages at home in China, and the bi-directional movement of people, goods, money, and communication created by this exchange provided day-to-day transnational connections between Chinese migrant laborers and their homeland in China. This connection in turn allowed for the formation and maintenance of transnational migrant identities rooted both in the home village as well as in Chinese communities in the United States. This was constantly reinforced as migrants' labor allowed them to help support families and home villages, while also keeping themselves supplied with valued material goods from China that they could not procure locally in the United States. Imported foods further reinforced this connection, allowing migrant Chinese to enjoy familiar flavors and nostalgically remember home in the intimate and culturally-charged setting of communal meals.

In addition to importing finished food products, Chinese migrants also invested in the creation of a number of food-based industries to produce a variety of food items made from the natural resources available in North America. Within Chinatowns and in nearby surrounding agricultural lands, Chinese migrants planted Asian crops and also raised pigs and poultry (e.g., Chan 1986:86; Honeysett 1982; Honeysett and Schulz 1984; Lawton 1987; Peabody 1871:660). Transplanted crops such as radishes and a variety of leafy green vegetables were raised in "truck gardens," which were small gardens dedicated to growing vegetables for sale in market or door-to-door by vegetable peddlers (Chan 1986; Honeysett and Schulz 1984; Spier 1958b:81). An archaeologically-recovered tin containing thousands of white cabbage (bok choy) seeds from the Riverside Chinatown outside of Los Angeles demonstrate that seeds were imported in bulk for local farmers (Kent et al. 1987), and Chinese vegetable growers also grew a wide variety of

Western vegetables that were sold by vegetable peddlers to both Chinese and Anglo customers (Gunther 1987). While English-language documentation rarely notes additional Asian plant taxa grown in the United States, archaeological evidence has demonstrated many other imports including a variety of squashes, gourds, and melons, flowering plants, and others; these will be discussed in more detail in the following chapters.

Likewise, Chinese communities raised animals for consumption, especially pigs and chickens which could easily be raised in urban environments and fed with a wide range of food waste (Langenwalter 1987; Peabody 1871:660). Multiple accounts document the presence of these animals in Chinese communities and they were often viewed by Anglo-Americans as health nuisances (Shah 2001; e.g., *Sacramento Daily Union* 1882). This did not stop Chinese merchants from selling pork to both Chinese and Anglo customers at market, though 19th-century newspapers record frequent complaints about the quality of Chinese-produced pork (*Daily Alta California* 1888a). It is unclear if these complaints have a basis in reality or if they were simply racially-motivated attempts to smear the reputation of Chinese pork sellers (*Daily Alta California* 1886, 1887a, 1888b). Regardless, Chinese pork producers in San Francisco became successful enough that by the late 1880s they had a major share of the supply of pork to the city (*Daily Alta California* 1887b; *San Francisco Call* 1890).

The raising of chickens and other poultry by Chinese migrants is less well-documented, though the presence of multiple Chinese meat sellers in San Francisco (Farwell 1885) and San Jose (Yu 2001) and the ease of and propensity for small-scale raising of a variety of birds including chickens, ducks, and pigeons across the 19th-century United States, suggest that it would be surprising if this was not common practice either in or nearby larger Chinese communities. The remains of bird shells and chicken long bones with medullary bone, a calcium

deposit in egg-laying female birds, in the Market Street Chinatown collection provide evidence for the keeping of chickens either in or near the site. This will be discussed in more detail in Chapter Five. Likewise, I have identified egg shell and chicken remains with medullary bone in the Aspen Section Camp, a 19th-century Chinese railroad workers campsite in southwestern Wyoming, suggesting widespread raising of these birds by Chinese migrants (Kennedy et al. N.D.). Archaeological and historical evidence suggests the raising or keeping of live fish by Chinese migrants in several contexts in North America. By the turn of the 20th century, Chinese restaurants in urban centers often featured live seafood tanks (e.g., *San Francisco Call* 1897) which were supplied with fresh fish from a variety of sources including Clear Lake in California (Davis 1963). Though I could find no mention of this practice at earlier dates in restaurants, archaeological evidence from the Donner Summit Chinese railroad workers campsite suggests that Chinese workers may have been storing and/or raising live fish in the 1860s in a purpose-built pond near their camps (Baxter and Allen 2015).

In addition to growing transplanted crops and raising animals, Chinese migrants also localized several food-driven extractive industries to North America. The most notable and widespread of these was the Chinese fishing industry, which produced tremendous amounts of salt fish for consumption in Chinese communities and export to China as well procured fresh fish to sell in nearby communities as fresh local catch. This industry is the subject of Chapter Six. Other extractive industries transplanted to North America include the closely related shrimp and abalone industries which utilized both meats and shells from these animals, seaweed harvesting industries along the West Coast (Young 2002), the collection of North American ginseng plants for export (Carlson 1986), and hunting of bears for paws and other valuable parts such as the gallbladder. While a portion of the food produced in these industries was consumed by Chinese

migrants in the United States, much more was intended for shipment to China, where it sold as alternatives to Chinese-sourced ingredients that had been under intensive collection and population pressure for quite some time (e.g., Carlson 1986; Collins 1892). The production and export of these goods provided financial opportunity for Chinese entrepreneurs and also kept Chinese communities linked through shared culinary practices; goods were produced and shipped between communities as well as to China, contributing to the transnational, bi-directional flow of things and people.

Chinese migrants also opened restaurants and dedicated specialty stores in the 19th-century United States, particularly in larger Chinatowns in urban centers such as San Francisco and San Jose. Restaurants in Qing period China served as meeting and socializing places, and rich and poor alike could purchase prepared food and meals at established catering to all social and economic levels of Chinese society (Spence 1977:289-290). Restaurants in Chinese migrant communities continued to play a similar social role, especially since restaurants often had more space than cramped tenement boarding houses and stores which many merchants and their families and workers called home. The service of both tea and food in restaurants provided a backdrop for numerous kinds of social gatherings (Chen 2014; Peters 2015). As Chen (2014:89-90) notes, large Chinatowns in essence served as “food towns,” providing meals not only for the residents of these communities, but also for the many laborers who would return to them on weekends and holidays when they were not working. Many Chinatown tenement boarding houses offered meal plans and served food to Chinese laborers who called them home (Xia 2001), and other returning laborers chose to take advantage of similar offers of meals and lodging made by restaurants (Chen 2014:90).

Due to the frequent importation and local production of Chinese ingredients, many Chinese restaurants in the 19th-century United States had everything they required to produce a wide range of dishes commonly found in the cuisines of Guangdong (Coe 2009:122-123). While Chinese migrants hailed from several regions of Guangdong, the variety of food served in these restaurants does not seem to have reflected that diversity. Instead, most restaurants in San Francisco and other Chinese communities served primarily Cantonese or Taishanese cuisine (Coe 2009; Kan 1980; Liu 2009), which would have been most familiar to the majority of Chinese migrants who were from Taishan County. This likely relates to general patterns found in immigrant foodways where population demographics determine the style of cuisine served in restaurants and specialty groceries in migrant communities, and it has two important implications. First, Cantonese or Taishanese cooking seems to have become the dominant cuisine of many American Chinatowns, at least in public and restaurant contexts. Second, and directly related to the previous point, Cantonese and Taishanese cuisines became a marker for emerging pan-Chinese migrant identities as they provided the foundation for the majority of feasting and everyday meals eaten in restaurants. In this way, in public and group meal contexts Cantonese and Taishanese cooking came to serve as the default shared cuisine that cross-cut intracommunity differences in regional origin.

Home cooked meals, on the other hand, would have provided opportunities for Chinese migrants to prepare dishes from regional cuisines as well as less intricate home-style dishes. In contrast to restaurant dining in 19th-century Guangdong, home cooking tended to include a lower number of ingredients, use meat sparingly and as a seasoning, and focus much more on *fan* meal components such as rice than on the flavorful *tsai* dishes (Simoons 1991). These patterns would have been more apparent in poorer kitchens, however, even elite home cooking typically

practiced frugality in cooking and eating as it was considered an ideal attribute outside of feasts and dining in restaurants. In Chinese migrant communities, wealthier merchants and their families would have likely been able to more easily cook their preferred dishes in their homes if they chose to do so. In contrast, laborers were often financially or logistically limited and they may not have always enjoyed this luxury. This is particularly true for laborers who bought into tenement housing meal plans, and they would have been limited to primarily Cantonese and Taishanese food provided to them in tenement housing buildings and restaurants. New evidence from historical documents related to the Market Street Chinatown reveals that at least some laborers living in tenement housing regularly cooked their own meals, however, suggesting that the food practices of Chinese migrant laborers were not limited to cheap, low-cost meal plans (Barbara L. Voss 2016, pers. communication).

To meet the demand for culinary and medicinal ingredients, Chinese merchants opened numerous specialty stores in the 19th-century United States. These stores provided a wide range of prepared products from both China and North America, and they frequently sold dried and salted seafood products, salted and pickled vegetables, myriad condiments, rice and dried noodles, and numerous specific-use ingredients for the production of medicine (Bowen 2002; Spier 1958a, 1958b). Larger Chinese communities enjoyed the services of multiple such stores specializing in different kinds of goods, and unlike Chinese restaurants, which tended to be unprofitable in rural locales, specialty stores were able to survive with fewer customers and thus offered services to Chinese consumers outside of major population centers. One example is Kam Wah Chung, an 1870s Oregon Chinese medical clinic and general store that served Chinese migrants living in nearby areas. Besides providing access to valued food items, this store and others like it sold other imported goods, including ceramics, clothing, and cooking utensils. They

also facilitated connections between rural Chinese populations and home, serving as go-betweens in the shipment of mail and money to families in home villages (Hsu 2006). Due to the nature of supply and limited shelf life of some goods, rural specialty stores would have provided a less diverse collection of products than would those in urban communities.

Chinese migrants in the 19th-century United States transplanted aspects of their culinary practices from home in a variety of ways, and broadly speaking residents of large, urban Chinese communities enjoyed easier access to foods from home than did those living in rural locations. However, southern Chinese foodways were never simply mapped directly onto new contexts; instead, numerous compromises, substitutions, and additions were made by Chinese cooks. While many ingredients could be readily imported into the United States, others presented greater challenges. Live fish were not well-suited to surviving the lengthy trip to the United States prior to the invention of air conditioning and faster ships, and thus Chinese cooks turned to new North American species to take their place. Likewise, many fresh fruits could not make the trip without spoiling (though see Coe 2009 for speculation that citrus fruits imported from China in the 1800s may have been fresh) and Chinese consumers quickly began incorporating a variety of locally available fresh berries and other fruits as substitutes and in some cases novel additions (Cummings et al. 2014). Strawberries are particularly notable, and Chinese migrants encountered them in both markets and in agricultural fields they labored in; these fruits were previously unknown in China and they quickly became known as “ground fruit” (Yu 2001). Even when particular classes of ingredients could be imported easily (e.g., salt fish, salted vegetables, etc.), archaeological evidence discussed below suggests that only a limited subset of the greater variety of these foods available in Guangdong was actually exported to the United

States; this would have provided limited options for Chinese cooks and perhaps served as encouragement to substitute local taxa to provide dietary and culinary diversity.

In some cases, new local foods were incorporated directly alongside imported Asian taxa. Perhaps no other example is as striking as the consumption of beef in Chinese migrant communities. Beef was rarely, if ever, consumed in 19th-century Guangdong owing to the importance of water buffalo and cattle as agricultural beasts of burden and their association with several religious traditions (Simoons 1991:303-305). However, archaeological evidence demonstrates that beef was a commonly consumed meat in nearly all 19th-century Chinese communities in North America (see Chapter Three). The incorporation of this new ingredient into culinary practice would have required Chinese cooks to create new recipes and methods to readily deal with its distinct flavor, texture, and cooking properties. The incorporation of beef, as well as other new and novel ingredients, would also have provided a branching off point for Chinese migrant foodways and would have contributed a distinctive feel to the Cantonese and Taishanese inspired pan-Chinese migrant cuisine found in Chinatown restaurants. Just as importantly, beef consumption required Chinese consumers or re-sellers to purchase this ingredient directly from Anglo merchants as beef was not a product produced by Chinese entrepreneurs in the United States. It is interesting to note that while beef in particular directly connected Chinese migrants to Anglo food markets and the Anglo merchants and customers operating within them, it did nothing to combat the stereotype of Chinese communities as insular and resistant to change.

In addition to localization leading to the modification of the individual food items being consumed by Chinese migrants, it also had profound effects on the proportion and quantity of particular foodstuffs eaten as well. Whereas archaeologists and historians have cast the heavy

consumption of pork and fish by 19th-century Chinese migrants as the continuation of traditional southern Chinese foodways (e.g., Diehl et al. 1998; Langenwalter 1987; Spier 1958a, 1958b), this is somewhat inaccurate. While these meats and preparations were certainly common to 19th-century Guangdong, the rural populations from which most migrants originated typically used salted and cured meat sparingly as a seasoning and they rarely ate fresh meat outside of festivals and feasts (Anderson 1988; Anderson and Anderson 1977; Simoons 1991). Instead, the seemingly frequent use of meat in meals across all social classes in Chinatowns and rural Chinese communities in the United States stands in stark contrast to the food practices of most Chinese in Guangdong outside of elite households. This level of meat consumption marked a distinct change in Chinese foodways amongst migrant populations (see Piper 1988 for an Australian case study).

Though the increase in meat consumption has been attributed to the far greater availability of cheap and affordable meat in American markets as compared to their counterparts in Guangdong (Newman 2007), its effects were not simply economic. Instead, heavy meat consumption became the hallmark of Chinese restaurant food in the 19th-century United States, a trend still seen in Americanized Chinese restaurants which serve copious amounts of meat compared to Cantonese and related restaurants in China (Coe 2009). Even more importantly, meat became expected in Chinese migrant cookery. Even though Chinese populations in the United States tend to eat less meat than Anglo-Americans they still consume significantly more meat than people in China do (Newman 2007). Alongside the addition of new ingredients to the diet the frequent consumption of meat became part and parcel of pan-Chinese migrant cuisine in the United States, marking it as different from the foodways of the home country. This has implications for the practice of successful Chinese migrants returning home and maintaining a

life of relative ease using the hard-earned fruits of their labor (Hsu 2000): did heavy meat consumption continue even after returning to Guangdong? No historical English-language source seems to address this question, though future archival or archaeological work may be able to provide an answer.

In addition to the general increased consumption of meat, Chinese migrants could also buy ingredients they could never have afforded in Guangdong. This in part reflects the economic success of migrant Chinese laborers and merchants, who could afford to import specialty items like birds' nests, shark fins, and sea cucumbers from China (Spier 1958a, 1958b). It also results from easier access to ingredients that could be raised or procured in North America, such as chickens, pork, bear paws, abalone, and ginseng. While these ingredients were prohibitively expensive for many consumers in China owing to their limited supply and extreme demand, in North America Chinese consumers faced much less competition for these ingredients as Chinese populations were lower and the ingredients were often not eaten by Anglo diners. In this way, ease of access to valued food items would have allowed some Chinese migrants the opportunity to engage in upward social mobility through their food practices. The trappings of relative wealth were apparently intentionally maintained by successful Chinese who returned home, indicating that migrants viewed this mobility as a way to permanently improve their social standing instead of a temporary perk of life in the United States (Hsu 2000:44). It also suggests strong linkages between food practices and transnational Chinese migrant identities, which simultaneously incorporated conceptions of self as laborers in the United States (upwardly mobile with better food) and members of clans and villages in China (often patrons of village projects and family shrines). In this sense, the success of migrant Chinese and their ability to eat above their previous social standing in China were directly related to their ability to contribute to the well-being of

family members in their home villages and counties. When describing life in the United States, successful returned migrants chose to emphasize the positive (financial success, food, etc.) rather than the harsh realities of life as a Chinese laborer in the American West, which in turn fit neatly with myths of America as Gold Mountain and hopes for further movement up the social ladder (Hsu 2000:44).

While economic and environmental factors directly affected the localization of Chinese cuisines to the United States, cultural pressures did as well. In large part, these were a matter of perception and racism on the part of Anglo observers who characterized Chinese food as either disgusting or exotic. These descriptions particularly centered on Anglo beliefs that Chinese people ate rats, cats, dogs, and any number of other animals considered unfit for human consumption by most Anglo-Americans (e.g., *San Francisco Chronicle* 1876; *Weekly Alta California* 1853; Williams 1849:47-48). While highlighting the supposed disgusting nature of such practices, these stereotypes also had significant political consequences as well; by linking Chinese consumers and restaurants to animals such as rats, Anglo writers could subsequently declare Chinese people themselves as filthy and disease-ridden (Chen 2014:15-20; R. Lee 1999:38-39; Shah 2001). Thus, Chinese food practices (or more appropriately Anglo *perceptions* of Chinese food practices) were directly related to the racialization of Chinese migrants. While it did little to help the image of Chinese people, in some instances the claims made by Anglo writers were patently false as in the case of rats. There has never been evidence for regular Chinese consumption of these animals in North America (though see Simoons 1991:320-321 for discussion of rat consumption in China, and Langenwalter 1987:72-73 for the single archaeological instance of potentially butchered rat remains at a Chinese site in the United States). When confronted with accusations of eating rats and other unsavory animals, Chinese

migrants often took offense as they very clearly realized this was meant as an insult (e.g., C. Lee 1903; Milne 1857). On the other hand, cats and dogs were most certainly eaten in Chinese communities in the United States and butchered remains of both animals regularly appear in archaeological assemblages from early Chinese sites in the West (see Chapter Five). However, the consumption of cat and dog meat was seemingly hidden from non-Chinese observers. Whereas 19th-century Anglo visitors often wrote about Chinese restaurants and occasionally dined in them as a form of culinary tourism (e.g., Berglund 2005; Coe 2009; Peters 2015), few of these accounts make direct mention of dog or cat meat being served in these restaurants. Instead, 19th-century Chinese restaurateurs typically served “safe” versions of food to Anglo visitors and tailored the restaurant experience specifically for these customers (c.f. Peters 2015). Dishes of cat and dog were not served at establishments frequented by Anglo customers, though these dishes could certainly be purchased at specialty restaurants as in Guangdong today. How much this affected Chinese day-to-day culinary practices, if at all, is unclear.

The process of localization allowed Chinese migrants to selectively transplant the culinary practices of Guangdong to the United States. The import of a plethora of preserved foods from China enabled the recreation of many of the flavors of home, as did Chinese efforts to grow and/or produce a wide range of food products throughout North America. Some foods could not be readily imported or grown in the United States in the 19th-century, and Chinese consumers either had to do without these foods or find locally available replacements for them. In other cases, Chinese consumers incorporated entirely new and novel ingredients such as beef into their food practices. Finally, in some cases they used the increased availability of food, and meat in particular, to achieve upward social mobility compared to what was possible in rural Guangdong. Throughout this process, the continued connection created by the movement of food

and other goods, money, and people helped to create and reinforce transnational identities that were built upon Chinese migrants' connections to both home and their lives in the United States. Food played a central role in this process, particularly through the creation of a pan-Chinese migrant cuisine based off of Cantonese and Taishanese cooking. This cuisine not only incorporated new ingredients, but also highlighted more of savory *tsai* dishes, especially those containing meat.

Chapter 3. Historical Archaeology of Chinese Migrants in the United States

Archaeological investigation of Chinese migrant sites began in the 1960s, and by the 1980s and 1990s a unique subfield of historical archaeology focusing on Chinese migrants had emerged. Since that time archaeologists have amassed a considerable body of data from both urban and rural Chinese sites in the North American West. Much of this work has been done under a rubric of cultural resource management (CRM) archaeology, and as such a considerable portion of the data exists in grey literature reports. However, particularly in the last decade, a growing body of peer-reviewed studies have made this work more accessible to those working in academic fields outside of archaeology. Several important reviews have discussed the state of the field and outlined evolving theoretical orientations within it, and this chapter draws heavily on and builds upon them (Ross 2013b; Voss and Allen 2008). The following sections describe the historical origins of Chinese migrant archaeology, broad trends in both site contexts and research questions, and several potentially fruitful future research directions. This review is also limited to sites in North America, though additional Chinese migrant archaeology has occurred in Hawaii, Australia, and New Zealand as well.

Origins of Chinese Migrant Archaeology

The archaeology of Chinese migrants in North America began in the 1960s and blossomed into a recognized subfield by the 1980s and 1990s (Ross 2013; Voss and Allen 2008). The earliest work was primarily concerned with the generation of Chinese artifact typologies and the identification of artifact assemblages indicative of or unique to Chinese migrant sites (e.g., Chase 1976, 2015; Chase and Evans 1969; Felton et al. 1984; Olsen 1978; Praetzellis 1976; Praetzellis and Praetzellis 1979; Pastron et al. 1981). This body of literature made important

contributions to archaeological understanding of the attributes common to Chinese migrant sites, and much progress was made in understanding the origin and trade of Chinese-produced goods, especially ceramics, (Felton et al. 1984) and dietary patterns (e.g., Gust 1993). Early work focused on a variety of site types, including urban and rural Chinatown sites, and case studies include Ventura, California (Greenwood 1976, 1980), Lovelock, Nevada (Hattori et al. 1979), Woodland, California (Felton et al. 1984), Riverside, California (Great Basin Foundation 1987), Idaho City, Idaho (Jones et al. 1979), Tucson, Arizona (Ayres 1984; Lister and Lister 1989; Olsen 1978, 1983), Sacramento, California (Praetzellis and Praetzellis 1981, 1982, 1990; Praetzellis et al. 1987), and El Paso, Texas (Staski 1985). Other early work identified additional site types, such as mining (Greenwood and Shoup 1983; Hardesty 1988; LaLande 1982; Ritter 1986) and railroad (Briggs 1974; Chase 1976; Landreth et al. 1985) contexts. As has been noted by Voss and Allen (2008), the vast majority of these projects occurred as unpublished master's theses or under a rubric of CRM archaeology, and thus exist primarily in technical reports and other grey literature. During this time, the founding of the Asian American Comparative Collection by Priscilla Wegars in 1982 helped support early efforts to standardize archaeological understanding of the kinds of artifacts were present on Chinese migrant sites.

Wegars (1993) edited volume *Hidden Heritage* was the first overview of Chinese migrant archaeology (though see early work in Schuyler 1980), and it laid out several important avenues for future research. Chapters in the volume emphasized the diversity of Chinese site types in the United States, highlighting mining camps (Longenecker and Stapp 1993; Sisson 1993; Stapp 1993) and associated gardening operations (Fee 1993), urban Chinatowns (Sando and Felton 1993; Staski 1993), and canneries (Fagan 1993). The volume also considered several important theoretical and topical discussions about evidence for Chinese women in the American West

(Wegars 1993), comparative analyses of Chinese dietary practices across multiple sites (Gust 1993), the seemingly exotic practice of opium smoking (Wylie and Fike 1993), innovative ceramics analysis (Steele 1993; Stenger 1993), and comparative analysis of Chinese mining sites in New Zealand (Ritchie 1993). Greenwood's (1993) commentary in the volume notes the general atheoretical nature of earlier work and the beginnings of new directions in cross-site comparison, approaches to Chinese adaptation to North America, and new analytical techniques for examining existing artifacts, architecture, and other material remains of Chinese life in the United States. Still, as Greenwood notes, much of the work examining Chinese migrant sites at this time was still focused on the generation of typologies and identification of artifact patterns, and in general lacked nuance in dealing with questions of comparison both between and within sites due to unsophisticated understandings of the nature of Chinese migration, differences in generations of migrants, and the differential localization of Chinese lifeways across geographic and temporal scales.

Archaeologists produced an increasing body of literature exploring Chinese migrant sites in the 1990s and early 2000s, and this was driven by the completion of numerous CRM excavations tied to urban development projects principally in San Francisco, Sacramento, Oakland, Los Angeles, and San Jose, and the extent of the data generated allows for comparative analyses not previously possible (Voss and Allen 2008). Notable examples include continued work on the Sacramento Chinatown (Praetzellis and Praetzellis 1997) and the excavation and analysis of the Woolen Mills Chinatown in San Jose, California (Allen et al. 2002), both of that include material culture, faunal, floral, and historical analyses which help generate a more detailed understanding of life in these communities. This multi-dataset approach follows that of several prior projects including the Riverside Chinatown outside of Los Angeles (Great Basin

Foundation 1987) and the Woodland Chinatown (Felton et al. 1984), and it makes clear the interpretive potential of approaching these (and other) communities from multiple analytical perspectives. During this time archaeological work also began to expand in non-urban contexts, albeit at a slower rate. Examples include excavations of sites related to numerous industries that employed significant numbers of Chinese laborers, including shrimping (Schulz 1988, 1996), fishing (Berryman 1995), mining (Markley 1992), and railroad work (Lindström 1993; Rogers 1997; Wroblewski 1996), as well as several communities which tie their existence to the spread of Chinese railroad workers throughout the American West (Diehl 1998; Gardner 2004). Research themes in both urban and rural projects tend to include questions of cultural persistence versus acculturation, ethnic boundary maintenance, and importation and distribution of Chinese-produced goods.

As with the earliest work in Chinese migrant archaeology, many of the projects undertaken in the 1990s and early 2000s drew upon acculturative models that emphasize simplistic binaries of continuity/tradition versus change/assimilation, which rigidly tie material culture to corresponding cultural practices (Praetzelis 2004; Praetzelis and Praetzelis 1997; Ross 2013a; Voss 2005). Voss in particular has challenged the acculturative models employed in much of this literature (e.g., Voss 2005; Voss and Allen 2008). She has demonstrated how acculturation as utilized by archaeologists has led to an overemphasis on Chinese communities as bounded and insular. Acculturation models come at the further price of masking not only internal differentiation within Chinese communities, but also the myriad ways Chinese migrants made lives for themselves in North America, including as entrepreneurs in various industries including fishing (Collins 1987a; Schulz 1988), mining (Hardesty 1988), and laundering (Greenwood 1999). These early approaches also often assumed that Chinese migrant

communities were homogeneous in makeup, though this had begun to be directly challenged in rare cases in the late 1980s and early 1990s (Greenwood 1993; Praetzelis et al. 1987; Wegars 1993). The body of work produced by Mary Praetzelis and Adrian Praetzelis in Sacramento stands as a notable exception, as their contract-driven publications explicitly challenged notions of Chinese homogeneity and simplistic interpretations of material culture in favor of an approach that highlighted the internal differentiation within Chinese migrant communities (e.g., Praetzelis and Praetzelis 1981, 1982, 1990, 1997). This work demonstrates the fruitfulness of more complex interpretations of data from Chinatown sites, and highlights the ways that material culture can be used by migrants to directly “create and transform identities in particular contexts and to serve particular agendas” (Ross 2013b:3). The use of acculturative models and the tendency for most Chinese migrant archaeology projects to reported upon in grey literature contributed in large part to the subfield’s lack of contribution to broader archaeological debates on migration, racialization, and identity amongst other topics (Ross 2013b).

By the mid- to late-2000s, Chinese migrant archaeology began to be increasingly published in peer-reviewed journals and used as case studies in broader discussions of topics such as racialization (Orser 2007) and consumerism and material culture studies (Mullins 2011). Voss and Williams’ 2008 thematic issue of *Historical Archaeology* provides an overview of research being conducted on Chinese migrant sites, and its contributors explore a variety of themes including the Chinese response to the anti-Chinese movement (Baxter 2008), the participation of small-scale Chinese entrepreneurs in broad networks and exchanges (Greenwood and Slawson 2008), Chinese masculinity and its articulation with broader American gender stereotypes (Williams 2008), emerging hybridity in Chinese communities and funerary practices (Kraus-Friedberg 2008; Smits 2008), and the connections between rural Chinese farmers and

broader supply networks (Van Bueren 2008). Voss' (2008) contribution, in particular, attempts to push the study of Chinese migrant sites forward by highlighting the need for multiscalar methodologies that take into account Chinese social lives, institutional racism, anti-Chinese violence, labor practices, and immigration policy. Voss argues for the effectiveness of approaching Chinese migrant archaeology at a "middle scale," which emphasizes forms of social collectivity between the archaeological staples of household and world system, and argues that district associations and other kin-based institutions were particularly important in the daily lives of Chinese living in the 19th-century United States. Additionally, Mullins (2008) notes that while the contributors to the volume all attempt to move beyond acculturative models there are still important hurdles to cross within the discipline. In particular, he urges archaeologists to move past their obsessions with the seemingly exotic and unusual artifacts that are in reality commonplace on Chinese migrant sites (e.g., opium pipes), and he also calls for increased efforts to better understand the structural effects of racism, as well as the role of power and inequality along racial lines in Chinese migrant lives. Finally, the volume is notable for the inclusion of an article by Yu (2008), which provides not only the viewpoint of a historian but also a Chinese-American descendant of the Market Street Chinatown; prior and subsequent archaeological work rarely includes this perspective.

Additional work since this time has further expanded the study of additional Chinese migrant site types and increasingly attempted to move away from acculturative models and interpretations that cast Chinatowns as monolithic communities. For instance, archaeologists have explored Chinese abalone fisheries on the Channel Islands in Southern California and their environmental impact and broader connections to market economies (Braje et al. 2014; Braje et al. 2007), class and ethnic identity amongst Chinese in a woodcutters camp in California (J. Lee

2008), the balancing and creative use of both Chinese and Western medicinal practices by Chinese migrants in Nevada (Heffner 2013), the diverse experiences of Montana's Chinese migrant population, including as railroad workers, miners, and the targets of anti-Chinese racism (Merritt 2010; Merritt et al. 2012; Norman 2009), and the very meaning of community in a small-scale Idaho Chinatown with only a handful of residents (Warner 2014). Many of these works explicitly emphasize the engagement of Chinese migrants with those outside of Chinese communities, such as Warner's interpretation that Chinese laborers in the restaurant industry played a key role in the procurement of beef, which ultimately structured their subsequent food practices. Sunseri (2015a, 2015b) highlights Chinese entanglement with Native Americans at the Mono Mills lumbering site, and she demonstrates how Chinese laborers intersected with national meat distribution networks, local butchers, and Native Americans who traded them wild collected resources such as pine nuts. Cummings and colleagues (2014) have used botanical data from the Market Street Chinatown to emphasize food-based differences along lines of labor and class within the community. These studies have all helped move the study of Chinese migrant archaeology forward, though as a whole they do not utilize any one single paradigmatic approach.

Since 2012, there has been renewed and reinvigorated archaeological research into the lives of Chinese railroad workers through the Archaeology Network of the Chinese Railroad Workers in North America Project (CRWNAP). The CRWNAP, founded by Gordon Chang and Shelley Fisher Fishkin in 2012 at Stanford University, is a multidisciplinary effort to study the history and lived experience of the Chinese laborers who built much of the Central Pacific and other railroads. The Archaeology Network was created shortly thereafter following conversations between Chang, Fisher Fishkin, and Voss in 2012 and serves as a loose information-sharing

organization for archaeologists working on railroad-related sites including section camps, rural Chinatowns, lumber and mining sites, etc. The Network has produced several conference sessions and meetings, an informational book for public consumption (Maniery et al. 2015), and a thematic issue of *Historical Archaeology* edited by Voss (2015).

The 2015 *Historical Archaeology* issue includes a reprint of Chace and Evans' (1969/2015) conference presentation at the Society for Historical Archaeology's 1969 meetings, which laid the foundation for the identification of Chinese railroad worker material culture assemblages and in many ways initiated additional studies of this population. Other articles address daily life in railroad work camps (Allen and Baxter 2015; Polk 2015), field strategies appropriate to railroad sites (Furnis and Maniery 2015), Chinese laborer medicinal practices along the railroad (Heffner 2015), Asian coins and their relation to transnational exchange (Akin et al. 2015), and historic inscriptions by Chinese and other workers marking the landscape (Urbaniak and Dixon 2015). Particularly noteworthy are Molenda's (2015) treatment of moral discourse and personhood amongst Chinese workers and how an emphasis on communal identity affected their relationship to labor strikes and struggles, Sunseri's (2015) discussion of alliance building between Chinese railroad workers, Native Americans, and African-Americans in the face of horizontal labor hierarchies, and Harrod and Crandall's (2015) use of bioarchaeological data to demonstrate the effects of disease, malnutrition, and physical injury on the bodies of Chinese laborers. My article in this volume (Kennedy 2015) discusses the differential localization of food practices by Chinese railroad workers in work camps, related rural sites, and urban Chinatowns, and a slightly modified version of this manuscript appears as Chapter Five of this dissertation. Praetzellis and Praetzellis (2015) offer suggestions for future work on railroad worker and other Chinese sites, and they push for a better understanding of the personal histories

of Chinese migrants and their lives as connected to multiple other sites at multiple scales.

Praetzellis and Praetzellis especially reiterate Voss and Allen's (2008) prior push for movement away from descriptive studies of so-called "ethnic markets" visible in the material record, and they support continued participation in projects exploring descendant-generated research questions.

Ross' (2009, 2010, 2011) recent work on Chinese and Japanese cannery workers on the Fraser River deserves particular attention. He frames this research using a diasporic and transnational approach, drawing on work in Asian and Asian-American Studies (e.g., Azuma 2005; Chan 2007; Hsu 2000; Ngai 2006). Ross emphasizes the connection that Chinese laborers maintained with home via material and dietary practices, while at the same time streamlining their day-to-day lives based on the realities of working-class life in North America. For Ross, the construction of ethnic identities, including that of Chinese migrant laborers is dependent upon both connections to home and the lived experience of immigrant life, and he emphasizes a transnational interpretive framework that will ultimately allow archaeologists studying Chinese migrant sites to participate in broad, comparative studies of other migrant populations. This follows similar calls from Voss and Allen (2008), Staski (2009), and others to look beyond the borders of North American archaeological sites in the study of Chinese migration. Since then, González-Tennant (2011) has also pushed for the creation of a diasporic archaeology of Chinese migration that acknowledges the experiences of Chinese migrants and home populations as well as the heterogeneity within and between these groups. This view specifically pushes against archaeological tendencies to cast Chinese migrant communities as homogenous, first in terms of intrasite variability, and later, following the move away from acculturative models, as belonging

to a monolithic Chinese migrant culture that does not acknowledge the ethnic and familial differences inherent in this population.

Most recently, Voss (2016) has proposed a transpacific archaeology of the modern world driven by interdisciplinary collaboration between practitioners of archaeology, history, American Studies, and other allied fields. Voss acknowledges the difficulty archaeologists often have in connecting locally excavated sites to the global flows of people, things, and ideas with which they are intimately entangled, a disconnect relevant to much of archaeology but particularly so to the study of migrant populations. Recent research on 19th-century Chinese home villages and collaboration with scholars studying them has highlighted to Voss the fact that North American archaeologists tend to situate the history of Chinese migration in an Americanist perspective that does not acknowledge that Chinese migration to North America is but one part of a much greater story. This is compounded by poor understanding by archaeologists of relevant work being done by scholars in other fields and in China itself, as well as a general lack of Chinese language training amongst archaeologists working on Chinese migrant sites who would otherwise benefit from transpacific conversation and archival and scholarly research on Chinese-language documents. Voss' hope is that through continued collaboration with scholars in allied fields and the use of resources outside of those typically drawn upon by archaeologists, studies in the future can not only continue to build upon the existing body of archaeological data on Chinese migrant sites but also better explore how these sites intersect with local, regional, national, transnational, and global flows.

In addition to Voss' push for interdisciplinary work, Fong (2013) has recently pointed out the general lack of awareness of Ethnic Studies, Asian American Studies, and related literature on race and racialization amongst archaeologists working on Chinese migrant sites. In part this is

due to the lack of interdisciplinary collaboration highlighted by Voss, however it also is part of a more systemic problem in which archaeologists write for themselves rather than engage with literature outside of archaeology (c.f. Praetzellis and Praetzellis 2015). Fong pushes for inclusion of Ethnic Studies and Asian American studies literature, especially as it relates to the ways that Chinese migrants have been racialized as foreigners and the corresponding effects that this process had on the everyday lives of Chinese individuals and communities. For Fong (2013:4), artifacts from Chinese sites are not simple indicators of ethnic boundaries, but instead evidence of “actions that individuals made in order to navigate, subvert, and adapt” to conditions of structural racism inherent in 19th-century life in the West. This approach allows Fong to interpret Euro-American artifacts from the multi-ethnic Chinese community at Isleton not as the passive remnants of acculturation, but instead as the results of “stranger intimacies” (Fong 2013:160, c.f. Shah 2011) driven by relationships and interactions among numerous racialized communities.

Developments in the archaeology of Chinese migrants over the past decade offer tremendous potential for future research. Recent calls for the collaboration of archaeologists with researchers in allied fields (Voss 2015a), the engagement of archaeologists with literature from Ethnic Studies and Asian American Studies (Fong 2013), continued emphasis on movement away from the study of artifacts as simplistic ethnic markers (Praetzellis and Praetzellis 2015), and pursuit of a transnational or transpacific approach to Chinese migrant sites (González-Tennant 2011; Ross 2009, 2010, 2011; Voss 2015b) point to a number of avenues through which archaeologists studying Chinese migrant sites can simultaneously produce more in-depth interpretations of the past, while also more fully engaging with scholars in other fields and additional bodies of literature that emphasize issues of race, racialization, and migration. This dissertation seeks to articulate with several of these calls, and the following chapters address the

localization of Chinese food to North American environmental, economic, and social pressures (Chapter Five), the creation and enactment of transnational identities through food practices (Chapter Six), the connection of the Market Street Chinatown's residents to local, regional, national, and international flows of goods and ideas (Chapter Seven), and the importance of food practices in creating community identities crucial in Chinese responses to racism (Chapter Eight). While these studies may help move the field forward, I agree with Voss (2016) in her calls for continued collaboration with scholars outside of archaeology, particularly those working on 19th-century Chinese home villages. As Praetzellis and Praetzellis (2015) note, archaeologists already have a strong understanding of the material lives of 19th-century Chinese migrants in much of North America, and while more work can certainly be done on additional sites and collections, archaeologists must also begin to turn their gaze towards other locations tied to the 19th-century migration of Chinese people throughout the Pacific world, including Chinese home villages and the many other countries which received Chinese migrants.

Food Studies in Chinese Migrant Archaeology

Archaeological studies of Chinese food practices became common after the development of Chinese migrant archaeology in the 1980s, and many of the earliest research projects focused on attempting to identify zooarchaeological and ethnobotanical signatures unique to Chinese foodways. These studies emphasized the connection between ethnic identities and corresponding food practices, and they often privileged seemingly exotic Chinese foods, such as imported fish and vegetables, reptiles, cats, and dogs as particularly indicative of Chinese culinary behavior. This body of literature produced data from both faunal and floral materials, and as with more general archaeological investigations into Chinese migrant sites, they tend to emphasize

continuity and change and the seemingly exotic (i.e. non-Anglo) nature of Chinese foodways. The recent turn towards nuanced and multi-disciplinary work on Chinese migrant sites has been slower to manifest in studies of food and culinary practices, though, as will be discussed below, several notable exceptions exist.

Many of the early studies of Chinese foodways analyses come from zooarchaeological work on a number of rural 19th-century Chinese communities. Examples include projects examining meat consumption through a lens of acculturation amongst Chinese migrants in Lovelock, Nevada (Dansie 1979), a Chinese work camp in California (Gill 1985), and the Chinatown in Virginiatown, California (Bowden 1993). These studies emphasize the continuation of supposedly traditional Chinese emphasis on pork consumption and the importation of exotic goods such as dried pufferfish. The analysts all argue for the maintenance of Chinese food practices and thus a corresponding low degree of acculturation at these sites.

McEwan's (1985) analysis of faunal remains from Chinese contexts in El Paso, Texas provides a more rigorous comparison as she highlights both seemingly traditional dietary features (emphasis on pork, chicken, duck, and fish) with evidence for changing culinary practices through time. In El Paso, Chinese diners increased their meat consumption over successive years, a change that McEwan attributes to the development of the beef industry and associated refrigeration and distribution infrastructure in the area. Ultimately, McEwan sees Chinese foodways as generally conservative, but open to change based on local conditions. Work at the Pierce Chinese mining camp in Idaho (Longenecker and Stapp 1993; Stapp and Longenecker 1983) emphasizes similar themes of dietary persistence, and the authors also offer a particularly in-depth analysis of the butchery marks observed in the collection. They argue that the patterns of butchery marks present on animal remains indicate Chinese cleaver-based animal

processing rather than Anglo saw-heavy methods, signaling a continuation of Chinese animal butchery practices.

Most of these studies draw heavily on acculturative models that emphasize continuity/tradition or change/acculturation based on either the kinds of animal remains identified at archaeological sites or the pattern of butchery marks observed on bones. With no 19th-century comparative data from home village archaeological sites in Guangdong or major North American Chinatowns such as San Francisco, most of these studies draw directly on historical accounts of Chinese foodways in San Francisco (particularly the descriptions of food and stores provided in Spier 1958a, 1958b) to determine what a baseline Chinese diet should look like. According to this reasoning, traditional Chinese diet is assumed to be heavily based on pork, which would be supplemented with chicken and fish where available. Beef bones, often present in Chinese faunal assemblages, are usually taken as evidence of acculturation to Anglo-American foodways or as indicative of economic or environmental restraints limiting the food choices of Chinese cooks.

Owing to their preoccupation with acculturation, these studies tend to pay little attention to the ways that Chinese food practices created entanglements between Chinese migrants and non-Chinese food producers in North America. One notable exception is Diehl and colleague's (1998) acculturation-based study of a 19th-century Chinese gardening community in Tucson, Arizona, which notably draws upon the work of scholars of Chinese food such as Chang (1977) and Simoons (1991) to provide historical and cultural background to their interpretation. While Diehl and colleagues (1998:23) exoticize Chinese cooking practices by declaring that "it has been established that the overseas Chinese held strong beliefs that related food to life, the universe, and just about everything," the authors take a more critical view of Chinese migrant

food practices at the site. Rather than see the incorporation of beef and local wild plants as evidence for acculturation/change, they argue that they are instead indicative of continuity in Chinese foodways via preferences for a diverse diet and accommodation of local economic realities (expensive pork versus cheap beef). Still, in this case Diehl and colleagues are still trapped by the acculturative models favored at the time, and thus they cannot see their data as potentially reflecting hybridization and emerging Chinese migrant identities in Tucson (see Mullins 2011:141-142 for a similar criticism of this study).

While many of the studies referenced above cite contemporary work at other Chinese migrant sites, few analysts in the 1980s and 1990s attempted truly comparative, multi-sited projects. Gust's (1993) comparison of faunal remains from Sacramento, Woodland, Tucson, Ventura, and Lovelock is one of the rare exceptions, and in it she offers several insights into Chinese migrant food practices. Perhaps most importantly, Gust uses the wide variability in the relative amounts of beef, pork, caprine (sheep/goat), and small mammal remains identified across these sites to argue against models of rigid preservation of seemingly traditional Chinese foodways in 19th-century migrant communities. Instead, she argues that Chinese migrants made frequent compromises in their food practices based on local economic and environmental conditions, and she provides evidence that, especially in rural communities, Chinese consumers relied heavily on Anglo merchants for the supply of basic necessities including food. Rather than use classic descriptions of Chinese migrant diet in 19th-century San Francisco as a baseline, she instead casts San Francisco and its myriad imported and locally prepared foods as "atypical" and not a good indicator of expected food practices in rural communities (Gust 1993:189). Finally, Gust notes that given the high variability in faunal remains across multiple Chinese sites there may not truly be an identifiable Chinese faunal pattern per se; rather, outside of distinctive

cleaver-derived scrapes on some medium and large mammal long bones and the presence of butchered cat and dog remains on some Chinese sites (exceedingly rare on Anglo sites) little separates rural Chinese faunal remains from those of their non-Chinese neighbors.

Several CRM-driven studies in the 1980s and 1990s go beyond isolated analyses of faunal remains, including botanical data, providing a more thorough treatment of Chinese migrant food practices. One notable example is the collection of faunal studies on the Riverside Chinatown near Los Angeles, California (Collins 1987b; Goodman 1987; Hall 1987; Langenwalter 1987; Langenwalter and Langenwalter 1987). This work highlights several broad patterns in Chinese migrant foodways, in particular general preferences for pork and poultry, importation and consumption of fish from multiple locations, incorporation of beef and other Euro-American domesticated animals, and use of ingredients such as geckos in Traditional Chinese Medicine. These authors employ acculturative models to explain Chinese migrant consumption of Euro-American ingredients, and Langenwalter (1987:97) goes as far as to suggest that beef and other bones with power saw marks on them are indicative of Chinese adoption of Euro-American butchery technology over Chinese cleaver-based methods. This is an unusual interpretation and it ignores the more likely possibility that sawn meat cuts were instead obtained by Chinese consumers and meat sellers from Euro-American butchers in Riverside. Beyond complicating the relationship between Riverside's Chinese community and surrounding American populations, this interpretation also opens up understandings of the ways that Chinese migrants drew upon multiple resources and connections in their day-to-day lives. Kent and colleagues (1987) also provide rich ethnobotanical data from the site, and they emphasize both the importation of plants food from China, as well as the adoption of local crops. They also make special note of the general diversity in the botanical collection, which they take as a sign of the

economic success of the community. Overall, the faunal, floral, and additional ceramic data are used to demonstrate that “traditional ethnic Chinese customs, language, and foodways thus prevailed in Riverside’s Chinatown where both internal and external forces worked to keep it that way” (Moses and Whitmore 1987).

Work by many of the same analysts on assemblages from the mid-1850s Chinese merchant contexts on the IJ56 Block (Gust 1982; Honeysett 1982; Praetzelis and Praetzelis 1982; Schulz 1982; Simons 1982) and laborer/tenement contexts on the HI56 Block (Gust 1997; Hirn 1997; Praetzelis and Praetzelis 1997; Schulz 1997; West 1997) in Sacramento, California provide two further examples. Included as “Special Studies” in the IJ56 Block report, faunal and ethnobotanical analyses document the range of culinary ingredients consumed by IJ56’s Chinese merchant residents. Individual faunal analysts highlight the importation of Chinese fish and engagement with local Euro-American fish markets and Chinese-run fisheries (Schulz 1982), distinctions between “kitchen butchering” aimed at removing small pieces of meat from mammal bones by Chinese cooks versus primary butchery of market cuts that could be variably from either Euro-American or Chinese butchers (Gust 1982), and the purchase of expensive pork cuts by Chinese migrants as a marker of ethnicity (Gust 1982). The botanical data demonstrate the growing of winter and bitter melons in truck gardens, importation of Sichuan peppercorns, and the use of multiple locally available California fruits (Honeysett 1982). Analysis and interpretation of the HI56 Block project is notably divergent from the IJ56 data. Rather than showing an emphasis for pork within the mammal remains from HI56, Gust (1997) notes that beef is the primary meat represented with much of it being sawn in typical Euro-American butchery methods. She notes even higher rates of “kitchen butchery” marks on remains in this portion of the site, and argues that this pattern may reflect more intensive meat removal here than

in HI56. Schulz (1997) identifies a wide range of fish taxa from this block, including imported Asian species and locally available freshwater and marine taxa; in addition to again highlighting the connections between Sacramento's Chinese community with multiple fisheries, he also demonstrates how Chinese consumers engaged specifically with Euro-American fishermen and markets. Hirn (1997) and West (1997) provide data from macrobotanical and pollen remains respectively, and they highlight the consumption of both imported (bitter melon, winter melon, and jujube) and local crops by Chinese migrants. Taking these two studies together, Praetzelis and Praetzelis (1997) demonstrate heterogeneity within Sacramento's Chinese community, as well as distinct class-driven economic and culinary differences between merchants, who dined on expensive pork, and laborers, who made maximum use of less expensive cuts of beef. Emphasis on internal variation within the community by Praetzelis and Praetzelis marks a distinctive turn from prior archaeological work, however this is a theme that has only rarely been pursued in subsequent studies.

Similar multi-dataset approaches continue to be used in more recent investigations of large, urban Chinatown sites, which often produce tremendous amounts of material culture, justifying the increased expense for specialty analyses. An example is work on the Woolen Mills Chinatown in San Jose, California which post-dates the Market Street Chinatown and its destruction by arson in 1887 (Allen et al. 2002, see Chapter Four). As with the above multi-dataset studies, the work on the Woolen Mills Chinatown splits analysis into separate chapters, including fish (Schulz 2002), mammal and bird (Gust 2002), shellfish (Ferneau 2002), and botanical remains (Puseman 2002). Schulz (2002) provides one of the most in-depth treatments of Chinese fish consumption to date, highlighting the intersection of Chinese taste preferences for fish, economic conditions in California, and the availability of individual taxa via the

operations of both Anglo and Chinese fishermen and fish sellers. Gust (2002) builds upon previous analyses from other 19th-century working-class Chinese sites to argue that large amounts of beef versus pork bones in the assemblage is indicative not of straightforward acculturation but instead the result of economic realities; Chinese laborers could afford cheap beef, some pork, and a handful of imported or specialty items, but lacked the financial resources and time to supplement their diet with additional imported goods and wild game available in the surrounding landscape. Puseman's (2002) analysis of macrobotanical remains from the site is largely descriptive, but it provides a wealth of information about the range of plant foods eaten by the site's residents which included locally available fruits, vegetables, and grains, as well as imports including rice, an surprisingly uncommon find on Chinese sites owing to its general lack of preservation in archaeological contexts. Thus, while the Woolen Mills analysis does not take up more recent themes of transnational identities, it does provide a view of life in Chinatown that highlights the choices and multiple connections made by people in the community.

Recent studies have begun pushing work on Chinese migrant food practices in new directions by building on the extensive data made available in through earlier projects. Sunseri (2015a, 2015b) has utilized a wide range of food-related remains from the Chinese residents of Mono Mills, a 19th-century lumbering community in California, to demonstrate the interconnectedness between Chinese consumers and both regional and local food supply networks. She uses the presence of power saw marks on beef bones to show how Chinese residents in this rural town purchased meat supplied by railroad from larger processing centers. A cache of pine nuts suggests trade with local Paiute people. Sunseri's argument for alliance building between Chinese and Paiute workers is bolstered by the presence of flaked obsidian tools in Chinese contexts and Chinese artifacts in Paiute ones. Ultimately, she shows how

Chinese workers at Mono Mills managed their local lives while also staying connected to home through goods and foodstuffs that were frequently imported from China.

Warner (2014) provides another recent examination of a rural Chinese community via its food practices at the small 19th-century Chinatown in Sandpoint, Idaho. Composed of only around a dozen residents, the Sandpoint Chinese were individuals who stayed behind following the construction of the railroad through the town. Rather than finding large amounts of pork Warner identified significant amounts of beef combined with turtles, birds, and some fish, and he argues that Chinese workers in local restaurants likely brought leftover beef cuts home with them as a creative and cheap way of dealing with food supply. Rather than argue for an Americanization of daily life, Warner draws on evidence of bird keeping and other social activities popular in southern China to support his interpretation that Sandpoint's Chinese residents maintained Chinese customs when possible.

Finally, I (2015, see chapter Five) have pushed for more powerful ways of understanding the localization of Chinese food practices across multiple types of sites by highlighting cultural, economic, and environmental constraints and opportunities acting upon migrant food practices. Rather than casting Chinese food practices in a dichotomy of continuity versus change, I highlight the hybridity that often occurs in migrant communities and the potential for dietary compromises and adaptations to form the basis for emerging food-based identities and practices.

The greatest volume of recent research emerging on Chinese migrant food practices is occurring as part of the Market Street Chinatown Archaeological Project. While this research will be covered in greater detail in the next chapter, it bears mentioning now in relation to the broader body of foodways studies discussed above. Henry (2012) has undertaken analysis of faunal remains from a large feature associated with tenement housing in the Market Street

Chinatown. She argues that the faunal data suggest hybridization of Chinese ingredients (consumption of pork, chicken feet, etc.) with new food items such as beef as residents adapted their food practices to San Jose. Henry also uses the presence of butchered bear paw bones, a high status ingredient in southern China, as evidence of upward mobility and the emergence of new Chinese-American identities. Cummings and colleagues (2014) utilized botanical data collected from both tenement housing and mixed merchant/laborer households within the Market Street Chinatown to argue for differential food consumption in the site, with merchants eating a wider variety of grains and workers eating more fresh fruit potentially picked from nearby agricultural fields (though see Chapter Eight).

Popper (2014, Chapter Eight) has provided additional macrobotanical data from the site including a wide range of imported, locally grown, and transplanted crops, and she argues that earlier differences in plant remains seen by Cummings and colleagues (2014) likely have more to do with the depositional history of the site than with tangible differences in the plant foods consumed by tenement and mixed merchant/laborer households. Popper also highlights the variety of plant foods available in the Market Street Chinatown, and she argues for the importance of transplanted and flexible farming practices in the economic and cultural growth of Chinese communities in the United States. Additional studies on materials from the site have also revealed the intricate connections between food and medicine in the Market Street Chinatown (Lun 2015) and the presence of rice starch residue on both Anglo- and Chinese-produced ceramics (Becks 2012). Taken as a whole, the growing literature on Chinese migrant food practices using data from the Market Street Chinatown have helped highlight the variable ways Chinese foodways were adapted to life in San Jose.

As will be demonstrated in the following chapters, this dissertation attempts to push current archaeology inquiry into Chinese migrant food practices along trends emerging in the broader subdiscipline. In particular, these include exploration of the transnational nature of migrant identities, the connection of Chinese migrants to local, regional, national, and transnational flows of people, ideas, and things, and the role of food and community in simultaneously connecting migrants to home and adapting to life in North America. The following chapter provides background on the history and archaeology of the Market Street Chinatown and discussion of my overarching research questions. Chapters Five through Eight are targeted studies examining aspects of these questions. Chapter Five is an application of the idea of localization to Chinese migrant foodways. Chapter 6 is a zooarchaeological analysis from the Market Street Chinatown through the lens of immigrant food theory. In Chapter 7 I trace connections between the Market Street Chinatown's residents and other people and places via the salt fish trade, and in Chapter 8 use of faunal and floral data from the Market Street Chinatown to highlight the importance of community identity.

Chapter 4. Historical Background and Methods

The first written documentation of Chinese migrants in San Jose is from an 1851 newspaper account of a trial involving a Chinese and Spanish participant (*Alta California* 1851 in Yu 2001:19), and the number of Chinese in San Jose and broader Santa Clara County remained low through the 1850s. As local agriculture shifted from the production of grains to fruit, agriculturalists needed additional field hands for the intensive planting and harvesting of these crops and they turned to Chinese laborers who often had considerable experience as farmers in Guangdong and who would plant and pick fruit for as little as \$1 a day (Yu 2001:10). As agriculture in Santa Clara County boomed so did its Chinese population, and by 1870 over an estimated 1,525 Chinese had moved to the County. Of these, 532 are estimated to have lived in San Jose. The numbers of Chinese continued to grow and by 1880 the County was home to an estimated 2,695 Chinese migrants, just under 8% of the county's total population (Yu 2001:19). With this large of a population, a sizable Chinatown community developed in San Jose, replete with its own businesses, housing, restaurants, and many other trappings of home: this was the Market Street Chinatown.

The history of the Market Street Chinatown and its residents has been discussed by historians and in several recent archaeological studies (Allen et al. 2002; Cummings et al. 2014; Laffey 1993, 1994; Yu 2001), and the following draws heavily upon these sources. The Market Street Chinatown was founded in the 1860s in San Jose, California at the intersection of San Fernando and Market Streets in the heart of downtown (FIGURE 1). The first Chinese-owned buildings in the Market Street Chinatown were constructed in 1866 by three Chinese entrepreneurs, Ah Toy, Ah Charley, and Ah Lee, and by 1869 the community was comprised of eight permanent structures (Laffey 1993:15). By 1870 the population had rapidly expanded and the Market Street Chinatown was home to an estimated 532 residents (Yu 2001:19). In January

of that year, however, a fire burned the Market Street Chinatown and the community relocated to a nearby riverfront property along the Guadeloupe River (Allen 2002:17; Yu 1991:21). While only Chinese-owned structures were damaged in the fire, contemporary accounts do not cite arson as a cause even though anti-Chinese sentiment was growing in the city at the time as evidenced by increasing complaints in newspapers and public discourse against Chinese laborers and the presence of the Market Street Chinatown in San Jose (Laffey 1993:17; *San Jose Weekly Mercury*, in Allen et al. 2002; Yu 2001). Flooding of the Guadeloupe River in 1871-1872 and the construction of new brick and wood buildings at the site of the Market Street Chinatown provided the impetus for many displaced Chinese to return to the Market Street Chinatown, once again making it the heart of Chinese life in the city (Allen 2002:17-18; Yu 1991:22).

Following the reestablishment of Chinatown at San Fernando and Market Streets, the city's Chinese population grew to over 1,000 permanent residents by the 1880s, with some estimates putting the population over 1,500 (Yu 2001:19). As with many other large Chinatown communities, the Market Street Chinatown's population swelled even further in evenings, weekends, and holidays when hundreds of workers in nearby agricultural fields would return to the community (Voss 2008:41; Yu 2001). The Market Street Chinatown also served as a commercial and cultural "home base" for over 2,000 additional Chinese migrants living and working throughout Santa Clara County, who could come to the Market Street Chinatown when not working to:

"visit the barber, have a letter sent to his village, pay a visit to his district association, burn incense at the temple, eat at a restaurant, have his fortune told, gamble his wages in a game of pai gow, watch an opera, and visit a brothel." (Yu 2001:22)

The opportunity to visit the Market Street Chinatown no doubt allowed Chinese workers throughout the county to experience familiar sights, smells, and tastes, particularly in the restaurants, stores, and boarding houses where they stayed. Visitors and permanent residents alike could shop at any of a dozen grocery stores, a fish market, three restaurants, barber shops, clothing shops, and general stores, and they could visit the temple, meet with their district associations, and go to a brothel (Yu 2001:22). At its peak, the Market Street Chinatown was the largest Chinese community outside of nearby San Francisco's Chinatown, and its residents and visitors enjoyed access to a number of goods and services not available in rural communities due to their relatively large population and close proximity to San Francisco.

As in other Chinatown communities in the 1870s and 1880s, the Market Street Chinatown provided its residents with support and protection. This was particularly important in the face of rising anti-Chinese sentiment in California, which was frequently centered on Chinese competition with Anglo workers who perceived Chinese willingness to work for lower wages as a threat to their way of life (e.g., Saxton 1975). Anglo labor agitators such as Denis Kearney spoke out against the practice of hiring Chinese coolie laborers, and he and others promoted the production and purchase of goods made by white workers only. San Jose was caught up in this movement along with much of the rest of California, and Kearney himself made a visit to speak in the city in 1885 (Yu 2001:14). While public sentiment in San Jose supported anti-Chinese rhetoric and the city was home to an "Anti-Coolie League" (Allen et al. 2002:14, Yu 2001), Kearney himself was not well received (*San Jose Mercury* 1885). Still, following the passage of the Chinese Exclusion Act in 1882 several of San Jose's businesses began to take active anti-Chinese stances, including the Rinaldo Brothers cigar makers who marketed their product as "made by WHITE MEN" (Yu 1991:25) and the Flickinger Cannery, which sold fruit "packed by

white men and women” (*Sunshine Fruit and Flowers* 1896, in Allen et al. 2002:14) amongst others. The San Jose City Council also passed a number of ordinances that targeted the city’s Chinese population, and these included “laws aimed at Chinese laundries, prohibiting fireworks, Chinese prostitution, and the carrying of baskets on shoulder poles, a traditional Chinese method of transport” (Allen et al. 2002:18; Laffey 1993:27; Yu 2001:28). More generally, the city also declared the Market Street Chinatown a “public nuisance,” and it was seen as an impediment to the development of downtown San Jose and detrimental to nearby property values (Yu 1991:28-29). While these city laws and declarations had a direct relation to ongoing anti-Chinese labor sentiment, they also drew more generally on growing fear of Yellow Peril (R. Lee 1999) and reflect the fact that few of San Jose’s Anglo residents viewed the Chinese presence in the city in a positive light (Yu 2001).

As Voss (2008) has argued, the social organization of Chinatowns in the 19th-century United States was shaped by migration, immigration policy, and labor, with most communities being dominated by young male workers. Families were relatively rare, and although most women and children would likely have lived in merchant households, emerging historical evidence suggests that some families were also present in the tenement buildings and other laborer housing (Barbara L. Voss 2016, pers. communication). Other women undoubtedly lived and worked in the Market Street Chinatown’s brothels, although their overall numbers are unknown. Regardless, women and children formed only a small proportion of the Market Street Chinatown’s population, as upwards of 95% of the population was male (Yu 2001:5). These highly skewed demographics created increased emphasis on homosocial relations and would have led to many of the Market Street Chinatown’s Chinese male residents taking on roles performed by women in China.

District associations and other Chinese social institutions took on heightened importance in Chinese migrant communities, and they often lent support to individuals by helping them find employment and housing they moved to or visited the Market Street Chinatown (Yu 2001:4). For this reason, residential patterns likely followed district association and other affiliations to at least some degree, though labor groups, occupation, temple membership, and family networks would all have played a role (Voss 2008:44). While many of the Market Street Chinatown's laborers would have spent time living in tenement housing, others would have frequently boarded in restaurants, temples, and stores, especially when the tenements were full (Chen 2014; Yu 2001). Most merchants lived in typically cramped quarters within the buildings that housed their stores, and they lived not only with their families but also often with the workers they employed. The mobile life as a Chinese laborer in Santa Clara County often required frequent trips to agricultural fields in the surrounding region and for other forms of employment as well; this generated a continual flow of people in and out of the Market Street Chinatown, likely rupturing small-scale social relationships while further emphasizing the importance of district associations and other social institutions. Taken as whole, the constant turnover in population, the importance of district associations, the fluid nature of housing, and the requirements of labor combined to create important social relationships that extended well beyond cohabitation (c.f. Voss 2008).

Given rising anti-Chinese sentiment and overt legal action against the Market Street Chinatown and its residents in the 1870s and 1880s, community solidarity and social structures such as district organizations no doubt took on heightened roles in Chinese day-to-day life in San Jose. Just as importantly, the very construction of the Market Street Chinatown itself also played a role in providing protection for its residents. This was manifested in the placement of

“thoroughfares, work areas, and gathering places” in the interior of Chinatown, with the back walls of its buildings forming a protective wall (Figure 4-1, Voss 2008:42). This strategy is not unlike that seen in other Chinatown communities, such as in the construction of a protective wall around the later Heinlerville Chinatown in San Jose (Allen 2002:19). The inward-facing layout would have also emphasized community-level aspects of daily life, especially around the north-central courtyard in the Market Street Chinatown that contained extensive pork roasting furnaces and the north-south running Ah Toy Alley, which was home to most of the Market Street Chinatown’s shops and businesses. Foot traffic along Ah Toy Alley and other thoroughfares to and from restaurants, tenement housing, stores, and temples, the smell of roasting pork and other cooking food, and the open spaces upon which many of the Market Street Chinatown’s buildings fronted all would have further emphasized community, while also shielding much of day-to-day life from those not willing to brave the “nuisance” of Chinatown.

Unfortunately, the Market Street Chinatown’s walls were not enough to keep it safe from violence. On May 4th, 1887 fire spread through the Market Street Chinatown, burning it to the ground (*Daily Alta California* 1887c; Yu 2001). Though fire crews responded to the fire, their efforts primarily preserved non-Chinese portions of the city, and their ineffectiveness at controlling the blaze within Chinatown was compounded by the fact that their water tanks had been intentionally drained prior to the setting of the fire. The incident was ultimately determined to be the result of arson and it was set while many of the Market Street Chinatown’s residents were occupied with celebration and a lottery. The majority of San Jose’s Anglo residents supported the destruction of what they saw as a public nuisance standing in the way of urban development and progress, and they openly rejoiced that “Chinatown is dead. It is dead forever” (*San Jose Daily Herald* 1887; Yu 2001:30). San Jose’s Chinatown was not dead and many of its

residents did not leave the city as Anglo anti-Chinese supporters had hoped. Instead, the Market Street Chinatown's community relocated to two new Chinatowns in San Jose: the Woolen Mills Chinatown founded by Ng Fook and the Heinlerville Chinatown built on land leased from German business John Heinlein (Allen et al. 2002; Yu 2001). Following the destruction of the Market Street Chinatown, residents of both Woolen Mills and Heinlerville took active efforts to protect themselves with Heinlerville being surrounded by a high fence with watchmen (Allen et al. 2002:19, *San Jose Mercury* 1887) and the Woolen Mills community creating its own fire response system (Baxter 2008).

Archaeology of the Market Street Chinatown

The archaeological history of the Market Street Chinatown began during an urban development project in downtown San Jose in the early 1980s (Kane 2011; Lum 2007; Voss 2005, 2008b; Voss et al. 2003; Voss et al. 2013). Despite initial evaluation of the site as significant under historic preservation law and in need of protection or mitigation, this decision was reversed and construction on the site began (Theodoratus et al. 1980:80-88; Theodoratus et al. 1981; Voss 2008:41). After archaeological monitors noted rich, historic deposits being unearthed following the beginnings of construction in 1985, a group of archaeologists and Chinese heritage organizations, which included descendants of the Market Street Chinatown protested the treatment of the site (Lum 2007; Voss 2008, 2012; Voss et al. 2013). Ultimately, the City of San Jose Redevelopment Agency contracted a cultural resource management firm, Archaeological Resource Services (ARS), to conduct archaeological excavations at the site and this work began shortly thereafter and continued off and on until 1988. The excavations by ARS were done under salvage conditions using a "rapid recovery" protocol, with archaeological

technicians working alongside construction equipment and monitoring work for evidence of archaeological materials (Kane 2011:10; Roop and Flynn 1993; Roop et al. 1988). When construction crews encountered cultural deposits, construction in that area of the site was briefly halted and archaeologists quickly removed all archaeological soils, which were then processed and screened off-site. Unfortunately, the nature of monitoring during the project resulted in the upper portions and in some cases the entirety of some archaeological features being impacted by construction equipment, and likewise due to time constraints stratigraphic excavation was not always employed. As Voss (2012) has noted, while this limits the possibilities for using the Market Street Chinatown collection for fine-grained temporal comparisons within and between features, the collection still holds tremendous potential for other work.

In total, ARS excavated “more than 60 features – mostly wood-lined rectangular pits filled with domestic refuse” during the project, and each of these features was numbered sequentially based on its year of excavation (Figure 4-2; Roop and Flynn 1993; Roop et al. 1988; Voss 2008:42). Under this system, features in Project 85-31 are located in the southeast portion of the Market Street Chinatown, those in 86-36 in the northwest portion, and 88-91 in the far west portion. Kane (2011) have provided an in-depth summary of archival research on the field and laboratory notes and records kept by ARS, and they include detailed summaries of each feature including whether it was excavated in stratigraphic levels, notable artifacts recovered from the feature, and copies of any related field notes. Kane also notes considerable variability in recording and excavation/screening strategies across project years and features, including non-systematic collection of fine-screened materials in some contexts versus coarse-screened materials in others. The variability in methods adds further difficulty to comparisons between features, however for this project, variability was minimized through sampling of features that

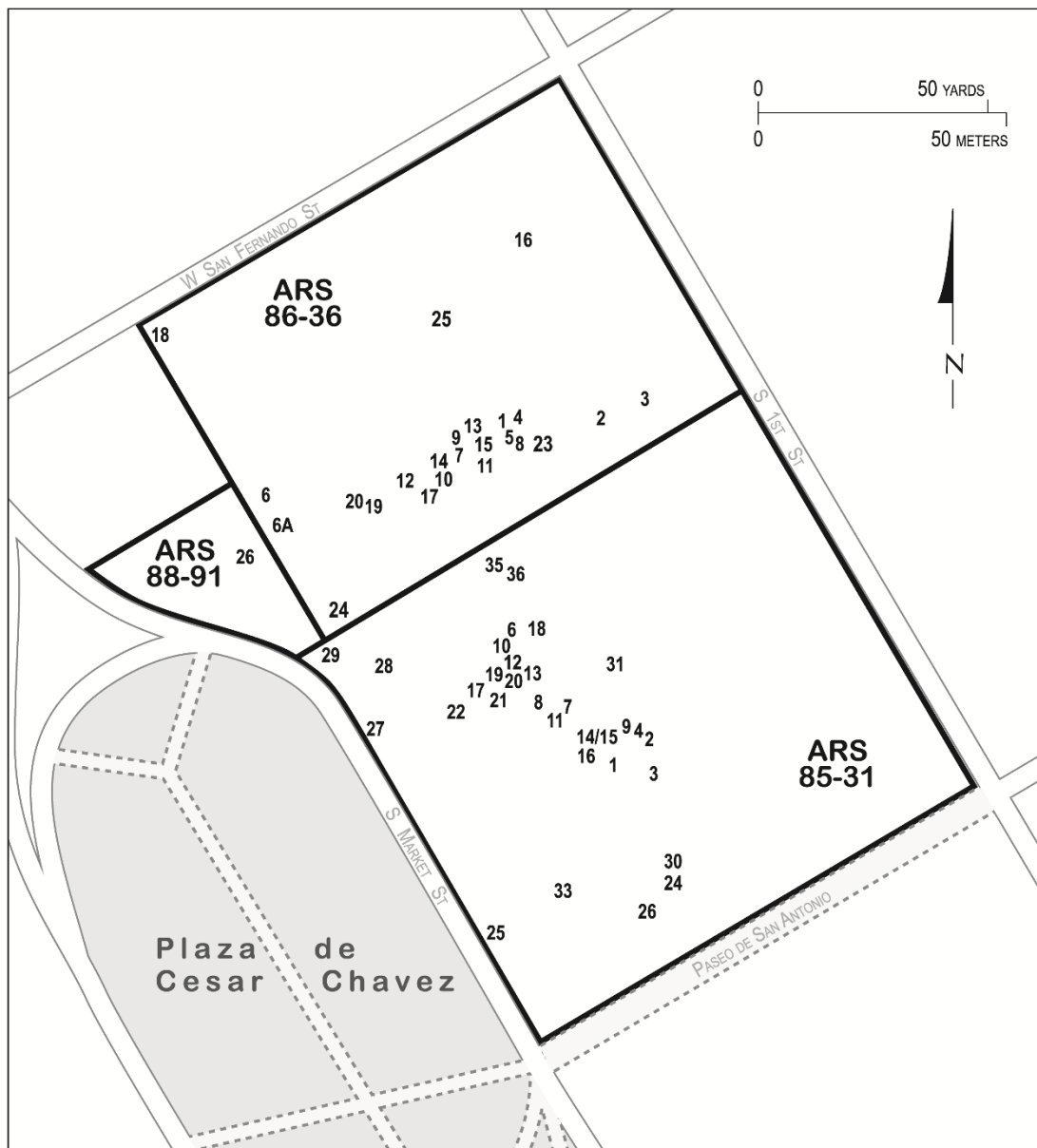


Figure 4-2: Locations of archaeological excavation projects and features at the Market Street Chinatown, Block 1, San Jose, California. Adapted from Kane (2011:maps A9, 10). (Cartography by 360Cartogrphics, 2013).

met specific criteria (discussed below). Following excavation and minimal laboratory processing of artifacts, the majority of the collection was placed in long-term curation with History San Jose, a historic preservation program focusing on the city's diverse past.

In 2002, the Market Street Chinatown Archaeological Project (MSCAP) was formed with the goal of cataloguing, analyzing, and curating the Market Street Chinatown collection (Lum 2007; Voss 2004; Voss et al. 2013). The MSCAP is a collaborative project between Stanford University, History San Jose, Environmental Science Associates (formerly Past Forward, Inc.), the Chinese Historical and Cultural Project, and the City of San Jose Redevelopment Agency, and it is led by Barbara Voss of Stanford University. Owing to the size and complexity of the Market Street Chinatown Archaeological collection, what was initially envisioned as a year-long project has since developed into a more than decade-long examination of the curated Market Street Chinatown assemblage (Voss 2012; Voss et al. 2013). Since its inception, the MSCAP has catalogued over 77% of the entire collection and completely catalogued several categories of material culture including Asian stonewares, buttons, opium pipe tops, tobacco pipes, and glass medicine bottles (Voss and Kane 2014). Much of this work has been driven by undergraduate research projects and several master's theses, as well as a plethora of contracted and affiliated studies described below. The research questions that drive the project have been generated through active dialogue between all project partners and they address a number of interests held by members of San Jose's Chinese descendant community (Voss 2005). The MSCAP has also been heavily involved in public outreach events, including archaeology days at History San Jose and elsewhere, an art installation by artist Rene Yung featuring artifacts from the site, and open house events allowing community members to discuss archaeological findings (Voss et al. 2013).

Previous research on material culture from the Market Street Chinatown provides important contextual information for this dissertation. Clevenger (2004) examined all the artifacts recovered from a single, small pit feature (85-31/20), and she found that their composition was similar to the artifact assemblages found at other Chinese migrant

archaeological sites. She was also able to identify basic stratigraphic relationships between materials in the feature, demonstrating that despite difficult field recovery conditions the materials excavated from the Market Street Chinatown should allow for contextual, comparative analyses. Additional studies followed this work, and they frequently examined single artifact types and were developed out of a research-driven approach to curation employed by Voss (2012). Williams (2004) examined opium pipe tops and found that not only were a variety of styles present at the site, they were distributed throughout multiple contexts. Williams suggests that the observed spatial distribution of pipe tops in the collection does not reflect deviant behavior and the presence of opium dens as stereotypes imply, but instead the use of a common drug in patterns similar to alcohol consumption at other sites. Kane (2007) also used spatial analysis in identifying the presence of artifacts related to fire rituals (incense burners, burner stands, etc.) across the site, and she argues for small-scale religious activities occurring in a variety of contexts including businesses and tenements.

Michaels (2005) studied a small collection of 16 ceramic vessels from the Market Street Chinatown that had been peck-marked with Chinese characters, and she noted interesting patterns in the distribution of these vessels based on the translation of the marks on 12 vessels. Vessels that had blessings or well-wishes were found only in contexts identified as merchant-related, while those peck-marked with names were found in contexts assumed to be associated with laborers living in tenement housing. This pattern suggests dual purposes behind peck-marking, with merchants using the practice to generate good financial luck and laborers drawing upon it as a practical way of marking their own personal bowls in shared housing and as a ‘hybridized art form’ to combat the stresses of living in crowded quarters (Michaels 2005; Voss 2008:47). The distribution of peck-marked ceramics also correlates with the groupings of laborer

and mixed merchant-laborer domestic contexts utilized in this study, and it further supports this division as relating to real, historical differences between groups of people differentially depositing trash in these features.

Douglas (2007) undertook additional spatial analysis examining toothbrushes from the site. She found concentrations of toothbrushes primarily in merchant-related contexts suggesting that dental hygiene varied along class lines in the Market Street Chinatown. Both Chang (2004) and Camp (2004) present data from gaming pieces recovered from the Market Street Chinatown, and both use the presence of dominos, dice, and glass gaming beads to highlight the importance of Chinese games such as *fan tan* and *wei chi* in maintaining cultural identity. Camp further used spatial analysis of gaming pieces to argue that gaming often took place in communal and open spaces near Ah Toy Alley rather than in secluded “opium dens” and gambling halls. Finally, Chan (2013) presents analysis of the nearly 300 British-produced transfer-printed wares recovered from the site, and she argues that the presence of these ceramics has implications for understanding identity construction amongst the Market Street Chinatown’s residents. Rather than tying transfer-printed wares specifically to notions of ethnicity, Chan argues that these ceramics would have played variable and dynamic roles in life and that their presence throughout the site in fact suggests that ethnicity was only one of many factors influencing action. Taken as a whole, these studies help break down stereotypes typically applied to 19th-century Chinese communities, and they demonstrate several lines of difference and similarity across class and labor lines within the Market Street Chinatown.

A growing number of studies from the MSCAP relate to food, and these bear special consideration. Two student projects directly address food and eating in the Market Street Chinatown. Matthews (2004) provides a preliminary examination of Chinese-produced

stoneware storage vessels, and he describes the variety of vessel forms that have been identified in the Market Street Chinatown collection. These include spouted pots, liquor/wine bottles, globular jars, and large barrel jars. In Feature 85-31/18 Matthews notes a large proportion of sherds from food storage vessels and spouted jars, which would have been shipped from China containing any number of dried and preserved foods and, in the case of spouted jars, liquids such as soy sauce (Yang and Hellman 1996). While Matthew's analysis is preliminary, and significant progress has been made in analyzing the stoneware vessels from the site since then (Voss and Kane 2014), it certainly highlights the import of preserved foods. Yuan (2007) presents data from a feature (85-31/14) potentially related to a Chinese restaurant in the southern end of the Market Street Chinatown, and he describes the importance of restaurants in the maintenance of Cantonese foodways. While the communal nature of trash pits in the Market Street Chinatown make definitively linking this feature to a restaurant difficult, Yuan did identify higher percentages of cooking and food storage ceramics within it than were present in Clevenger's analysis of feature 85-31/20, suggesting that similar future analyses may be fruitful.

A number of people have studied the faunal and floral remains from the Market Street Chinatown. In her master's thesis, Henry (2012) provides faunal data from Feature 86-36/5, a trash pit located in the northern half of the Market Street Chinatown near the pork roasting furnaces and tenement housing. In particular, she identified a pattern of meat consumption relying primarily on pork and lesser amounts of beef, supplemented with chicken, duck, and other fowl. A number of additional mammals including rabbits, cats, dogs, and bears played minor roles in residents' meat diet, as did turtles and frogs. The bear bones are notable as Henry argues that they are evidence of feasting behavior owing to their use in Cantonese feasts, and she sees their presence as evidence for the creation of class distinctions within the community.

Overall, Henry argues that Chinese foodways in the Market Street Chinatown are largely traditional based on the consumption of large amounts of pork, chicken feet, turtles, and other foods common to Guangdong, but she also highlights hybridization with Anglo-American food practices through the heavy consumption of beef by the Market Street Chinatown's residents.

Cummings and colleagues (2014) present pollen, phytolith, macrobotanical, and macrobotanical data from 10 soil samples collected from six features at the Market Street Chinatown (86-36/5, 86-36/6, 86-36/7, 85-31/11, 85-31/18, and 85-31/28), which include both tenement housing and mixed merchant/laborer households. This study highlights the diverse and rich botanical assemblage within the collection, as well as the use of a wide range of local crops (particularly fruits such as blackberry, strawberry, and apple) alongside imported and transplanted Asian plant taxa (e.g., winter melon and jujube). Cummings and colleagues also highlight the incorporation of seemingly new foods into the diet of the Market Street Chinatown's residents, including agave, tomato, and prickly pear cactus. This study also compares plant consumption between merchant and tenement contexts, and the authors note that merchants seem to have consumed a wider range of grains compared to laborers who ate a wide range of fruits (though see Popper 2014, 2015, Chapter Eight).

Popper (2014, 2015) has undertaken further macrobotanical analyses examining remains recovered from soil samples as well as that collected from previously screened "matrix" samples, and her work further highlights the mixing of local crops with imported and transplanted Asian plants. She also suggests that rather than class and labor differences being the root cause of variability between features as argued by Cummings and colleagues (2014), differential preservation and trash disposal methods are likely the cause. In particular, Popper emphasizes the role of 19th-century Chinese farmers in supplying not only Anglo crops to the surrounding

population but also the important role they played in growing the wide range of Asian transplanted crops consumed on a regular basis by the Market Street Chinatown's residents. Botanical studies from the site have shown the high diversity of plants consumed by community member as well as their general distribution between both merchant and tenement contexts.

Voss (2005, 2008, 2012, 2015) has explored the social dimensions of life in Chinatown communities and the archaeological challenges and opportunities presented by the communal nature of trash disposal in the Market Street Chinatown. Her work is particularly relevant for approaches to scalar relationships within the Market Street Chinatown, and she specifically highlights the need to pair archaeological scales of inquiry with social and cultural contextual information. Voss (2008:41) argues that collectively formed waste deposits such as that found in the Market Street Chinatown's many pit features represent a cumulative record of community-wide daily practices. While this is different than typical archaeological approaches that often privilege deposits that can be linked to households and individuals it does not make the data from the Market Street Chinatown any less meaningful. Instead, Voss reasons that communal trash deposits "smooth out" any irregularities that occur on the household level and thus provide a powerful way of assessing broader relationships within a community.

In the Market Street Chinatown, as at other 19th-century Chinese communities, the importance of district associations and other communal networks makes the study of communally formed trash pits perhaps more appropriate for assessing meaningful social scales at the site. Voss (2012) has also discussed methodological concerns surrounding the excavation of the site and the destruction of the upper levels of many features, and she suggests that while temporally-driven comparisons between features are difficult, this does not negate the potential for the Market Street Chinatown collection to be used for meaningful spatially-driven research.

Voss (2005, 2015) has also pushed for movement away from simple studies of tradition and acculturation in Chinese migrant communities, and has instead placed emphasis on the flows of people, goods, and money that transnationally connected Chinese migrants to home villages as well as a variety of people and places at local, regional, and international scales. Finally, Voss (2005) has fostered and maintained open dialogue and conversation with project partners and San Jose's Chinese descendant community, both of which have been central in generating research questions that guide the MSCAP.

Feature Summaries

As mentioned above, 63 trash-filled pit features were excavated under salvage conditions at the site of the Market Street Chinatown (Roop and Flynn 1993; Roop et al. 1988; Voss 2008:42). As can be seen in Figures 4-3 and 4-4, most features come from east of Ah Toy Alley, the main thoroughfare running through the Market Street Chinatown. While pit features are distributed throughout the site, there are several notable loci: (1) a section on the north end of the Alley that included a pork roasting furnace, laundries, sheds, and tenement housing; (2) a small area at the southern block of the Alley which included additional tenement housing, a restaurant, and a plant nursery; (3) and a merchant-dominated section in the center of Ah Toy Alley located to the rear of several stores which served as a housing area for many of the community's merchants and the economic heart of the Market Street Chinatown. Although a tenement structure stood between Loci 2 and 3, material culture studies and association with surrounding buildings suggests that the trash pits in Loci 2 are most directly associated with this structure.

Given their use as communal trash pits and their location between rather than inside of buildings, these pits do not line up in a one-to-one relationship with buildings or other distinct

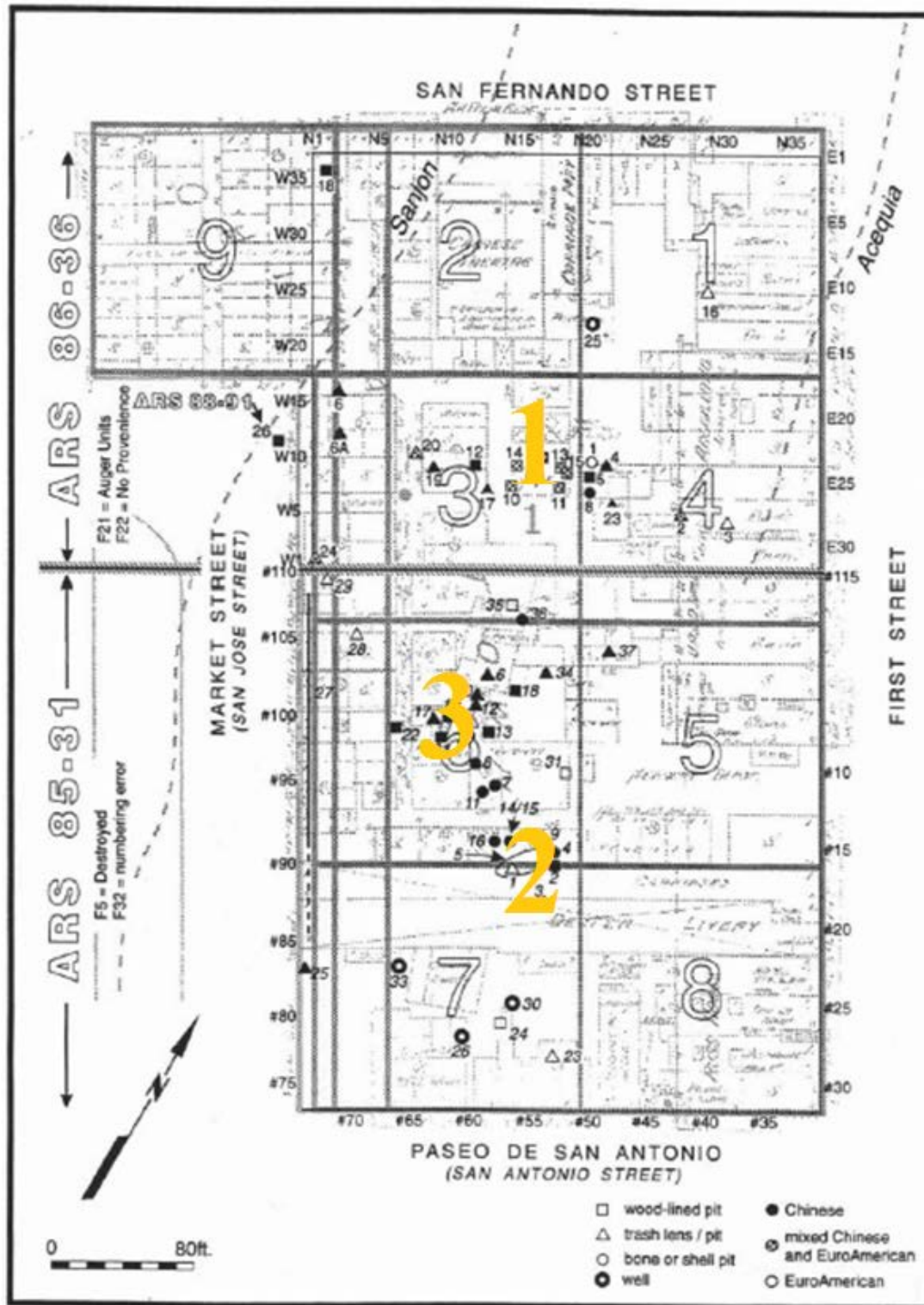


Figure 4-3: Three loci of archaeological featured excavated at the Market Street Chinatown. (Map originally appears in Kane 2011)

units in the Market Street Chinatown (Clevenger 2004; Voss 2008:45). Further, with the high probability of mixing within the deposits they are best approached as small middens associated with multiple nearby dwellings and businesses (Voss 2008:45). However, as material culture studies suggest that structures with similar functions in the Market Street Chinatown tend to be grouped together (Michaels 2005) and historical documents suggest economic stratification across the site (Voss 2008: 45), I make the assumption that the pit features were most frequently used to dispose of trash by people living and working in their general vicinity. While such an assumption inherently obscures individual household-level differences, such communal trashpits can still insight into the practices of both laborers and merchants who were grouped by economic class within the Market Street Chinatown. This approach has also been used in previous studies of the site (e.g., Cummings et al. 2013), and it has proven successful at revealing differences between laborer and mixed merchant-laborer contexts.

In order to have adequate coverage of the variability of food practices within the Market Street Chinatown, I identified ten large features for this study that are distributed between loci 1 and 3 but also include two features to the west of Ah Toy Alley (Figure 4-4, Table 4-1). While I ideally would have included features from all three loci, I limited the features chosen to those which were excavated in stratigraphic levels, have complete excavation records, and have both faunal material and flotation samples for botanical analyses. I also selected features for which botanical data already existed (e.g., Cummings et al. 2014) to reduce the total botanical samples needed to complete this work. Taken as a whole, the features chosen for this study provide a good sample that will allow me examine food practices across multiple areas of the site. The individual features are discussed below, and the descriptions draw heavily on the work of Kane

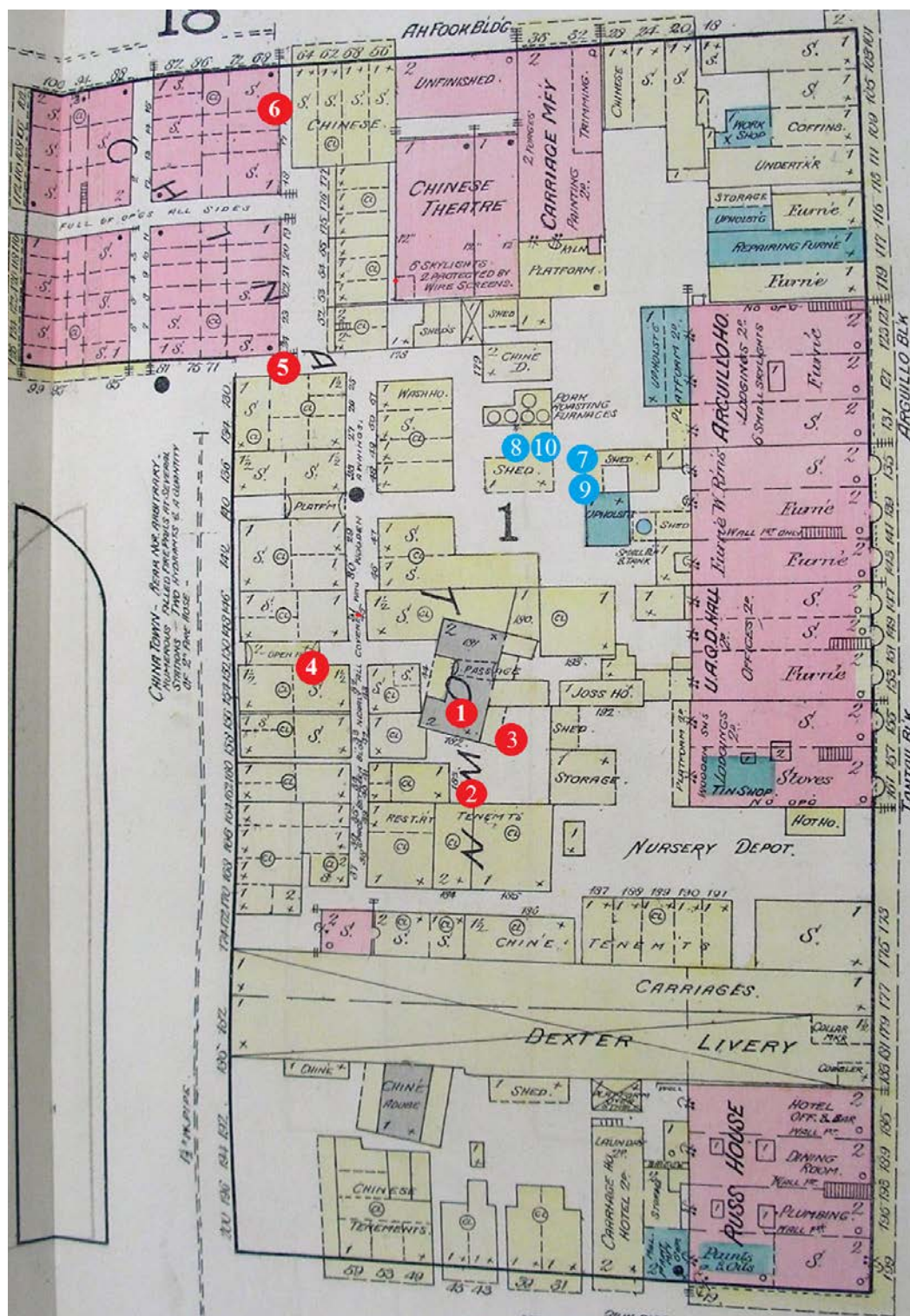


Figure 4-4. Archaeological features utilized in this study. Blue dots mark tenement contexts and red dots mark merchant contexts. See Table 4-1 for feature key. (Base map originally appears in Kane 2011)

(2011) who compiled information for each feature from prior archaeology and historical reports (e.g., Laffey 1993, 1994; Roop and Flynn 1993; Roop et al. 1988).

Feature No.	Demographic context	Map label
85-31/6	Mixed merchant/laborer	1
85-31/13	Mixed merchant/laborer	2
85-31/18	Mixed merchant/laborer	3
85-31/28	Mixed merchant/laborer	4
86-36/6	Mixed merchant/laborer	5
86-36/18	Mixed merchant/laborer	6
86-36/5	Tenement	7
86-36/7	Tenement	8
86-36/8	Tenement	9
86-36/13	Tenement	10

Table 4-1: Features utilized in this study sorted by demographic context.

Tenement Contexts

All four tenement-related contexts are located in Loci 1 in the northern portion of the Market Street Chinatown. These pit features were in a semi-open mixed-use area that included the pork roasting furnaces, laundries, sheds, and tenement housing, and they can reasonably associated with laborers who lived and worked in this area. Still, given the proximity of the pork roasting furnaces and the open nature of these contexts, it should be assumed that material outside of laborer food waste was deposited here as well.

Feature 86-36/5 was a wood-lined trash pit with 10 identifiable levels, and it measured 3.25m in length, 1.25m in width, and 2.2m in depth. It is one of the largest features excavated in terms of volume of artifacts, and Kane (2011) notes that it was “one of the best documented and most internally coherent features excavated by ARS at the site.” While the upper stratum was disturbed during construction, the subsequent strata were collected undisturbed. ARS excavators

initially believed the pit to potentially be a privy of Chinese origin (Roop et al. 1988:21-22) and Laffey (1994:10-11) notes that it could be associated with either the 1866-1870 or the 1871-1887 Chinese occupation at the Market Street Chinatown. ARS archaeologists specifically noted significant amounts of Chinese artifacts and pig bones following excavation of this feature. Several Stanford student papers utilized material from this feature as well, including toothbrushes (Douglas 2007) and ritual objects (Kane 2007). This feature was also the subject of Henry's (2012) more extensive faunal analysis discussed above.

Feature 86-36/7 was initially designated by ARS as a wood-lined trash pit, but it was later reinterpreted as a wood-lined cistern during excavation (Roop et al. 1988:24-25). Though only the south and west walls of the feature were fully intact, ARS archaeologists noted that both they and the floor of the feature were well-constructed and made of redwood. Feature 86-36/7 was excavated in four stratigraphic levels with the two uppermost levels showing disturbance from construction, and the feature measured 3m in length, 2m in width, and 1.5m in depth. While Laffey's (1994) historical analysis suggests the feature could range in date from the 1850s to 1880s, Kane (2011) notes that even if the feature was constructed prior to the Chinese occupation of the Market Street Chinatown the infill of the feature could easily have occurred after that. While the feature has been classed as a "mixed" deposit by Laffey, the presence of cuttlefish and other imported Asian animal remains suggest that the fill within the feature was deposited by the Market Street Chinatown's residents.

Feature 86-36/8 was described by ARS archaeologists as an unlined bone pit of Chinese origin (Roop et al. 1988:26). This feature was not collected in multiple strata as it had only a single level of loose, yellow silt containing copious amounts of porcine remains and artifacts of Chinese origin. This feature measured 1.44m in length, 1.48m in width, and .5m in depth,

making it significantly smaller than either 86-36/5 or 86-36/7. Laffey (1994:10-11) places this feature adjacent to the pork roasting furnaces, highlighting the potential for remains from activities taking place there to be deposited in this and other nearby features.

Feature 86-36/13 is different in nature from the other three tenement-related features, and it was described by ARS archaeologists as “a wood structure, possibly either a Spanish or a Chinese dwelling” (Roop et al. 1988:31-32). The feature had wooden walls on the west, east, and south sides, and a partial wooden floor, and it measured 2.3m in length, 3.4m in width, and .4m in depth. The material within the feature was excavated in four stratigraphic levels and contained numerous artifacts including Chinese ceramics, faunal remains, and seeds. Layer 1, the primary level in the feature, lay directly on top of a wooden floor. The feature is particularly notable as it is one of the only primary contexts excavated from the Market Street Chinatown, as most other features are trash deposits representing secondary disposal of waste materials. As with Feature 86-36/7, Laffey (1994:8) suggests a possible date range from the 1850s to the 1880s for this feature, but the presence of materials imported from China including yellow croaker bones indicate that minimally it was filled following Chinese occupation of this area of the site.

Merchant Contexts

The six merchant contexts used in this study are more widely distributed through the site than are the tenement contexts. The first three merchant contexts, Features 85-31/6, 85-31/13, and 85-31/18 are all located east of Ah Toy Alley in an area that was at the rear of several stores, most of which were in wooden buildings but one of which was housed in an adobe structure from the Mexican era known as the Bernal Adobe (Laffey 1994:7). These stores were considered to be the commercial heart of the Market Street Chinatown and they served as housing for

merchants, their families, and their workers. Although this area is nearby a tenement structure, trash from this building was more likely disposed of further south in Loci 3. Feature 85-31/28 is located west of these three features, and is in a rear passageway between store buildings that fronted onto Ah Toy Alley. Features 86-36/6 and 86-36/18 are both located in the northwestern portion of the Market Street Chinatown, with 86-36/18 being in the far western corner of the site and 86-36/6 directly southeast of it. These two features are associated with the area known as the Brick Chinatown, the portion of the Market Street Chinatown first rebuilt following the 1870 fire and made of brick to better fireproof it. These features would thus have either been associated with the businesses and residences located in this area of the site, or to prior Chinese habitation pre-dating the 1870 fire.

Feature 85-31/6 was a small unlined trash pit in close proximity to the Bernal Adobe (Laffey 1994:15; Roop and Flynn 1988:6). The feature was excavated in three strata, and it was marked by a heavy concentration of artifacts including many of Chinese origin. The feature measured 0.17m in length, 0.17m in width, and 0.09m in depth, making it much smaller than many of the other trash pit features excavated at the Market Street Chinatown. It is likely associated with one of the Chinese merchants operating out of the Bernal Adobe or an adjacent building, and it thus likely reflects both business and domestic practices.

Feature 85-31/13 was a wood-lined trash pit designated by ARS archaeologists as Chinese due to the large number of artifacts of Chinese origin it contained (Roop and Flynn 1988:9). The feature was excavated in four strata, and it contained heavy concentrations of porcine bone, earthenware ceramics, and a variety of Chinese artifacts including a Chinese coin, opium pipe fragments, and a jade ornament. The feature was also noted by ARS archaeologists as containing large numbers of fish bones. Laffey (1994:15) suggests the feature could be

associated with either the businesses in or around the Bernal Adobe or with cleanup following the 1887 arson fire. Kane (2011) discounts the latter possibility as the feature does not contain demolition debris, and it is most likely that this feature relates to businesses operating in this area.

Feature 85-31/18 was a redwood-lined pit directly adjacent to the southeast corner of the Bernal Adobe. ARS archaeologists designated the feature as Chinese owing to the significant amounts of material of Chinese origin it contained including opium pipes, a crystal amulet, gaming pieces, Chinese ceramics, and even several leather shoes (Roop and Flynn 1988:12). The feature was excavated in three stratigraphic levels and measured 1.8m in length, 1.2m in width, and 0.9m in depth. This feature was the largest of all the 85-31 features based on the number of artifacts recovered, and these materials have been extensively drawn upon for Stanford student research projects. Laffey (1994:15) notes this feature's spatial relationship to the Bernal Adobe which housed several businesses including merchandise companies, a grocery store, and restaurant, and the material in this feature likely relates to business and domestic practices occurring in these or other nearby stores.

Feature 85-31/28 was designated as an unlined trash pit of Chinese origin by ARS archaeologists based on its contents which included a variety of Chinese-produced artifacts (Roop and Flynn 1988:17). Unfortunately, as Kane (2011) notes this feature has little in the way of recorded information outside of the collected artifacts themselves, and thus little is known of its excavation history. However, this feature offers potential insight into life in the Market Street Chinatown as it is one of only a few features in this area of the site. This makes it worth analyzing, despite its general lack of documentation.

Feature 86-36/6 was an unlined circular trash pit designated by ARS archaeologists as of Chinese origin (Roop et al. 1988:22-23). It was excavated in three stratigraphic levels, with the upper level being noted as containing primarily brick fragments, Layer 2 containing porcine remains and Chinese artifacts in an ash and charcoal matrix, and Layer 3 containing a large concentration of Chinese artifacts. The feature measured 1m in length, 0.8m in width, and 0.6m in depth. Laffey (1994:8) notes that as mapped by ARS, the feature was under the border of the 1871-1887 Brick Chinatown, thus suggesting that it pre-dates the first fire that destroyed the Market Street Chinatown. However, both Laffey and Kane (2011) caution that this feature's location may be slightly inaccurate and it could fall outside of this border making its association with the first Market Street Chinatown tenuous. Either way, it certainly relates to one of the two Chinatown occupations between 1866 and 1887.

Feature 86-36/18 was a redwood-lined pit containing European and Chinese artifacts, faunal remains, and charcoal and brick fragments (Roop et al. 1988:35-36). The feature was excavated in three horizontal cells, each having distinct stratigraphic levels assigned to it which are variously described as "Level" or "Layer" in field and lab records (Kane 2011). The feature measured 2.7m in length, 1.3m in width, and 1m in depth, and its western wall had a thin ferrous metal exterior lining, which was taken by ARS archaeologists as evidence that the pit had been a "rat-proofed" storage compartment. Laffey (1994) does not specifically discuss this feature, but Kane notes that the location of Feature 86-36/18 was near several Chinese owned businesses, a Chinese Theater, and (from 1884-1887) a tenement lodging structure.

Methods

Faunal remains and soil samples were already sorted by ARS archaeologists and Stanford archaeology students for all of the above features, and thus I only personally prepared these materials for shipment from Stanford University to Indiana University (for faunal remains) and the University of Massachusetts Boston (for soil samples and subsequent macrobotanical analysis by Dr. Virginia Popper). I shipped the entirety of the faunal assemblages from each feature for analysis, though in some cases I ultimately omitted contexts with obvious modern disturbance. The following describes the methods used for the analysis of all faunal remains, as well as a brief discussion about combining faunal and floral data. The methods utilized for the botanical analyses by Popper (2014, 2015) are presented in Chapter Eight.

Zooarchaeology

The data presented in this dissertation were collected by the author using standard zooarchaeological methods (e.g., Klein and Cruz-Urbe 1984; Reitz and Wing 2008). All specimens were identified to the most precise taxonomic classification possible through the use of skeletal landmarks and general osteological form. In all but a few cases this was accomplished with the aid of modern, known comparative specimens, though in a small minority of specimens for which comparative samples could not be obtained photographic images and manuals were used to arrive at an appropriately conservative taxonomic designation (e.g., Gilbert 1990; Gilbert et al. 1985). The majority of the comparative specimens utilized in this study are curated in the comparative skeletal collection housed at Indiana University's William R. Adams Zooarchaeology Laboratory, and these were supplemented with numerous fish specimens from the North American Pacific Coast and from China collected for the express purpose of this study.

I assigned specimens to the most precise taxonomic level possible, and in some cases species level identifications could be easily made while in others the identification is at the genus, family, or even class level due to heavy fragmentation of individual bones, lack of diagnostic landmarks on specimens, or extreme osteological similarities between closely related taxa. This is particularly true in the case of fish remains, especially those of members of the same family such as rockfishes, minnows, and others; in these cases I followed zooarchaeological standards of classifying these remains at higher taxonomic levels to acknowledge the extreme similarities in osteological form between at the species or genus level (e.g., Gobalet 2001; Gobalet and Jones 1995). Mammals were not immune to this problem, either, as exemplified by the identification of specimens as members of subfamily Caprinae rather than as a species of sheep or goat due to the similarities between these taxa (Zeder and Lapham 2010). I also employed mammal and bird size classes in the case of skeletal remains that could be identified to class but not to a lower designation. In the case of mammals, I use extra small mammal (small rodent sized), small mammal (raccoon and cat size), medium mammal (pig and goat size), and large mammal (cow size) where appropriate. For birds I employ a similar system, with Aves 1 (robin size), Aves 2 (duck/chicken size), Aves 3 (goose size), and Aves 4 (swan size). Finally, due to the propensity of Anatidae (duck family) remains that could not be identified to species, I developed a size grading system specifically for this family: Anatidae 1 (duck size), Anatidae 2 (goose size), and Anatidae 3 (swan size). Regardless of taxa, in all cases I kept identifications conservative as it is better to identify a specimen at a higher taxonomic level than to misidentify it at a lower level.

In addition to taxonomic designation, I also recorded the skeletal element each specimen derived from, the portion and subportion (segment) of the element present, the symmetry (side)

of the element, any taphonomic or butchery modifications present, and the weight in grams. Skeletal part names are those considered standard in zooarchaeology, and all fish skeletal names (which can differ widely depending on source) match those given by Cannon (1987). All portion and segment designations rely on anatomical directions to describe the section of bone present. These data are used in discussions of the skeletal parts represented at the site. Skeletal part representations can be used to explore a variety of topics including meat distribution within and between communities, class, ethnic, or other differences restricting access to particular parts of animals, and culinary preferences for individual cuts of meat for a wide range of reasons (e.g., Huelsbeck 1991; Lyman 2008; Reitz and Wing 2008). Zooarchaeologists typically perform skeletal part representation analysis by either qualitatively assessing which skeletal elements are either over- or under-represented in relation to their representation in a whole animal, or more preferably by quantitatively normalizing the number of recorded elements to the number of elements in a whole animal to produce numerical values demonstrating the degree of over- and under-representation across elements (Reitz and Wing 2008:213-232). While useful in determining broad patterns in the differential use of meat cuts, skeletal part representations are directly affected by fragmentation of elements through taphonomic or butchery process (generating higher counts of individual parts), relative ease or difficulty in identifying certain elements to species (e.g., medium mammal ribs versus pig rostrum), differential butchery patterns which increase counts of particular elements in a non-uniform manner (e.g., sawing a femur into steaks versus cooking a humerus whole), and mathematical problems that arise from the fact that the number of bones found in particular parts vary greatly across species (e.g., pig multiple pig metapodials versus a single fused cow metapodial). Thus, while skeletal part

representations are valuable for zooarchaeological studies they do present difficulties in calculation and interpretation.

I also recorded taphonomic data for each specimen, which provides valuable information about the environmental and cultural impacts affecting the preservation of faunal remains. The taphonomic data I recorded include burning, weathering, and rodent/carnivore gnaw marks. Burning data are based off of color-based stages and were recorded with numerical values (Crader 1984a, 1990): 1 (black/carbonization or sooting), 2 (grey/incomplete oxidation), 3 (white/calced), and 4 (white and black, indicating different levels of burning on individual parts of a specimen). Generally, black bones correlate with low temperature sooting while calced bones indicate exposure to high temperature fires for long periods of time. Typically speaking, limited sections of carbonized bone may be taken as evidence of cooking or roasting over a fire, while calced bones are often produced through trash burning and waste disposal in hearths or other controlled situations (e.g., Crader 1984b, 1990). The arson fire that destroyed the Market Street Chinatown would also have produced significant amounts of burning on any faunal remains exposed to the fire, and this would most likely be represented by large amounts of black or grey bones within deposits containing significant amounts of architectural demolition debris. Weathering was generally absent in the assemblage, though surface damage caused by exposure was recorded as present in the few instances it was noted. This suggests the quick deposition and burial of faunal remains from the Market Street Chinatown, which follows with the use of formal trash pits for waste disposal seen in the community. Rodent and carnivore gnaw marks were recorded as either present (1) or absent (0), and they are assumed to indicate the activity of these animals in the presence of faunal material at some point before it was covered with other debris. As with weathering, the rates of rodent and carnivore gnawing were

relatively low and suggest a short exposure of faunal material before burial or being covered in trash pits. Four kinds of butchery marks were recorded: cuts, saws, chops, and shears (see Crader 1990; Landon 2005; Reitz and Scarry 1985). Any specimens with butchery marks were recorded as butchered and the total number of each kind of mark was recorded in separate data fields per butchered bone. Thus, a single pig femur with 25 cut marks, 3 chops, and a shear would be first recorded as being butchered and then the count of each kind of butchery mark added to relevant data categories. I also recorded the weight of each specimen in grams using a MyWeight iBalance i201 scale capable of accurately measuring in .01g increments, and the resulting weights are used as a rough indicator of taxonomic abundance and to calculate sample biomass measures.

Throughout the dissertation, I present the relative abundance of individual taxa using two standard zooarchaeological measures: NISP, or the number of identified specimens for each taxa; and weight in grams. Each of these methods suffers from individual weaknesses, but taken together they provide a stronger basis for considering the relative importance of individual taxa (Grayson and Frey 2004; Lyman 1994, 2008; Reitz and Wing 2008). For instance, NISP is directly related to the level of fragmentation caused by cultural and environmental factors within a given assemblage, differential preservation between fragile and robust skeletal elements and large and small taxa, difficulty or ease of identifying individual skeletal elements, and the number of total bones in the skeletons of different taxa. NISP also tends to downplay the importance of rare or difficult to identify taxa, and it is usually not appropriate for direct comparisons between taxa of wildly different sizes (for instance, twenty rabbit bones would likely not have provided as much meat as five cow bones).

Additional measures are sometimes used to mitigate the problems presented by NISP. The most common derived measure typically utilized is the minimum number of individuals

(MNI), a calculation of the number of animals necessary to create a given assemblage. MNI solves some of the problem of comparing different-sized animals by calculating an estimated number of whole animals represented in an assemblage, which can then be correlated to estimated live weights or sizes to better understand taxa importance. However, MNI overemphasizes the importance of rare taxa (an MNI of one based on a single deer bone is equally weighted against an MNI of one based on 250 fragmented pig ones that lack overlapping elements) and requires extensive amounts of time to accurately calculate for large assemblages. As a derived measure, MNI is also directly related to decisions made by zooarchaeologists and it must be recalculated based on the specific ways that faunal assemblages are broken down into study units; it is entirely possible and indeed likely to have a higher total MNI when adding multiple features' values together than when simply calculating a site-wide MNI from an aggregated dataset. Finally, and most importantly for this study, MNI measures inherently assume that whole animals are the units of primary importance, but skeletal part representations routinely demonstrate that individual portions of animals are traded and distributed as separate units. This is particularly true of historic sites with industrialized meat production and distribution infrastructure where primal cuts and consumer portions dominate the meat trade making MNI measures problematic. In response to the unique nature of industrialized meat distribution, historical zooarchaeologists (and some prehistoric zooarchaeologists) developed and at times utilize minimum number of elements (MNE) or minimum number of cuts (MNC) values, which attempt to calculate the number and relative importance of consumer cuts rather than whole animals (Huelsenbeck 1999). In cases where MNE or MNC values are used, fish and birds are often still treated with MNI values as they were often cooked and consumed as whole animal units (Landon 1996). However, Lyman (2008) has shown that these measures are

typically not statistically different than simple NISP calculations, and thus I have opted to rely primarily on NISP as well as skeletal part representations to explore taxonomic and skeletal element importance in the diet.

Finally, weight and its related derived measure of sample biomass are often used to help account for the variation in sizes and weights of animals of different ages and across different taxa. While NISP gives equal weight to a whole beef femur and a small fragment of a rabbit femur, weight and sample biomass both demonstrate the drastically greater importance of the meat that could be removed from the beef femur. While both measures serve similar analytical functions, sample biomass uses unique allometric formulae derived for individual taxa and attempts to provide a method for comparing wildly divergent taxa such as fish, birds, and mammals, all of which have different relationships between skeletal weight and overall meat weight (Reitz and Wing 2008:211). However, sample biomass of raw bone weights is inherently flawed in that it assumes the same amount of meat can be yielded from any skeletal element, and thus 10 kilograms of phalanges will provide the same measure of sample biomass as 10 kilograms of femurs, despite the femurs likely representing more true meat weight. Weight and sample biomass measures are both dependent on many of same shortcomings that influence NISP, especially those which affect the ability of zooarchaeologists to accurately assign taxa designations to highly fragmented specimens. Given the theoretical problems with sample biomass I utilize weight measures to provide an ordinal ranking of taxa where appropriate (Lyman 2008).

Combining Zooarchaeology and Paleoethnobotany Data

Archaeological analyses tend to emphasize individual material classes, and while this allows for specialization and in-depth study of specific artifact types it also introduces unnatural

divides that hinder attempts at holistic studies of past cultural practices. In the case of archaeological food studies the most common divide is seen between specialists studying faunal and floral remains, and this often results in meat- and plant-based culinary practices being interpreted in isolation rather than as parts of a complete culinary system. This criticism can also be extended to the lack of integration between studies of ecofacts (plant and animal remains) and food-related artifacts, including ceramic storage and cooking vessels, cooking implements, and serving vessels (but see Atalay and Hastorf 2006; Pezzarossi et al. 2012 as counter-examples). There are practical concerns of adequate training and time and budget constraints that often limit the collection and integration of these different kinds of data, however, even where these datasets are available they are often treated as standalone studies in isolation. This is particularly true of CRM studies that rely on contracted specialists to analyze particular material classes (e.g., faunal, floral, etc.) and do not usually have budget support for further integrative studies outside of a general synthetic report that is not typically written by an archaeologist with specialization in food studies. Thus, while including multiple analyses helps generate additional data for future studies in addition to the insights gained from single-material type analysis, the segmented nature of many archaeological projects often leads to an artificial divide between plant- and animal-based dietary practices.

Archaeologists have recently begun to make promising initial efforts to combine faunal and floral datasets in more thoughtful ways. VanDerwarker and Peres' (2010) edited volume *Integrating Zooarchaeology and Paleoethnobotany* provides the first systematic treatment of the subject, and individual authors provide case studies of integration between these two kinds of data. Of particular note, Peres (2010) and VanDerwarker (2010) individually note the inherent difficulty in quantitatively combining faunal and floral data owing to different methods of

reporting quantities and abundance (e.g., NISP and MNI vs counts, density, and ubiquity). Given these hurdles, they argue that simple measures such as correlation of individual faunal and floral ingredients, ubiquity/rarity indices, diversity of ingredients, and spatial distribution of plant and animal taxa across a site may prove to be an effective way to systematically combine these data sets and approach food and flavor combinations in the past. Unfortunately, the nature of faunal and floral data measures makes comparing the relative importance of individual plant and animal taxa in the diet difficult. Chapter Eight combines faunal and macrobotanical botanical, and it utilizes simple measures of ubiquity and rarity to combine these datasets. While it also employs standard zooarchaeological measures including NISP and MNI, these are only used for comparison of the importance between individual animal taxa.

Research Goals

The following chapters draw upon zooarchaeological data as collected above to address two broad, overarching research goals: (1) understanding the many intersections of food and migrant identities in the Market Street Chinatown, and (2) exploring the ways that community residents' food practices connected them to other people and places. Because migrant food practices are rarely mapped onto new locales in their entirety, I first explore the specifics of localization and solidification of Chinese migrant food practices in Chapter Five. This chapter uses the lives of Chinese railroad workers, a highly mobile labor group who experienced life in urban Chinatowns as well as rural communities and railroad camps, as a case study to examine some of the constraints and opportunities that Chinese migrants encountered in relation to their food practices. Rather than emphasize strict models of continuity and change, I highlight how Chinese railroad workers made practical choices based on local economic, environmental, and

social conditions. Further, my aim is to emphasize the variability of food experiences within individual lives as workers moved from camp life to Chinatowns between jobs; while this step-by-step shadowing of individuals is not usually possible in archaeology, conceptualizing Chinese migrants as mobile individuals with myriad experiences helps to emphasize not only the internal diversity within communities but also the potential for multiple meanings for individual foods and food practices.

Chapters Six and Eight both explore the connections between food and migrant identities in the Market Street Chinatown from slightly different positions. Chapter Six uses in-depth analysis of the faunal remains from the site to examine the decisions Chinese migrants made in implementing food practices. Here I draw on notions of transnational identities that connected Chinese migrants to both the United States and their home villages (Hsu 2000; Ross 2013a; Voss 2016), and I combine this with the extensive literature on the study of migrant food practices which emphasizes the myriad roles food plays in creating and maintaining cultural memories, bridging connections to home, and providing opportunities for social engagement between and within communities (Janowski 2012a). Ultimately, Chapter Six highlights the hybridity that defines migrant lives and it challenges models of the traditional often seen in the archaeological study of Chinese migrant foodways. Chapter Eight focuses specifically on the importance of community identity in the face of growing anti-Chinese sentiment, and I use both faunal and floral data (the latter collected and analyzed by Dr. Virginia Popper) to demonstrate that while subtle differences within community food practices existed the overall dietary patterns of both tenement and merchant households were quite similar. While social differences certainly existed within the community along lines of labor role and class, I argue that broadly shared food practices served as a point of commonality between the Market Street Chinatown's merchants

and laborers. Taken together, these two chapters show how Chinese migrants negotiated identities that connected them to their home villages and to the social fabric of San Jose, while also providing practical benefits through increasing community cohesion in the face of anti-Chinese violence.

Finally, Chapter Seven directly addresses the goal of exploring food-driven connections within the Market Street Chinatown through an in-depth analysis of fisheries engagement by the community's residents. Fish, which frequently have highly specific environmental needs, were important in southern Chinese cooking as both fresh and salted ingredients. While 19th-century transportation technology did not allow for the long-distance trade of fresh fish, salt fish were extensively traded as part of the transnational flow of goods between China and the United States (Hsu 2006) as well in local and regional trade networks in North America. Ultimately, I use the fish species present in the Market Street Chinatown faunal collection to demonstrate how the community was directly connected to local freshwater and marine fisheries, regional fisheries throughout North America, and both marine and freshwater fisheries in China. While this chapter is in some ways a study of the increasing globalization of food and resource extraction from the natural environment in the late 19th-century, it also serves as evidence for how Chinese cooking and consumer practices were principal drivers in the sustained connection between migrant Chinese communities and the gold mountain firms which connected them to home villages. Finally, while the fish data demonstrate multiple connections at multiple scales they tell only part of the story; future studies should consider similar approaches with additional material types.

Chapter 5. Zooarchaeology, Localization, and Chinese Railroad Workers in North America

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Introduction

In the last half of the 19th century, nearly 380,000 Chinese people arrived in the United States (Takaki 1998:32). Many coalesced into communities known as Chinatowns, while others found themselves in rural locales as miners, agricultural workers, and railroad workers. Like Chinese migrants around the world, those in the United States brought their own unique food beliefs and practices from their home region, primarily Guangdong Province in southern China. Though varied, these p typically centered on distinction between starchy foods such as rice or noodles (*fan*) and vegetable or meat side dishes (*tsai*) (Chang 1977: 6–7, 10; Simoons 1991). Southern Chinese food practices were characterized by flexibility and adaptability, and a wide variety of plants were consumed alongside popular meats, including pork, chicken, duck, and fish (Chang 1977:8). Beef was rarely consumed in 19th-century China. A rich history of the medicinal use of foods for a variety of purposes also existed, and the continuation of these practices in the United States is explored elsewhere (Simoons 1991; Heffner 2013, 2015).

Scholars of Chinese cuisine note that the spread of Chinese foodways usually involves initial farming of Asian staple crops, followed or paralleled by the creation and maintenance of supply networks for important culinary and medicinal food items, and ultimately the opening of restaurants catering to local populations of transplanted Chinese (Pilcher 2006b). Superficially, such a narrative suggests attempted wholesale re-creation of Chinese culinary practice and does

not necessarily factor in the simultaneous mixing of familiarity and novelty that quite often occurs in food practices among immigrant groups (Tan 2011). Nor does this model encompass the range of experiences immigrants encountered in a single country or geographic region. Instead, this narrative is more productive when focusing on what Tan (2011) refers to as “localization,” or the flexibility of Chinese and other immigrants in adapting their food practices to local economic conditions, the availability of ingredients, and exposure to new foods and cooking methods. While Tan’s concept refers specifically to Chinese food practices on a national level within a broader Chinese diaspora, the concept can be productively applied to understand differences across multiple contexts within a single nation as well.

Understanding food practices and the process of food localization among immigrant groups can provide more than a simple understanding of economic conditions at a specific site. The study of foodways is a particularly powerful way to explore daily lives of individuals within different social contexts, given the importance of food in daily routine, social bonds and boundaries, and identity marking (Hastorf and Weismantel 2007; Twiss 2007). Encountering new people, places, and foods provides immigrants opportunities and challenges, allowing creative repositioning within and between groups while also constraining food choices to subsets of familiar food items and practices from home. This can lead to a middle ground between cuisine loss and maintenance, resulting in the “solidification” of food items (Janowski 2012a). Often termed *soul foods*, solidified foods remain culturally important for nostalgia, memory, or group cohesion despite often drastic changes in other aspects of cuisine. Thus, it may be best not to think of an archaeological approach to foodways as the study of the maintenance or loss of food practices, but instead as a series of choices, opportunities, and constraints dependent on local conditions and strategies.

The Zooarchaeology of Chinese Railroad Worker Sites

This chapter uses zooarchaeology, the study of animal bones in archaeological contexts, to explore the food practices of Chinese railroad workers in the United States. To interpret archaeologically recovered animal bones (Figure 5-1), zooarchaeologists draw on standard laboratory methods, including the identification of individual taxa and skeletal elements, as well as the generation of measures comparing species representation in past diets, such as the Number of Identified Specimens (NISP), the minimum number of individuals (MNI) per species present, and the theoretical meat yield or biomass that recovered animal bones represent (Reitz and Wing 2008). By comparing these measures and combining them with taphonomic and butchery modification data, zooarchaeologists can address such topics as differential use of animal taxa and cuts of meat by past peoples, animal husbandry practices, dietary reconstruction, and the symbolism and meaning of animals. Unfortunately, cross-site comparison can be difficult if different identification standards and quantification methods are utilized, and as is the case in this study, comparisons are often qualitative rather than quantitative in nature. Still, zooarchaeological analysis can examine the active food practices of Chinese railroad workers and the constraints they encountered based on local conditions.

Maintaining flexibility in approaching food differences among Chinese railroad workers is important for several reasons. First, since railroad construction requires continual linear movement, Chinese railroad workers encountered an ever-changing series of physical and social environments with potentially different food availability. This is useful to consider in regards to the availability of wild animals, as well as potential variability in the price of domestic meats. Second, Chinese migrants in the United States tended to use larger Chinatowns as home bases



Figure 5-1: Representative faunal remains from the Market Street Chinatown, San Jose, California. Left, cow long bones with saw marks; middle, pig maxilla, pig jugular process and occipital condyle with cut marks, pig cervical vertebra sheared in half, pig humerus; upper right, rat bones; middle right, bird bones, including two chicken tarsometatarsi sheared with a cleaver on right; bottom right, fish bones and turtle carapace.

to return to during holidays or between periods of work (Voss and Allen 2008; Voss 2013; Praetzellis and Praetzellis 2015). Because of this, it is highly likely that some railroad workers still spent considerable time in Chinatowns away from primary railroad-related contexts. Third, Chinese railroad workers were not always railroad workers the entire time they were in the United States (Sunseri 2015). Instead, Chinese people in the 19th-century United States found themselves transitioning between different labor roles depending on job availability, local political and economic conditions, and personal choice. Any consideration of Chinese railroad worker foodways must address this fluidity.

Given the above reasons, this article broadly defines railroad worker–related sites by including line and lumber camps, as well as urban and rural Chinatowns. This allows exploration of food choice and localization in a number of environments experienced by, in many cases, the same individuals at different points in their lives. The next section provides a summary of different Chinese railroad worker–related contexts and representative zooarchaeological data recovered from them. These data are examined in light of the concepts of localization, solidification, and the range of food experiences encountered by Chinese railroad workers throughout their lives. Finally, suggestions are offered for future zooarchaeological studies of Chinese railroad workers that address the ephemeral nature of data at associated sites and that produce a more robust, holistic understanding of Chinese railroad worker food practices.

Zooarchaeological Data from Chinese Railroad Worker Sites

This section presents representative data from several site types associated with Chinese railroad workers: railroad line camps, lumber camps, and rural and urban Chinatowns (Table 5-1). While not comprehensive, this review allows for understanding of Chinese railroad worker food practices and localization across a variety of site types. Future studies should consider increasing the variety of contexts to include agricultural, mining, and other sites to further expand understanding of the food practices of Chinese migrants and workers in the United States.

Railroad Line and Lumber Camps

Before examining data from railroad contexts, it is important to review food supply in railroad camps. As part of labor negotiations, the Central Pacific Railroad supplied food for sale to Chinese laborers, usually through the contractor responsible for hiring Chinese work crews

Site Name	Type	Coll. Method	Assemblage Size	Quantification ^a
V&T Railroad	Line camp	Survey	Small/unknown	NISP
V&T Railroad	Line camp	Survey/excavation	76	NISP
Mono Mills	Large lumber camp	Excavation	368	NISP
Spooner Summit	Small lumber camp	Excavation	36	NISP
Woodland, CA	Rural Chinatown	Excavation	717	NISP, MNI, ^b meat weight
Sandpoint, ID	Rural Chinatown	Excavation	12,785	NISP, MNI, biomass
Riverside, CA	Urban Chinatown	Excavation	40,000+	NISP, meat weight
Sacramento, CA	Urban Chinatown	Excavation	6,467	NISP, MNI, ^b meat weight

Table 5-1: Zooarchaeological data used in this chapter.

^aAbbreviations: MNI, minimum number of individuals; NISP, Number of Identified Specimens.

^bMNI not calculated for large mammals.

(Spier 1958b; Krause 1969). The situation was likely similar on smaller lines as well. Crews were typically composed of no more than 30 individuals who cohabitated and pooled resources to pay for cook and communal food supplies (Rogers 1997). Due to culinary demand by Chinese railroad workers, food was sold from mobile stores housed in railcars near the end of the tracks. As Nordhoff (1873:190) notes for the Merced Railroad, these stores were well-stocked with a variety of ingredients:

dried oysters, dried cuttle-fish [sic.], dried fish, sweet rice crackers, dried bamboo sprouts, salted cabbage, Chinese sugar (which tastes to me very much like sorghum sugar), four kinds of dried fruits, five kinds of desiccated vegetables, vermicelli, dried sea-weed, Chinese bacon cut up into salt cutlets, dried meat of the abalone shell, pea-nut oil, dried mushrooms, tea, and rice. They also buy pork of the butcher, and on holidays they eat poultry.

Access to mobile, rail-supplied stores allowed Chinese workers to access more exotic food items available in larger, distant Chinatown communities as they moved along the line during rail construction (Gardner 2004).

Despite the large number of Chinese workers on the Central Pacific and other lines, scant zooarchaeological data exist from these sites. This is partly due to the short occupancy of railroad camps and the reliance of Chinese workers on tents rather than more permanent structures (Furnis and Maniery 2015). Further, as discussed by Merritt, Weisz, and Dixon (2012:676), there have been little formal archaeological survey and analysis of line camp sites and their assemblages. Even for surveyed sites, faunal analysis has often not been completed. Still, a small sample of zooarchaeological data exists from primary railroad sites that can provide insight into railroad worker food practice.

One of the few examples of zooarchaeological data from Chinese railroad workers comes from line camps along the Virginia and Truckee (V&T) Railroad, which was constructed around 1870 (Wroblewski 1996; Rogers 1997). Wroblewski's (1996) survey of the V&T line between Virginia City and Mound House, Nevada, identified two camps used by Chinese workers and provides limited but important faunal data. While only a handful of specimens were recorded, Wroblewski notes the identification of pig and cow bones within the work camp assemblages. Although the scant size of the assemblage and the few bones identified to species make quantitative analysis impossible, that both pig and cow are present indicates Chinese workers at railroad camps consumed both pork and beef.

Additionally, Rogers (1997) provides data associated with an 1872 railroad camp located between Reno and Carson City, Nevada, also along the V&T Railroad. While no faunal remains were noted during surface survey, 94 faunal specimens were recovered from a feature likely

associated with food preparation (Rogers 1997:31). Seventy-six specimens were unidentifiable mammal remains, and the remaining 18 were vertebrae from trout or chub-sized fish. The fish bones suggest line fishing in local streams, rivers, or lakes by Chinese railroad workers, a not unheard of event. As Merritt and colleagues (2012) note, Chinese laborers were observed fishing for suckers, chubs, and lake trout in the Clark Ford River while working from the Noxon Line Camp in Montana (*Spokane Falls Chronicle* 1882), and a lake near the Summit Camp in Placer County, California, is believed to have been stocked by Chinese workers to provide a ready supply of catfish (Baxter and Allen 2015). These examples illustrate collection of wild animals to supplement foods available in railroad stores, and they suggest that fresh fish was important enough to Chinese workers to commit time to procuring it. Additionally, Rogers's data illustrate potential differences in the ability of archaeologists to recover faunal material from surface survey versus excavation in railroad worker contexts.

Beyond Chinese railroad line camps, zooarchaeological evidence related to railroad workers also exists from lumber operations with direct linkages to the railroad and mining industries. Lumber companies, in some cases directly owned by the railroads, frequently hired unemployed Chinese railroad workers as laborers for timbering operations supplying wood for mines, general construction, and the building of train trestles, bridges, railroad cars, and railroad ties (Chung 2003:3; Sunseri 2015). As with railroad workers, Chinese laborers in lumber camps procured food items from trade networks and nearby Chinese communities, although the level of food supply and diversity of items available likely varied based on factors such as population size.

Ongoing archaeological investigations at Mono Mills, a multiethnic town occupied from 1880 to 1915 to supply lumber to nearby Bodie, California, provides a case study illustrating

foodways within a railroad-related lumber context. Owing to existing labor relationships with railway investors, Chinese workers at Mono Mills were hired to construct a rail line from nearby Bodie to Mono Mills and to maintain this line and work in the lumber mill (Sunseri 2015). Ongoing analysis of a faunal assemblage containing 368 specimens from a Chinese household at Mono Mills shows roughly equal numbers of identified specimens for pig (n=48) and cow (n=49) remains, along with other animals (Charlotte K. Sunseri 2014, pers. communication). The relatively even ratio between pig and cow suggests increased reliance on beef by Chinese residents of Mono Mills; however, the sample size makes this difficult to argue with certainty. Other animals consumed at the site include cuttlefish, chicken, and locally available wild game, fowl, and fish. Interestingly, while the identified domestic mammal remains show powered saw marks indicative of national, railroad-based distribution networks, documentary evidence from the site suggests supply of meat to Mono Mills by local ranchers and butchers. While preliminary, the faunal data from Mono Mills suggest Chinese engagement in larger trade networks to procure domestic mammals and exotic Chinese ingredients, such as cuttlefish, as well as the use of a range of wild animals to supplement diet.

Solury's (2004) analysis of a wood camp cabin dating from the 1870s to the late 1880s on Spooner Summit in the Tahoe Basin of the eastern Sierra Nevada provides a second, limited set of zooarchaeological data from a railroad-related lumber site. Employed by the Carson and Tahoe Lumber and Fluming Company, the Chinese residents of the wood camp on Spooner Summit supplied lumber for the local mining industry and associated railroads, and they would have had access to Chinese goods and food items through their labor contractors and from other nearby Chinese communities (Solury 2004:22). Though only 36 highly fragmented bones were recovered, they provide clues to food practices at Spooner Summit. Several bones, including a

large mammal femur, a pig jaw, and a handful of unidentifiable mammal bones, exhibit saw marks suggestive of nonlocal meat procurement, while at least two smaller femurs show evidence of being split lengthwise with a cleaver. Solury also identified a small mammal rib that possibly could have been from a wild animal consumed for food; however, the lack of butchery marks and species level identification make this difficult to discern. Solury (2004:56) argues that heavy fragmentation of the faunal remains may be indicative of the preparation of soups or stews, and that the general dearth of faunal material at the site may suggest that Chinese residents ate many of their meals at a larger, nearby camp, where they may have consumed more foods prepared in a southern Chinese style. If true, the Spooner Summit case study demonstrates the possibility of differential faunal signatures on a local level in unique, small-scale settings. Furthermore, while in isolation the faunal data speak inconclusively to Chinese foodways at the site, other artifact classes, including botanical remains, ceramics, and metal tools, suggest a mixing of both Chinese and American practices and suggest that Chinese residents at the site adapted their foodways to local conditions.

Despite the dearth of faunal data from primary railroad-related sites, zooarchaeological analysis still provides fruitful insights into the foodways of railroad workers. Data from the camps along the V&T Railroad demonstrate the consumption of both pork and beef, a meat not typically consumed in large quantities in 19th-century southern Chinese cuisine. The trout and chub-sized fish bones identified by Rogers (1997) mirror documentary accounts of Chinese railroad workers consuming fresh fish. Though preliminary, the data from Mono Mills provide perhaps the most informative examination of Chinese foodways in a primary railroad context. Here, Chinese workers consumed local and imported domestic mammals, dried cuttlefish imported from Asia, and a variety of local fowl, wild game, and fish. Although the faunal data

from Spooner Summit are sparse, the possibility that workers consumed different foods at the wood camp and nearby larger camp suggests that Chinese workers' food practices may vary drastically even between sites in close proximity to each other. Taken as a whole, these four studies illustrate some of the ways Chinese railroad workers adapted their food practices to local conditions, including their use of available domestic pork and beef, collection of fresh local fish, and the importation of food items from China. However, none of the assemblages exhibit the variety of species described in firsthand accounts of railroad worker foodways such as that by Nordhoff (1873), and it is clear that additional data from other sites and material types are necessary to fully explore foodways in these rural contexts.

Rural and Urban Chinatown Sites

In addition to primary railroad contexts, zooarchaeological data from rural and urban Chinatown sites provide evidence of Chinese railroad workers' food practices. Many small, rural Chinatowns formed along the routes of railroads as Chinese workers stayed behind to form small communities or arrived via the newly constructed lines. Beyond being populated in part by present and former railroad workers, these smaller communities were central to the distribution of food items to Chinese laborers in nearby railroad and mining camps (Gardner 2004). Larger urban Chinatowns, on the other hand, represented major hubs in food distribution and served as home bases to Chinese laborers working in a variety of industries (Voss and Allen 2008). These communities created initial connections between new Chinese migrants and trade networks and instilled within them the possibility of maintaining Chinese food practices in other contexts, such as railroad line camps. Workers frequently returned to rural and urban Chinatowns for holidays and other occasions, and these visits could reconnect Chinese laborers to a broader community

and provide opportunities to consume food items unavailable in rural contexts. The discussion below draws on data from the Woodland, Sandpoint, Riverside, and Sacramento Chinatowns.

The Woodland Chinatown, established in 1866 and located in Yolo County, California, was linked to the transcontinental railroad in 1869, resulting in an increase in population to nearly 100 individuals by 1880 (Gust 1993:178). Excavation of a cesspool or cellar associated with a Chinese laundry or residence yielded 717 identifiable faunal remains. While pig bones (n=301) significantly outnumbered cow bones (n=45), meat weight calculations show that pork accounted for 40% of the total meat weight compared to 58% for cow (Gust 1993). Interestingly, while only saw marks were identified on cow bones, a roughly equal number of saw marks and cleaver marks were observed on pig bones, suggesting Chinese residents at the site procured pork at least in part from European American butchers. In addition to cow and pig, small numbers of ground squirrel (n=3), cat (n=3), and pond turtle (n=14) bones were identified, with specimens from all three species exhibiting butchery marks. Chicken represents up to 80% of the 221 identified bird bones, with duck (n=36) second and goose, crow, quail, and dove making up the remainder. Finally, 119 bones from a dozen local fish species were identified at the site, with notable taxa including rockfish (n=8), Sacramento perch (n=18), Sacramento sucker (n=10), squawfish (n=12), and the minnow and sucker family (n=48). Taken as a whole, the Woodland Chinatown assemblage suggests that while site residents consumed pork in some quantity, they relied more heavily on beef. They also supplemented their diets with turtle, chicken, cat, fish, and wild animals such as ground squirrel, however, providing a range of meats common to southern Chinese cuisines.

Faunal remains from Sandpoint, Idaho, provide a case study of a much smaller rural Chinese community (Warner et al. 2014). While approximately 1,500 Chinese railroad workers

were in Sandpoint in 1881 constructing the Northern Pacific Railroad, only 9 remained in what locals referred to as “Chinatown” by 1900. Despite this small population, excavation of a laundry in the Sandpoint Chinatown yielded 12,785 faunal remains. While by count pig (n=625) outnumbered cow (n=372) in the assemblage, other measures tell a different story. According to sample biomass, a measure calculating theoretical meat weight from bone weight (Reitz and Wing 2008), beef may have made up nearly two thirds of the meat consumed by Sandpoint’s Chinese residents compared to only one fifth from pork. Additional taxa making up smaller portions of the diet include caprine (n=242), moose (n=1), turtles (n=27), and fish (n=24), as well as a variety of birds primarily consisting of chicken (n=52) and duck (n=18), with smaller numbers of goose (n=1), turkey (n=7), and loon (n=1) identified. Butchery marks suggest significant engagement with European American meat distribution markets, as only 122 total chops and cuts were identified compared to 2,335 saw marks, which are not typically associated with Chinese butchery patterns. Still, a small number of bird bones displayed typical Chinese butchery into small, bite-sized pieces. Of particular note is that most of the Chinese residents of Sandpoint worked in local restaurants, and they may have been procuring meat from their workplaces in an effort to make due with resources at hand (Warner 2012; Warner et al. 2014:64). If this is in fact the case, Sandpoint offers an intriguing example of Chinese people at a railroad-related site consuming large quantities of beef to take advantage of local food conditions while simultaneously maintaining other more familiar culinary practices, including the consumption of large amounts of chickens, ducks, turtles, and fish.

The Riverside, California, Chinatown, established in 1885, has been the focus of extensive faunal study (Collins 1987; Goodman 1987; Langenwalter 1987). Over 40,000 vertebrate specimens were recovered from 14 features at the site, including trash pits and

building basements. Pork bones (n=3,616) far outnumbered those from cows (n=365), and pork accounted for between 60% and 80% of meat weight at the site, while beef represented only 20% to 30% in most features. While most butchery of pig bones could be attributed to Chinese cleavers, cow bones tended to show European American style saw marks and indicate Chinese procurement of this meat from outside Chinatown. A wide variety of additional taxa were identified, including sheep (n=43), rabbits (35), deer (2), pond turtles (n=294), desert tortoise (n=8), and both butchered cat (n=11) and rat (n=7) bones reduced into smaller pieces with a bladed instrument, such as a cleaver. Though not fully identified, 95% of the analyzed bird specimens are thought to be from chickens. House gecko (n=63) and soft shell turtle (n=8) were also identified, both of which have Chinese medicinal uses. The fish remains from the site include local California fish, such as sheepshead (n=15), barracuda (n=59), halibut (n=20), tuna (n=18), and several species of croaker (n=17), as well as a small number of nonlocal fish, including yellow croaker (n=8) and puffer (n=32), both Chinese imports. In total, the Riverside faunal assemblage demonstrates a wider variety of animals than those from smaller sites and conforms more closely to expectations based on southern Chinese cuisine (Simoons 1991) and ethnographic observation of Chinese food practices in the United States (Nordhoff 1873; Spier 1958a, 1958b).

Zooarchaeological analysis of material from the Sacramento, California, Chinatown, dating to the 1850s, provides another example (Praetzellis and Praetzellis 1997). Excavation of the city's HI56 block recovered 5,562 identifiable faunal remains associated with Chinese boardinghouse residents, permanent staff, and merchants. Surprisingly, beef bones (n=1,537) outnumbered those from pigs (n=512), and beef constituted upward of 80% to 90% of the assemblage by meat weight (Gust 1997). While pork accounted for much of the remainder,

smaller quantities of elk (n=17), deer (n=29), and rabbit (n=4) were also present. Bird bones identified in the assemblage included chicken (n=103), turkey (n=29), goose (n=31), duck (n=54), and pheasant (n=1). While butchery patterns generally conform to European American methods, smaller animals, such as rabbits and fowl, appear to have been cut into pieces with cleavers. A total of 2,077 fish remains were identified from these contexts, and important taxa include Sacramento perch (n=1,298), suckers or minnows (n=692), Sacramento sucker (n=35), salmon (n=25), Atlantic mackerel (n=22), and several Chinese species: white herring (n=3), golden threadfin (n=15), snapper (n=13), and sea bream (n=31) (Schulz 1997). Separate analysis of 905 faunal remains from merchant contexts in the nearby IJ56 block yields conflicting results (Praetzellis and Praetzellis 1997:292–293). Here, pig bones (n=622) far outnumber those from cows (n=21), and pork represents nearly 95% of the total meat weight. Only a limited number of bird bones were identified (n=11), and the range of fish species was similar to that of the boardinghouse contexts, with the exception of a high number of bones from yellow croaker (n=163), a highly prized Chinese food fish. Together, the Sacramento data show that, although both merchant and boardinghouse residents used a wide variety of animals in their food practices, including multiple fish and bird taxa, differences do exist. Boardinghouse residents consumed tremendous quantities of beef, whereas merchants dined on pork. Boardinghouse residents, it seems, either adapted their food practices to relatively high local pork prices (Gust 1997) or were provided beef as provision by boardinghouse staff (Praetzellis and Praetzellis 1997:286). Either way, this contrasts with the IJ56 merchants' ability to procure pork in large quantity and shows that merchants and boardinghouse residents adapted their food practices in different ways to conditions in Sacramento.

Taken as a whole, zooarchaeological analysis on Chinatown sites complements data recovered from railroad and lumber camps. Owing to longer occupations, Chinatown communities tend to produce a wider variety of taxa closer to that observed in the documentary record and containing more rare specimens than primary railroad contexts. As in laborer camps, however, the faunal remains from Chinatown sites vary greatly based on local conditions. The Riverside Chinatown's faunal assemblage includes a wide range of commonly utilized in southern Chinese cuisines, while others, such as Sandpoint, demonstrate unexpected attributes, in this case relatively high amounts of beef likely related to residents' jobs in restaurants. Likewise, faunal data from Sacramento shows how Chinese residents differentially practiced foodways in large based on purchasing power.

Localization and the Zooarchaeological Data

The zooarchaeological data discussed above represent a range of contexts Chinese railroad workers encountered in the 19th-century United States. While varying in scale from small work camps to large Chinatowns, these locales share several traits. Of particular note is the fact that none of the sites suggest full abandonment or retainment of traditional southern Chinese food practices. Instead, individuals' food practices varied in relation to the ways that they navigated navigating economic, social, and environmental food constraints that at times led to necessary compromises. Overall, the faunal and documentary data from railroad camps suggest that while Chinese people often had access to a wide range of food options, including many ingredients common to southern Chinese cooking, they also adapted their food practices to local conditions.

When examining the process of localization, several patterns ultimately emerge. Although faunal remains from primary railroad sites are sparse, they offer insight into Chinese engagement with broad food supply networks in both railroad and lumber camps. The Mono Mills case study in particular suggests that Chinese laborers procured meat from both national and local sources, while the remaining assemblages show the general consumption of both pork and beef by workers. The recovery of fish bones from a V&T rail camp (Rogers 1997) and wild game, fowl, and fish from Mono Mills demonstrate Chinese willingness or need to supplement pork and beef with readily available wild animals, a practice mirrored in documentary evidence describing Chinese fishing and aquaculture efforts at railroad camps. Still, ethnographic accounts of food supply to railroad workers reveal a tremendous variety of food items not seen in the archaeological record and suggest that railroad worker food practices regularly utilized a number of imported Chinese ingredients. Railroad and lumber camp data suggest that Chinese laborers consumed familiar foods where possible but maintained flexibility by readily incorporated beef and locally procured animals into their diets. While economic constraints and the availability of ingredients may have had an impact on these decisions, food beliefs, such as general southern Chinese preferences for fresh ingredients, may have motivated railroad workers to seek out wild fish and game when possible.

Even with the availability of imported foods in Chinese railroad and lumber camps, larger Chinatown sites would have still provided residents with greater access to ingredients than in rural areas due to lengthier occupations and populations large enough to support local markets. The variety of animal species present in the Riverside Chinatown illustrates this, as does the comparatively high numbers of turtles, fish, fowl, and other taxa in the Sacramento, Woodland, and Sandpoint faunal assemblages. Despite commonalities in the range of taxa,

zooarchaeological data suggest distinct differences in how Chinese people at each site dealt with local conditions. Riverside residents enjoyed large amounts of pork and were able to procure rare medicinal taxa, such as house geckos. Residents of Sacramento, however, ate varying amounts of pork and beef based on their purchasing power, although they shared similarly wide ranges of fish and other taxa. Food practices in more rural communities were equally varied. Woodland Chinatown residents consumed slightly more beef than pork alongside smaller amounts of chicken, fish, and turtles, while Sandpoint's possibly took advantage of employment in local restaurants to procure beef, which they supplemented with available ingredients that better fit into familiar southern Chinese food practices. Taken together, these four Chinatown sites illustrate localization strategies across sites from large, urban sites to small, rural communities.

Although the above discussion attempts to demonstrate how Chinese railroad workers adapted their food practices at a local level, it must be emphasized that the different contexts discussed in this study were all encountered by railroad workers during their individual lives. When Chinese migrants arrived in the United States, they were first exposed to large, urban Chinatowns before making their way to jobs in railroad construction and other industries. From there they would have visited Chinese communities along the railroad and at times returned to large Chinatowns for holidays and between jobs. As Chinese railroad workers moved between each context, their food practices varied in important ways; workers typically enjoyed more food options in large Chinatowns, while they creatively managed local conditions to maintain some semblance of Chinese foodways even in rural environments. This fluidity in Chinese labor roles in the 19th-century United States has important implications for interpreting food practice and choice when combined with the idea of localization; archaeologists must be cognizant that

apparent differences between sites may be the result of individual context-specific strategies rather than changes in identity or food beliefs.

Conclusion

This chapter provides an overview of zooarchaeological data from Chinese railroad worker-related sites in the United States and presents the concept of localization as a way to frame the lives of Chinese railroad workers in the past. In addition to accounting for the effects of unique conditions at any given site, localization emphasizes fluidity in the lives of Chinese railroad workers as they moved from urban Chinatowns to rural sites and vice versa. Differences in food practices at any given railroad worker-related site are determined more by local limiting factors, including economic, environmental, and social constraints, than concrete changes in food beliefs held by individuals occupying a site. This model, however, is not meant to suggest that variation and change in foodways are always caused by external factors; instead, it implies that short-term differences perceived within zooarchaeological data may simply be evidence of the adaptation of culinary beliefs by a highly mobile group of people moving through a wide array of contexts.

While this study has shown that localization can be a useful framework, it is apparent that it can also be heavily improved upon with additional data. Of greatest importance is addressing the dearth of faunal data from railroad worker-related sites with archaeological survey and excavation. It is also imperative to utilize fine-grain collection strategies to recover remains from fish and other small animals visible in the documentary record but often not recovered in archaeological survey and excavation. Because of the relatively small number of faunal remains recovered from rural Chinese sites, archaeologists should also consider incorporating additional

data sets, including botanical remains and food-related material culture, to provide a fuller understanding of railroad worker foodways. This is only a first step, however, and archaeologists also need to explore how Chinese railroad workers combined these ingredients into dishes and meals. Examining flavor combinations and cuisine decisions may offer insights into the localization of food practices that are not possible to achieve from simple ingredients lists alone. Our understanding of the localization of Chinese food practices may also be extended by including additional site types, such as agricultural and mining camps. Ultimately, a more robust set of data and case studies will allow archaeologists to piece together the daily lives and food practices of Chinese railroad workers in a more systematic and satisfying way and better understand changing food practices among Chinese migrants in the United States as a whole.

Chapter 6. The Myth of the Traditional: Zooarchaeology and Chinese migrant food practices in the United States

Archaeologists have often cast the lives of Chinese migrants in the United States as a balance between tradition and change, wherein migrants attempt to transplant daily practices from home wholesale while navigating social, legal, economic, and environmental impediments along the way. In these models, material goods such as Asian and Euro-American ceramics, opium pipe bowls and tops, American and Asian liquor bottles, and faunal and floral remains come to represent two poles in migrant life: continuity with the home country and change driven by exposure to new ways of living. This is no more evident than in the large body of acculturation studies which developed in Chinese migrant archaeology in the 1980s and which sought to ultimately understand the mixing of Chinese and Anglo material culture found at Chinese migrant sites (e.g., Collins 1987; Greenwood 1980; Langenwalter 1980; Staski 1993, see Voss 2005 for additional discussion). These studies drew heavily on concepts of acculturation employed in anthropology, sociology, and other allied fields, and they ultimately cast Chinese migrant communities as rigid and unchanging through their heavy emphasis on the maintenance of tradition.

Within Chinese migrant archaeology, acculturative models have been increasingly challenged since the mid-2000s (Fong 2013; Praetzellis 2004; Praetzellis and Praetzellis 1997; Ross 2013a; Voss 2005). Voss (2005, Voss and Allen 2008) in particular has argued against these frameworks as implemented within the subfield, and she has demonstrated how acculturation studies have led to an overemphasis on Chinese communities as bounded and insular. Rather than highlighting the heterogeneity within Chinese migrant populations and the myriad ways Chinese people made lives for themselves in North America, acculturative models

instead implicitly cast Chinese communities as monolithic, homogeneous groups attempting to maintain a set of shared practices seen as traditional to China. Beyond stifling the potential for Chinese migrant archaeology to contribute to broader debates on topics such as migration, racialization, and identity (Ross 2013b), these approaches also limit the interpretive ability of archaeologists to frame material practices outside of notions of the traditional. Recent critiques have addressed this deficiency, with arguments from Ross (2013b:3) that material culture can be used by Chinese (and other) migrants to “create and transform identities in particular contexts and to serve particular agendas” and Fong (2013:4) that artifacts from Chinese sites are not simple indicators of tradition-driven ethnic boundaries but instead evidence of “actions that individuals made in order to navigate, subvert, and adapt” to conditions of structural racism inherent in 19th-century life in the United States. Though Fong and Ross both discuss the transplantation of Chinese material practices to North America, they do so while explicitly highlighting the corresponding changes that migration inherently introduces as well as the multiple ways that Chinese migrants actively used material objects to meet a variety of goals and needs. However, despite these calls archaeologists have been slow to decouple notions of tradition and ethnic boundaries from the material culture found on Chinese migrant sites (Praetzellis and Praetzellis 2015). Instead, despite moving away from the language of acculturation archaeologists still find themselves trapped by the specter of its most basic assumption: that Chinese migrants unfailingly attempted to transplant a singular set of so-called traditional material practices to North America.

Notions of the traditional have been particularly prevalent in archaeological studies of 19th-century Chinese migrant food practices, which are often cast as exotic and inherently different from those of Anglo-Americans (Fong 2013:31-37). This is compounded by the

tendency of zooarchaeologists, especially in earlier studies, to attempt to identify a dietary signature indicative of Chinese meat preferences (e.g., Bowden 1993; Dansie 1979; Gill 1985; Longenecker and Stapp 1993). Rather than explore the role of food in migrant lives, many of these early studies focused on broad patterns at Chinese sites which emphasized heavy pork consumption and the importation of exotic goods such as dried Asian salt fish. These data were then typically used as evidence of Chinese migrants maintaining traditional food practices and thus experiencing a low degree of acculturation. Even studies examining the change of 19th-century Chinese migrant food practices through time in El Paso, Texas (McEwan 1985) and framing the incorporation of new ingredients by Chinese gardeners in Tucson, Arizona as accommodation rather than assimilation (Diehl et al. 1998) still couch these interpretations in the traditional, which is defined by the pork-heavy faunal signature identified at other Chinese migrant sites. This trend is exacerbated by zooarchaeologists' tendency to draw directly upon historical accounts describing the myriad imported and seemingly exotic foods available to residents of San Francisco's large, 19th-century Chinatown as representative of traditional Chinese foodways (e.g., Spier 1958a, 1958b). Gust's (1993) comparative, multi-site analysis of 19th-century Chinese meat consumption in five urban and rural Chinese communities offers something of an exception. While still drawing on notions of the traditional, Gust argues that the high variability in faunal remains across these five sites suggests that there was in reality no single, identifiable Chinese faunal pattern; instead, general sensibilities towards the kitchen butchering of animals and the consumption of a small handful of taxa (cats and dogs) not typically eaten by Anglo-Americans were all that seemed to separate Chinese and non-Chinese faunal assemblages, especially in rural sites. Gust challenged notions that the food practices of San Francisco's large Chinatown were indicative of broader Chinese patterns in North America,

and instead she cast San Francisco as “atypical” and not a good indicator of expected food practices in rural communities (Gust 1993:198). Even here, though, the underlying assumption is that the food practices in San Francisco represent tradition while those in other 19th-century Chinese migrant communities are indicative of varying degrees of accommodation and change.

Recent zooarchaeological studies have attempted to move further away from acculturative models of tradition versus change towards more nuanced understandings of Chinese migrant food practices and identities. Warner (2014) provides an examination of a rural Chinese community via its food practices at the small 19th-century Chinatown in Sandpoint, Idaho. Instead of finding large amounts of pork, Warner identified significant amounts of beef combined with turtles, birds, and some fish, and rather than argue for an Americanization of Chinese food practices Warner uses evidence of bird keeping and other social activities popular in Guangdong to support his interpretation that Sandpoint’s Chinese residents used local restaurant connections to creatively solve the problem of food supply. Henry’s (2012) previous work on faunal remains from a single feature at the Market Street Chinatown follows similar themes and draws on notions of hybridization to explain the presence of both seemingly traditional Chinese foods such as pork and chicken feet and new and novel ingredients, especially beef. Henry contends that the presence of bear paw bones and other high class ingredients suggest the transplantation of Chinese feasting customs, and she frames this interpretation and her broader work against a backdrop of tradition defined by high class Cantonese culinary practices. While both Warner and Henry provide invaluable data and interpretations highlighting Chinese engagement with new and novel food practices, they still implicitly draw upon notions of the traditional. Sunseri (2015a, 2015b) has provided perhaps the most promising approach to Chinese faunal material in recent years. She has utilized a wide

range of food-related data including faunal remains from the Chinese residents of Mono Mills, a 19th-century lumbering community in California, to demonstrate the interconnectedness between Chinese consumers and both regional and local food supply networks. She has also shown how food played an important role in alliance building between Chinese and Paiute workers at the site, and she illustrates how Chinese workers at Mono Mills created connections and managed their local lives while also staying connected to home via the frequent importation of Chinese goods and food. Most importantly, she actively downplays the role of tradition in favor of the ability of Chinese migrants to “actively shift their social opportunities and to exploit fluidity that existed in identity representation and perception” via food and other material practices (Sunseri 2015a:419).

Recent calls to turn the study of Chinese migrant archaeology towards transnational and diasporic models offer avenues through which to address archaeological understandings of food practices and the traditional (e.g., González-Tennant 2011; Ross 2013; Staski 2009; Voss 2016; Voss and Allen 2008). Rather than view Chinese migrant communities as monolithic, these authors and the approaches they champion instead emphasize heterogeneity within migrant populations and acknowledge the hybridity and material change that occurs in daily practice as a result of migration. They frequently draw upon the work of Hsu (2000, 2006) and others in Asian and Asian-American Studies which pushes for understandings of Chinese migrant lives that are simultaneously rooted in both the home village and the broader fabric of life in North America. Migrants maintain connections to both home and host countries, and these are driven by daily practice and the transport and exchange of goods, people, money, and correspondence, which generate a unique context of migration in which material practices do not simply represent tradition and/or change but instead are the result of negotiations between Chinese migrants, their

dual lives in China and North America, and the day-to-day realities of life in the United States. Indeed, the concept of the traditional loses value in these contexts as the heterogeneity seen within Chinese migrant communities along lines of gender, labor, class, and clan, village, and familial ties all suggest that individual migrants would have in some cases highly divergent material practices and sentiments. González-Tennant (2011) has specifically called for approaches that highlight this heterogeneity, both between and within Chinese migrant communities. This and other similar pushes are an important step in realizing a more fruitful archaeological understanding of Chinese migrant lives. However, archaeologists must go a step further by fully contextualizing their interpretations of migrant material and food practices within the historical backdrop of 19th-century Chinese migration and the myriad material flows of goods, people, and ideas that developed around them (c.f. Voss 2016). In this vein, I argue that typical conceptualizations of the traditional employed in archaeological studies of Chinese migrant food practices limit archaeologists' interpretive abilities and serve only to rupture daily practice from broader conceptions of transnational migrant identities.

In this chapter, I use zooarchaeological data collected from laborer and mixed merchant/laborer contexts within the Market Street Chinatown in San Jose, California to explore how Chinese migrant identities were created through food practices within the community. I contextualize these data within the broader history of Chinese migration to North America, and I draw upon the growing literature of migrant food studies to frame the relationships between food practices and multifaceted migrant identities. Rather than emphasize tradition and change, I highlight how Chinese migrants actively used food to simultaneously create community identity, mark differences, and maintain connections to both home and host societies. Ultimately, I use this case study to highlight how the frequent reliance by archaeologists on notions of the

traditional is problematic for two interrelated reasons. First, the heterogeneity of 19th-century Chinese migrant populations precludes the possibility that they as a group shared a single, identifiable set of food beliefs. Instead, migrants arriving in the United States held multiple views towards food and material practice, and emphasizing tradition versus change in interpretation serves only to obscure this fact. Second, the very notion of traditional food practices employed by archaeologists studying Chinese migrant sites is in itself fundamentally flawed. By basing understandings of the traditional off of examples from 19th-century San Francisco and other large, urban Chinatowns in North America, archaeologists have ignored the historical contingencies through which these food practices were generated. Instead, I demonstrate that Chinese migrant food practices in 19th-century North America were not those found in the rural villages from which most Chinese migrants originated, but were instead created through the unique process of the localization of Chinese food practices to North America and the use of food by Chinese migrants to achieve a variety of goals. By casting these resulting food practices as traditional, archaeologists not only reinforce Chinese homogeneity but also implicitly discount the generative process of migration and the opportunities it presents in restructuring social relationships and creating identities.

Migrant Food Identities

Whereas the important roles food plays in social distinction and identity creation have long been recognized in the social sciences (e.g., Barthes 1979; Bourdieu 1979; Caplan 1997; Hastorf and Weismantel 2007), a growing body of literature has begun to explore the centrality of food in migrant lives. The process of migration necessarily creates ruptures between individuals and their homeland, and while migrant populations tend to attempt recreation of food

practices from home this is rarely possible in a literal sense (Gabbacia 1998; Vallianatos and Raine 2008). Instead, as I have previously argued migrants make compromises and balance the desire to maintain nostalgic food-based connections to home with the challenges of localizing food practices to new economic, social, and environmental conditions (Kennedy 2015; Tan 2001, 2011). This negotiation provides multiple opportunities for migrant individuals and communities to reimagine their relative positions in the world, and thus food practices can be variably employed to maintain diasporic cultural ties, build new social groupings, provide linkages with host populations, and create divisions both between and within communities (Janowski 2012a). Migrant food practices need not meet only a single goal, and this is exemplified in Chapman and Beagan's (2013) work amongst Punjabi-Canadian families. The authors argue that the consumption of both Canadian and Indian foods within Punjabi-Canadian families is not evidence for dietary acculturation as would be the standard interpretation; instead, they see this mixing as reflective of food's potential to simultaneously connect migrants to multiple national identities. Numerous other studies have followed this same theme (e.g., Avieli 2005; Tookes 2015; Walker 2012), and it is clear from ethnographic work that migrant food practices are both historically contingent and powerful in their potential to facilitate negotiations centered on identity, connection, and belonging.

While food clearly plays an important role in migrant lives, implementing food practices during migration is anything but a simple proposition. As Pilcher (2006b) has described in the context of Chinese migration, migrant communities tend to follow general patterns related to the sourcing of food beginning with the direct importation of desired ingredients, the transplantation of crops and food animals, and ultimately the opening of stores and restaurants only when population levels are high enough to support them. This process places constraints on migrant

food practices, particularly amongst early generations, and these combined with local social, economic, and environmental conditions often lead to the solidification of a subset of particularly important food items in the dietary practices of migrants (Janowski 2012a; Kennedy 2015). Examples of this phenomenon include the continued use of mint by Lebanese migrants in New England (Rowe 2012) and the decision to specifically not import *ntsambu*, a foul-smelling food from home, and instead focus on other foods made by Comorian migrants in France attempting to gain inroads with their French neighbors (Walker 2012). Further, localization often leads to profound divergences between the home cuisine and that of migrant communities, however the resulting changes in food practices can be variously viewed as either negative or positive and these opinions often vary along generational lines (e.g., Abarca 2003; Mandy 2004; Tookes 2015). The changes wrought on migrant foodways during early localization can also ultimately become the foundation for subsequent future food traditions practiced by migrants in the host country (Janowski 2012a). Thus, migrant food practices are not static but instead contingent upon the historical specificities of localization as well as the goals of individual migrants and migrant communities, and both of these can easily change through time and through successive migrant generations.

An emphasis on change calls into question notions of authenticity and the traditional within migrant food practices. While food practices are often significantly altered during the process of migration, wildly divergent food preparations are still frequently viewed as authentic by those cooking them (Tookes 2015). As Abarca (2003) argues, authenticity and the traditional are concepts that can be determined independently by the cook and eater and there is nothing inherently less authentic about a dish prepared with a twist such as a substituted ingredient compared to the recipe from which it was derived. Instead, it is the “feel” of meals that often

allows eaters to view these dishes as authentic (Walker 2012), and this harkens to the work of Douglas (1972) and others emphasizing the cultural significance of rules of commensality and meal structure. This is not to suggest that changing food practices do not indicate corresponding shifts in identity constructions, but rather that they need not correlate in the stark manner often put forward in archaeological acculturation studies. Instead, migrant populations have shown incredible flexibility in tying strong conceptions of self to ever-shifting food practices by maintaining solidified foods which can be used to periodically reemphasize conceptions of identities tied to home. As highlighted by Chapman and Beagan (2013), these identities can exist alongside new conceptions of self that are centered on being a migrant in a new place, and eating different foods in different settings thus allows migrants to maintain transnational identities.

All of this makes defining the traditional a difficult task at best and a foolhardy one at worst, and it also suggests that the social settings in which meals are consumed are in and of themselves perhaps more important than the actual foods being consumed. This is unsurprising as traditions, including those bounded in food, are invented cultural constructions which are highly political in nature and subject to change depending on the goals of those performing them (Appadurai 1988; Hobsbawm 1983). In the case of migrant food practices, invented traditions can be constructed for a variety of reasons including to satisfy nostalgic longing for home (e.g., S. Lee 2015; Marte 2008; Naidu and Nzuzi 2013; Stowers 2012), effect change in or reinvent one's place in social hierarchies (Ferris 2005; Walker 2012), or downplay heterogeneity within communities by implementing a single set of community-wide food practices that were not shared by all members prior to migration (e.g., Parasecoli 2014). These effects of these food practices need not be conscious either, but instead can be the byproducts of chance, restriction/opportunity, or even the pursuit of culinary pleasure. As I will argue below, the latter

result is particularly important in the archaeological study of Chinese migrant food practices as the dietary patterns observed by zooarchaeologists are not the result of simple mapping of food practices from Guangdong to the United States but are instead constructed through historical specificities, transnational connections between China and the United States, and the goals of individual migrants.

19th-Century Chinese Foodways in North America

During the last half of the 19th century roughly 370,000 people left China and migrated to the United States (Liu 2002; McKeown 2004; Takaki 1998:32). The vast majority of these individuals came from Guangdong Province in southern China, and they left for a variety of reasons including increasing taxation, local warfare and violence, famine, and other hardships that were the result of both governmental crackdowns and increased disorganization during the 19th century (Lawton 1987:159; Voss and Allen 2008:9). They were also not typically the poorest of the poor, but instead they had the money, familial connections, and motivation to seek new opportunities in new places. While migrants arriving in the United States came from throughout Guangdong, around 80% were from the Siyi district southwest of Guangzhou and most of these were from Taishan County (Figure 6-1; Hsu 2000; Lai 2004; Voss and Allen 2008:6). The remainder of Chinese migrants left primarily from the Sanyi district or from Zhongshang County, which were surrounding and just south of Guangzhou respectively. Clan and village connections played important roles in migration and subsequent life in the United States (Hsu 2000), and migrants drew heavily on them for support in Chinese communities in the United States (Yu 2001). Thus, while 19th-century Chinese migrants have typically been broadly

cast in archaeological studies as Cantonese, they were an internally heterogeneous group from multiple villages and counties.



Figure 6-1: Map of Guangdong with Guangzhou highlighted in red.

Archaeological conceptions of traditional food practices in Guangdong typically derive from ethnographic and historical sources specifically exploring Cantonese food, particularly that consumed by social elites (e.g., Anderson 1988; Anderson and Anderson 1977; Chang 1977; Simoons 1991). This cuisine is noted as placing emphasis on distinctions between *fan* (starch) and *tsai* (non-starch) dishes in the construction of meals, focusing heavily on pork, chicken, and seafood, and incorporating a wide range of costly ingredients such as shark fins, bird nests, and

bear paws in feasting contexts. Cooks preparing Cantonese cuisine focus on mild preparations intended to enhance rather than obscure the natural flavors of ingredients, stir-frying to retain the crispness of vegetables, the use of a wide variety of ingredients in individual dishes and meals, and a reliance on salted and preserved fish, seafood, and vegetables as seasonings and ingredients in dishes (Anderson and Anderson 1977:355; Kan 1980; Simoons 1991:54-57). Fish and poultry, roasted meats including *char siu*, and a plethora of dumplings and other small dishes termed *dim sum* are all commonly consumed Cantonese foods. However, most migrants arriving in the United States in the 19th-century would not have been eating high class Cantonese cooking prior to migration but instead one of the many rural versions or closely related regional variations such as Taishanese, Fukkien, or Hainanese cuisine (Anderson and Anderson 1977:355-358; Simoons 1991:57). These cuisines, in contrast to the high class Cantonese food most often referenced in archaeological studies, typically utilized significantly less meat and fewer individual ingredients within dishes and meals. Whereas Chinese elites could eat fresh meat on a regular basis, Buck (1956:402) notes that rural farmers in early 20th-century Chinese could only afford to eat meat sparingly and on rare occasions. Instead, rural farmers ate a diet primarily consisting of vegetables occasionally seasoned with preserved meats such as salt fish and various kinds of dried pork and poultry, with fresh meat used to mark important festivals and holidays. Other historical sources confirm this trend (Anderson 1988:177; Spence 1977), and while no English-language 19th-century accounts address rural meat consumption specifically in Guangdong, deficiencies in arable land, numerous famines, and repeated episodes of bandit raids targeting food supplies in the region all suggest that food, and likely meat, was limited (e.g., Hsu 2000). Thus, historical data suggest that the food practices that archaeologists frequently ascribe

as traditional to Chinese in 19th-century North American are not in fact representative of the likely dietary patterns eaten by rural Chinese prior to migration.

How then did the archaeological association between Chinese migrants and high Cantonese cuisine occur? To some extent this is likely related to the general lack of availability of English language sources describing rural food practices in 19th-century China, a problem I can attest to encountering. Without readily accessible documentation on the topic, archaeologists turned to two other bodies of literature: descriptions of Cantonese cuisine and the numerous historical accounts of the seeming plethora of imported Chinese foods available in San Francisco's Chinatown in the 19th century (e.g., Spier 1958a, 1958b). The laundry lists of dried seafood products, fruits, and vegetables, seemingly exotic medicinal ingredients, Chinese condiments, and cooking styles including roasting of meats, preparation of rice, and an emphasis on fresh fish described in the latter all seemed to fit the basic expected pattern predicted by descriptions of Cantonese cuisine, and thus one could assume the descriptions were also reflective of the dietary practices in migrant home villages. However, the connection was also made for a much deeper reason: archaeologists ignored the nature of the transnational flow of goods, including food between China and North America, as well as the historical specificities behind the localization of Chinese migrant food practices in the United States.

Whereas Chinese migrants had diverse familial, village, and clan origins, the shipment of goods supplying migrant communities in North America and elsewhere was dominated by a small handful of shipping firms rather than through direct connections with home villages. As Hsu (2000, 2006) has described, there were two primary kinds of shipping firms operating in Guangdong: *nanbeihang* (north-south firms) which moved goods from northern to southern China, and *jinshanzhuang* (gold mountain firms), which shipped goods from Chinese ports such

as Guangzhou and Hong Kong to customers in North America and elsewhere. While these firms had a vested interest in shipping products that consumers would buy, they also had what amounted to a captive market: Chinese consumers overseas who had few other options for purchasing goods from home. Thus, while the goods that *jinshanzhuang* shipped were no doubt familiar to Chinese consumers in North America the shipping firms had no impetus to ensure they were the same as those used in daily life in rural villages. Instead, the goods shipped to North America represent only a subset of material objects from Guangdong, and merchants placed particular emphasis on those that could be produced in bulk and easily transported to Hong Kong or other shipping ports (Choy 2014; Hsu 2006:26-27; Tsai 1993:26-27). As will be discussed below, the salt fish taxa most commonly exported to North America by *jinshanzhuang* are all common marine fish readily available in the waters near Hong Kong and they do not typically include other fish commonly dried throughout the region (e.g., Schulz 2004). This trade has two important implications for archaeological understandings of Chinese food practices in North America. First, Chinese migrants had access to a wide array of goods imported from China, though these were not necessarily those used on daily basis in their home villages. Second, the standardization and shipment of a limited range of foods from China also served to homogenize Chinese food practices in North America into forms of cooking and eating that would not have occurred in rural villages.

Finally, localization of Chinese food practices to North America in and of itself directly affected migrant foodways. Localization, which describes the economic, cultural, and environmental restraints and opportunities which structure migrant food practices (Kennedy 2015; Tan 2001, 2011), suggests not only that migration is the impetus for changes in food practices but also that dispersed migrant populations have resulting differences in food

consumption based on the unique local conditions they encounter. In this way, migrants from Guangdong in the United States will have related yet different food practices compared to those in other places such as Australia (see Wu and Tan 2001 for examples). This further reinforces the notion that migrant food practices are not strictly traditional in the sense evoked by archaeologists but instead something fundamentally new produced via the constraints and opportunities provided by migration. Perhaps the most profound effect of the localization of Chinese cookery to North America was the increased availability of meat including pork, beef, chicken, and fish that marked a divergence from rural Chinese diet typified by low levels of meat consumption (Buck 1956:402; Spence 1977). Thus, while beef consumption has often been cast by zooarchaeologists as evidence for Chinese dietary change, hybridization, or acculturation, the regular consumption of so-called traditional foods such as pork and chicken represent equally profound changes in foodways as well. Cultural influences and relationships with the host population also affect the localization of food practices, and I argue below that the specificities of Chinese migrant food supply combined with increasing anti-Chinese sentiment in the American West combined to encourage the development of pan-Chinese foodways in American Chinatowns; this was a practical response to the foods available, population dynamics, and the ability of shared foodways to help mitigate outside social pressures.

The Market Street Chinatown

The Market Street Chinatown provides a case study to reexamine notions of the traditional in Chinese migrant food practices. Founded in 1866, at its peak the Market Street Chinatown housed over 1,000 permanent residents and served as a “home base” for an additional 2,000 to 3,000 laborers working nearby jobs who would return to the Market Street Chinatown

periodically on work breaks and for festivals and holidays (Laffey 1993; Yu 2001; Voss 2008). Historical accounts and an 1884 Sanborn insurance map show that the Market Street Chinatown was a dense urban center with businesses, markets, and restaurants, and it included over 20 tenement buildings that housed primarily male laborers working in agriculture, industry, mining, and domestic service jobs. Businesses including grocery stores, restaurants, butchers, a fish market, pharmacies, medical practices, and small-scale manufacturers of commercial goods also served as the homes for mixed households made up of merchants, their employees, and their families, who represented the majority of the few women and children living in the Market Street Chinatown (Laffey 1993; Yu 2001; Voss 2005:430).

Daily life was drastically different in the Market Street Chinatown compared to Guangdong, particularly for men living in tenement housing. As in other Chinese communities in the United States, many of the laborers living in the Market Street Chinatown likely bought into cheap meal plans serving food prepared in boarding houses and restaurants (Chen 2014:90; Xia 2001) or pooled their resources to hire a cook (Van Bueren 2008). Merchants, their families, and their employees would have prepared meals within the often small apartments at the backs of their businesses; documentary evidence suggests that some laborers (especially those with families) did the same in tenement housing rooms equipped with stoves (Barbara L. Voss 2016, pers. communication). Merchants and laborers alike would have eaten at the Market Street Chinatown's several restaurants, however, it can be assumed that the community's wealthier merchants did so on a more regular basis. As with other Chinese communities, the Market Street Chinatown provided protection amid rising anti-Chinese racism in California. In addition to the safety that sheer numbers provided, the Market Street Chinatown's layout centered on the main business thoroughfare running through the heart of the community and the exterior of Chinatown

acted as a defensive wall (Voss 2008:42). Despite this protection, however, in May of 1887 the Market Street Chinatown was burned to the ground in an arson fire. While this was a devastating event in the history of San Jose's Chinese community, its residents remained in the city and ultimately rebuilt Chinatown on new land.

The Market Street Chinatown was excavated as a salvage project in the 1980s before the site was destroyed for the construction of a new hotel. Archaeologists from Archaeological Resource Services (ARS), a private archaeological consulting firm, identified and excavated more than 60 features, primarily communal rectangular trash pits containing domestic refuse (Kane 2011:10; Roop and Flynn 1993; Roop et al. 1988; Voss 2008:42). While these trash pits do not have a direct association with individual buildings in the Market Street Chinatown, they can be reasonably correlated with clusters of businesses and tenement buildings nearby. Since historical documents show that structures with similar functions or residential populations such as laborers and merchants in the Market Street Chinatown tend to be grouped together (Michaels 2005; Voss 2008: 45), I make the assumption that excavated features can be provisionally linked to both tenement and mixed merchant-laborer household concentrations illustrated on the 1884 Sanborn map. Although the resulting clusters of features represent a composite of household-level activities, trash from businesses, and refuse from public activities, the preponderance of faunal material in the features included in this study suggests that they were used at least in part for disposal of the domestic waste of individuals living nearby.

As with other 19th-century urban Chinatown sites, excavations at the Market Street Chinatown revealed a tremendous amount of material culture including Chinese and European ceramics, glass bottles, metal knives, cleavers, and other tools, preserved leather and fabric, and copious amounts of animal bone and plant remains including wood, charcoal, and seeds. Due to

funding constraints, the majority of artifacts from the site were placed in storage until the Market Street Chinatown Archaeological Project (MSCAP), a collaborative project between Stanford University, History San José, Past Forward, Inc., the Chinese Historical and Cultural Project, and the City of San Jose Redevelopment Agency, was formed in 2002 with the goal of cataloguing, analyzing, and curating the Market Street Chinatown collection (Lum 2007; Voss et al. 2013). While still ongoing, research carried out under the MSCAP has given insight into the daily lives of the Market Street Chinatown's residents, and a number of recent studies have focused on the food practices of the community (Henry 2012; Puseman et al. 2013; Cummings et al. 2014).

The discussion below presents the analysis of faunal data from eight representative features in two distinct groups from the Market Street Chinatown (Figure 6-2, Table 6-1). The first group (in blue) correlates with tenement housing concentrated near pork roasting furnaces in the north of the Market Street Chinatown and east of the main thoroughfare of Ah Toy Alley. The second group (in red) correlates with business in two locations: the first a cluster of features east of Ah Toy Alley in the southern half of the Market Street Chinatown, and the second a single feature associated with business west of Ah Toy Alley. The food waste recovered from the latter trash pits represents the remains of meals eaten by store owners, their families, and their employees, and is thus representative of mixed merchant-laborer households in the community. Taken together, the data from these two loci provide an overview of the food practices of both tenement and mixed merchant-laborer households, and they can be used to understand food practices across the Market Street Chinatown.

I analyzed the faunal assemblage from these features using standard zooarchaeological methods. All bones were identified to the most precise taxonomic classification possible with the aid of modern, known comparative specimens and laboratory manuals. In some cases species-

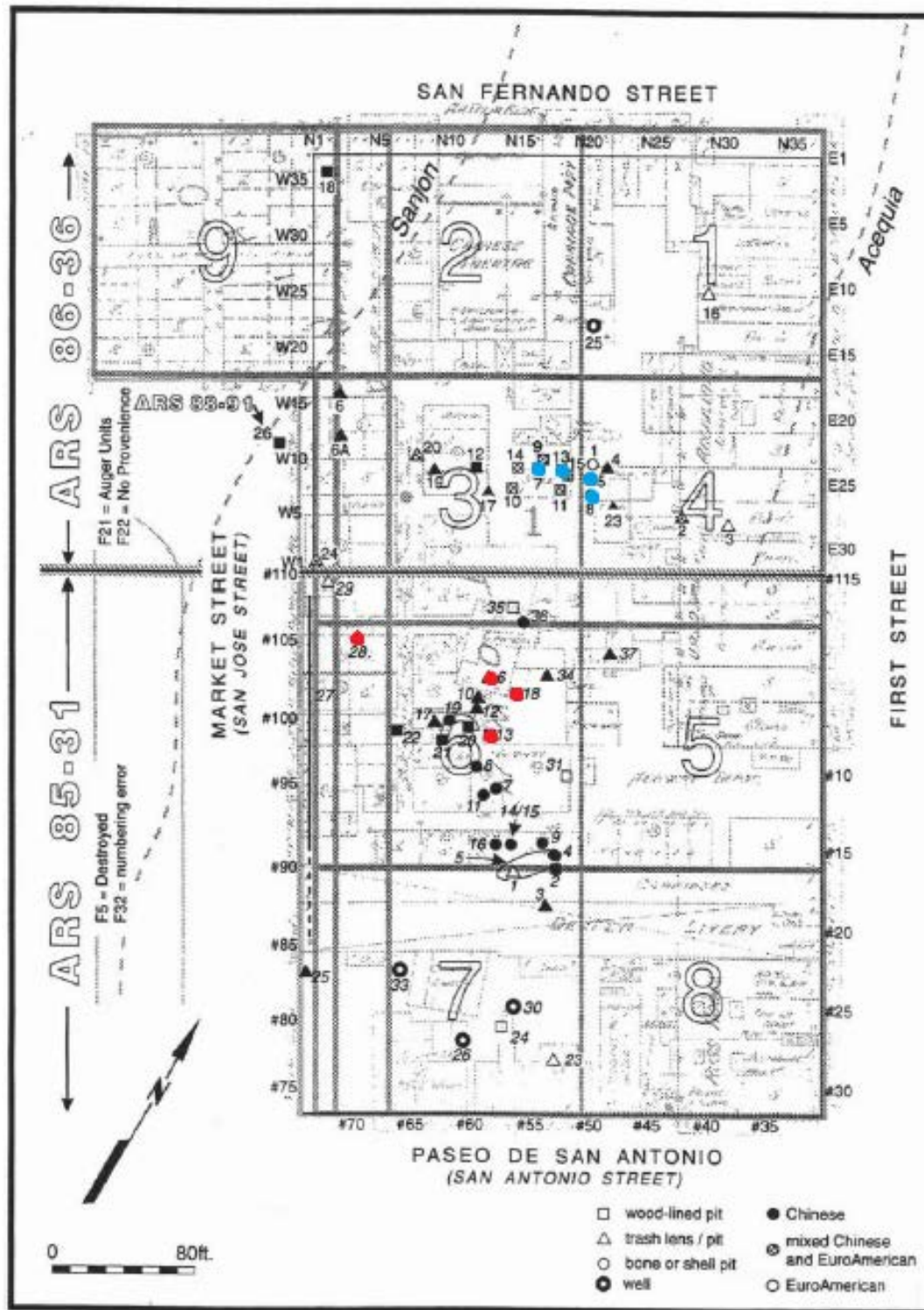


Figure 6-2: Archaeological features included in this study. Merchant contexts are marked in red, laborer contexts are marked in blue. (Map originally appears in Kane 2011)

Feature No.	Demographic context
85-31/6	Mixed merchant/laborer
85-31/13	Mixed merchant/laborer
85-31/18	Mixed merchant/laborer
85-31/28	Mixed merchant/laborer
86-36/5	Tenement
86-36/7	Tenement
86-36/8	Tenement
86-36/13	Tenement

Table 6-1: Archaeological features included in this study.

level identifications could be easily made while in others the identification is at the genus, family, or even class level due to heavy fragmentation of individual bones, lack of diagnostic landmarks on specimens, or extreme osteological similarities between closely related taxa (e.g., Gobalet and Jones 1995). Two standard zooarchaeological measures are used to report taxonomic importance; NISP, or the total number of identified specimens for each taxa, and the total weight of specimens in grams (Lyman 2008; Reitz and Wing 2008). While NISP reports the total number of skeletal fragments represented by a single taxon, skeletal weight provides a way of comparing elements from animals or skeletal elements of different sizes (e.g., rabbits versus pigs) that may more accurately represent the relative dietary importance of each taxa present in the assemblage.

The Zooarchaeological Data

The archaeological assemblage used in this study consists of 16,303 faunal remains which could be identified to at least the taxonomic level of class. Despite the arson fire that destroyed the Market Street Chinatown only 6.5% (N=1,056) of the specimens in the assemblage

were burned, suggesting that the majority of the faunal remains in this assemblage were deposited before the 1887 fire rather than through the cleanup and demolition that followed. Additionally, the assemblage has very low rates of rodent gnawing (0.86%) and carnivore bite (0.14%) marks, indicating that faunal remains were disposed of and covered very quickly before they could be impacted by scavengers. The presence of complete, intact fish and small rodent remains across all features of the assemblage further highlight the high level of preservation within this collection, as does the nearly complete absence of significant weather-related bone surface modification. While taphonomic processes no doubt impacted the assemblage to some degree (as they do all assemblages), their effects do not seem to have drastically altered the underlying nature of faunal material in these features.

Mammals

As at other Chinese migrant sites in North America, pork and beef dominate the mammal assemblage from the Market Street Chinatown in terms of NISP and weight (Table 6-2). Pork is numerically the single most important taxon at the site and it makes up 22.08% NISP in tenement contexts and 11.82% NISP in merchant contexts. Beef on the other hand represents only 5.28% NISP in tenement contexts and 1.19% NISP in merchant contexts, but given the large size of many beef bones the numbers are more complicated when considering weight: in tenement contexts beef actually represents more of the total assemblage by weight than does pork, though in merchant contexts pork is nearly twice as important by weight than beef is. Even if all unspecified large mammal bones in the assemblage are assumed to be beef bones and those of medium mammals assumed to pigs as is likely the case, these patterns do not significantly change. Thus, it appears that in the Market Street Chinatown, as in other urban Chinatowns in

Taxonomic name	Common name	TENEMENT CONTEXTS				MERCHANT CONTEXTS			
		Total NISP	NISP%	Total Wt(g)	Wt(g)%	Total NISP	NISP%	Total Wt(g)	Wt(g)%
<u>Mammals</u>									
<i>Sus scrofa</i>	Pig	1664	22.08	15350.26	35.88	1036	11.82	5921.762	42.64
<i>Bos taurus</i>	Cow	398	5.28	20901.919	48.86	104	1.19	2905.52	20.92
Caprinae	Sheep/goat	57	0.76	734.74	1.72	21	0.24	178.01	1.28
Canidae	Dog or wolf	2	0.03	13.34	0.03	0	0.00	0	0.00
Ursidae	Bear	1	0.01	4.3	0.01	2	0.02	3.26	0.02
Ursidae?	Possible bear	1	0.01	3.1	0.01	0	0.00	0	0.00
<i>Felis domesticus</i>	Cat	18	0.24	17.23	0.04	51	0.58	54.77	0.39
<i>Procyon lotor</i>	Raccoon	1	0.01	1.91	0.00	1	0.01	1.15	0.01
<i>Sylvilagus</i> sp.	Cottontail rabbits	3	0.04	0.46	0.00	0	0.00	0	0.00
<i>Lepus</i> sp.	Jackrabbits	1	0.01	0.36	0.00	0	0.00	0	0.00
<i>Thomomys</i> sp.	Pocket gophers	0	0.00	0	0.00	1	0.01	0.8	0.01
<i>Spermophilus</i> cf. <i>beecheyi</i>	Ground squirrel	0	0.00	0	0.00	1	0.01	0.23	0.00
Large mammal	Large mammal	134	1.78	1373.32	3.21	123	1.40	827.43	5.96
Medium mammal	Medium mammal	646	8.57	1068.78	2.50	699	7.97	960.79	6.92
Small mammal	Small mammal	16	0.21	4.71	0.01	35	0.40	6.92	0.05
<i>Rattus</i> sp.	Rats	112	1.49	36.62	0.09	219	2.50	66.1	0.48
Murinae	Mice	2	0.03	0.02	0.00	2	0.02	0.18	0.00
Rodentia	Rodents	48	0.64	4.53	0.01	51	0.58	5.77	0.04
Unspecified mammal	Mammal	3005	39.88	2722.64	6.36	2228	25.41	1841.28	13.26

Table 6-2: Mammal taxonomic representation by context group.

the 19th-century United States, pork and beef reigned supreme. The differential consumption of these two taxa within merchant and tenement contexts follows patterns seen in other urban Chinatown assemblages (e.g., Praetzelis and Praetzelis 1997). In these cases, archaeologists have cited economic factors including relatively high prices of pork as impediments to the ability of laborers to eat more of this meat, and this may well be the case in San Jose. This pattern may be related to laborers buying cheap meal plans in tenement housing, as it is possible that these plans made heavy use of cheaper cuts of beef which ultimately found their way into the tenement contexts described here. The skeletal part representations of pigs and cows lend credence to this idea, and I will return to these shortly.

None of the remaining mammal taxa played a significant role in the food practices of the Market Street Chinatown's residences based on their NISP or weight, however these taxa bear further discussion. Caprines, or sheep and goats, were widely available in California and around the San Francisco Bay area in the 19th-century (Nordhoff 1873) but as at other Chinese migrant sites these animals seem to have played only a minor role in food practices. Examples of canid, bear, and cat remains all demonstrate butchery marks indicative of being sheared with a heavy metal blade such as a cleaver, and it is clear that all three taxa were consumed in small numbers by Chinese migrants at the site. With one exception, the identified bear remains are all elements found within bear paws, a cut of meat previously identified at the Market Street Chinatown by Henry (2012) and which she attributes to 19th-century Cantonese feasting practices which feature bear paw as a luxury item. The identification of bear remains in both tenement and laborer contexts is interesting, as it suggests that members of both social classes were able to procure and afford this item. The possible bear bone recovered from tenement feature 86-36/7 most closely matches the lower right canine from a grizzly bear, and it has been sawn, filed, and



Figure 6-3. Possible modified bear tooth from the Market Street Chinatown.

notched in a seemingly random fashion (Figure 6-3); I do not know the ultimate purpose behind these modifications, and they could be from filing flakes of bear tooth for use in medicine, an unfinished attempt at making something of worked tooth, or even idle play. Finally, the cat remains bear specific note as they are common finds on Chinese migrant archaeological sites and their consumption was the focus of much 19th-century racist commentary by Anglo-Americans (e.g., *San Francisco Chronicle* 1876; *Weekly Alta California* 1853; Williams 1849:47-48). Ten of the identified cat bones (14.5% NISP) bear shear marks from being chopped into pieces by a large, metal blade, serving as evidence that some if not all of the animals represented by these bones were eaten as food. While cat meat was consumed with some regularity in Guangdong, Chinese migrants' willingness to eat this food in the face of racist backlash is notable; perhaps

cat consumption served as a common activity upon which the Market Street Chinatown's residents build community bonds (cf. Yaeger and Canuto 2000). The denigration of eating cats by Anglo-Americans, while potentially cast as detrimental, could in fact have made cat meat consumption an even more powerful internal symbol of Chineseness through eating it in spite of the external cultural stigma attached to these practices (c.f. Galinsky et al. 2003).

An examination of the skeletal part representations for both pork (Figure 6-4) and beef bones (Figure 6-6) offers additional insight into the food practices of the Market Street Chinatown's merchants and laborers. As can be seen in Figure 6-5, the pig remains present at the site suggest the use and consumption of all parts of a whole animal. While there are apparent spikes at the measures for cranium and dentary, these include numerous loose teeth which overinflate these counts. Likewise, the seemingly increased numbers of phalanges and metapodials are due to the fact that pigs have a greater number of toes than do other domestic quadrupeds such as cows. This pattern suggests that the Market Street Chinatown's residents were utilizing and consuming whole pigs, and they may even have been raising them in or near the Market Street Chinatown as was done by Chinese pork farmers in other Chinese communities (Langenwalter 1987; Peabody 1871:660). Further, the skeletal part data from both merchant and tenement contexts are strikingly similar; rather than demonstrating divergence in cuts of meats consumed by different social classes as is often the case in Anglo-American sites (e.g., Schulz and Gust 1983) it appears that both merchants and laborers in the Market Street Chinatown dined on similar portions of pork. Whether these cuts were prepared in the same way or eaten in the same quantity is impossible to discern via zooarchaeological methods, however the data do suggest extreme similarities in pork consumption between these two groups.

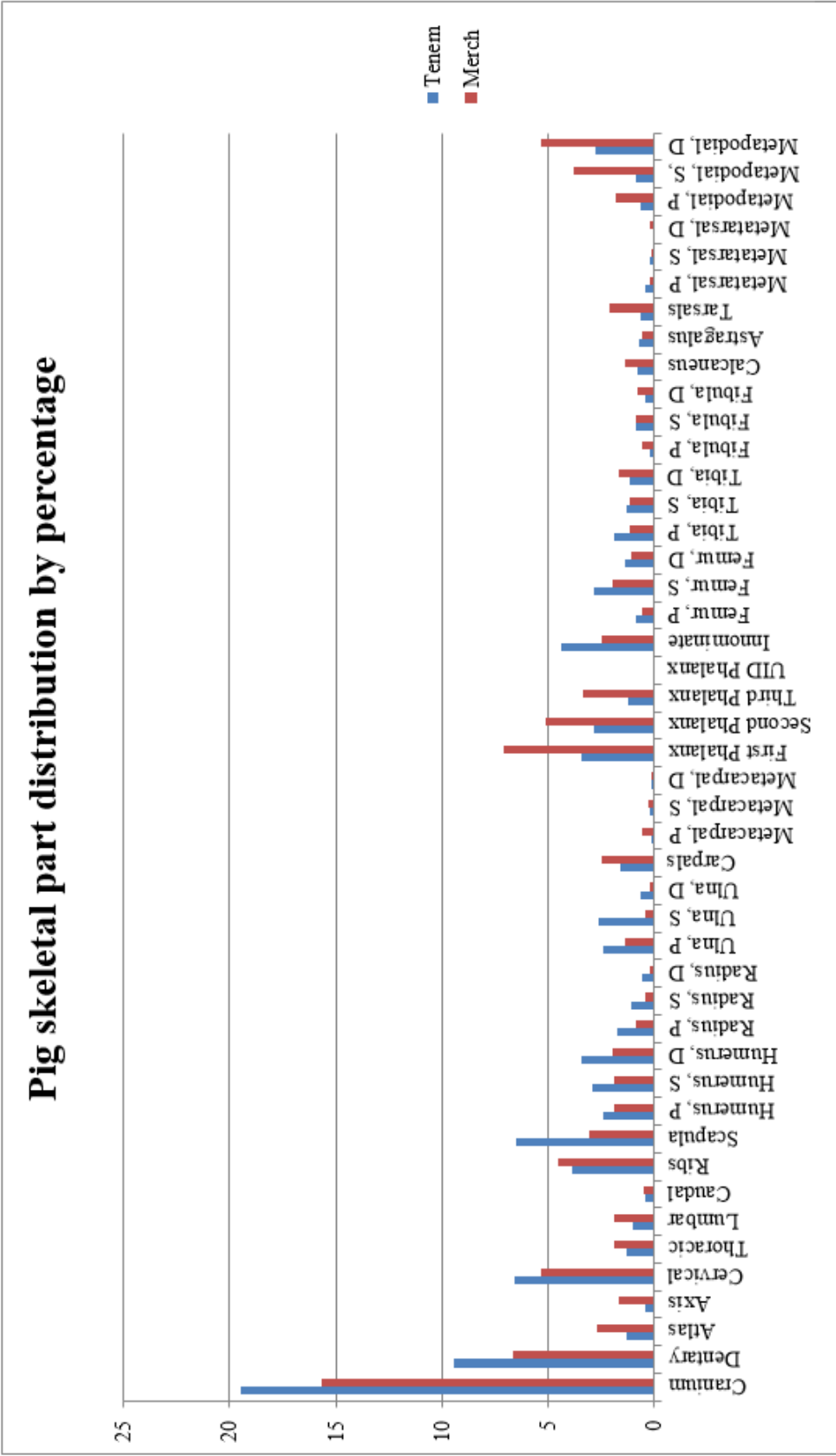


Figure 6-4: Pig skeletal part representation by context group

The beef skeletal part representation tells a different story (Figure 6-5). Rather than suggesting procurement of whole animals, the Market Street Chinatown's residents seem to have utilized a wide variety of cuts with a focus on several sections of the animal. For instance, the forelimb including scapula is more heavily represented than the hindlimb, and there are more cervical vertebra than expected compared to either thoracic or lumbar vertebra. Three anomalies stand out in the beef skeletal part data, and these are the overrepresentation of cranial and femur shaft elements in tenement contexts and the similar overabundance of caudal vertebra within merchant contexts. Both the cranial and femur concentrations come from the same trash pit, Feature 86-36/8, which contained 40 complete beef hyoid bones (which are attached to the tongue) and 22 beef femur shaft portions sawn into soup bones in addition to several dozen more similarly sawn portions from other long bones such as the radius and humerus. The recovery of so many bones of the same cuts in a single feature suggests that they were used for the mass production of the same or similar dishes, and given their recovery so close to tenement housing buildings it seems likely that these beef specimens represent the remains of large amounts of food prepared for some of the Market Street Chinatown's laborers. Chinese cooks could have used cheaply available soup bones and beef in a number of dishes, with soup bones forming the base of soups and stews and tongue lending itself well to stir-fried, braised, and other preparations. This follows patterns mentioned above from Sacramento's 19th-century Chinese community, where laborers seem to have been provided cheap meals consisting primarily of low cost beef cuts. Merchant contexts also have an overrepresentation of a single beef element: caudal vertebra. These are represented primarily in feature 85-31/18, and while they may initially suggest intensive use of this cut of meat visual inspection reveals that the recovered caudal

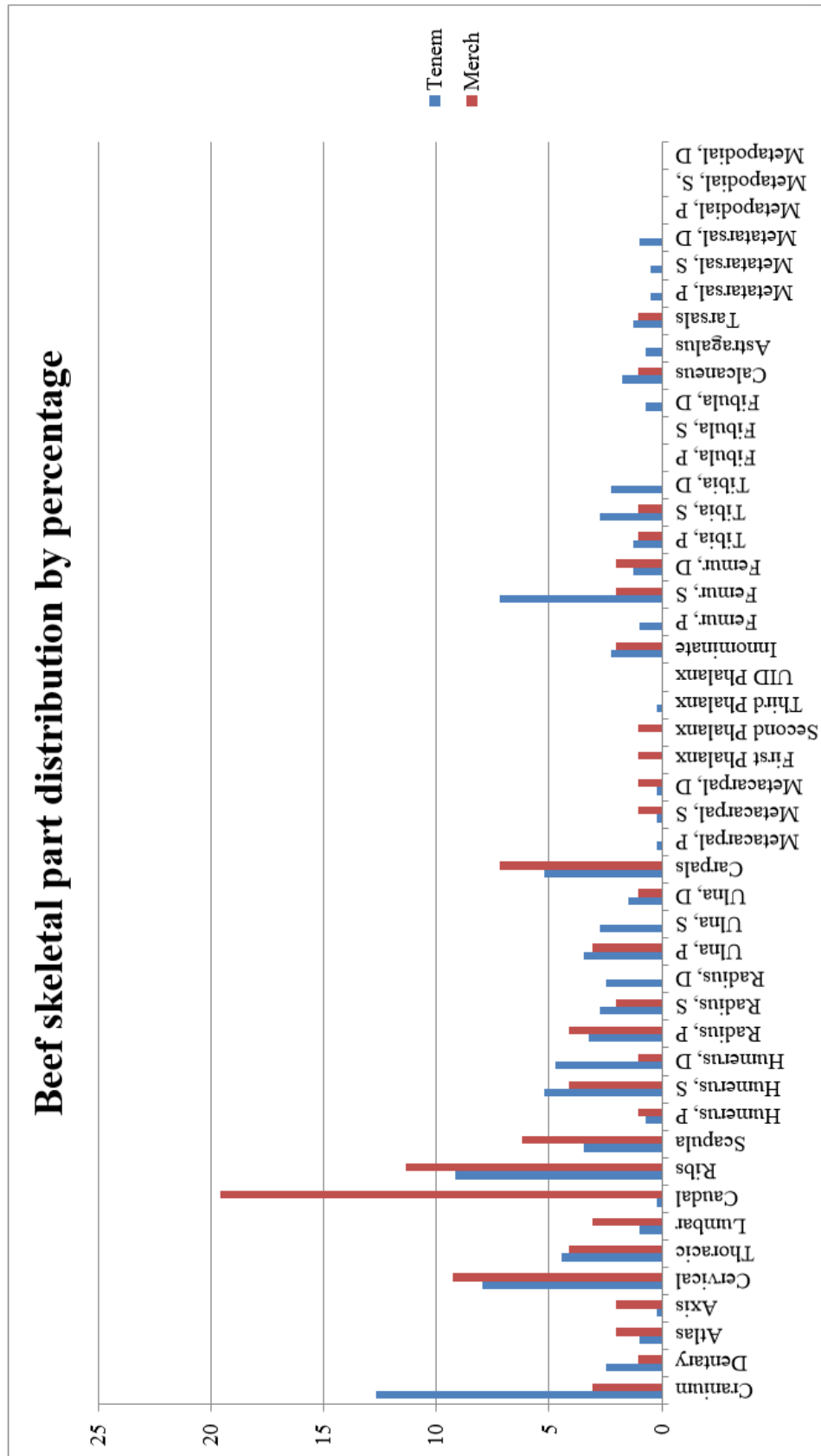


Figure 6-5: Beef skeletal part representation by context group.

vertebra likely derive from the same individual. In this case, the overrepresentation simply indicates the disposal of one or more beef tails containing multiple caudal vertebrae.

The pattern of butchery marks present on pork and beef bones in the Market Street Chinatown collection also deserves mention (Figure 6-6). As at several other Chinese migrant sites (e.g., Gust 1993, 1997), pork bones show a significantly higher rate of shear marks indicative of cleaver- or axe-based butchery, while beef bones have considerably more saw marks present. Beef bones also have a much higher proportion of bones with butchery marks present, and this is reflective of a large number of both saw-cut beef soup bones and un-butchery pork long bones in the assemblage. Whereas the former seem to be related to cheap meals produced in tenement housing, the latter could be variously from use of larger meat cuts in home cooking or tenement contexts, or discard from roasted meats such as those produced at the pork roasting furnaces. This patterning also provides insight into meat procurement in the Market Street Chinatown. Saw-based butchery was the standard Anglo-American urban butchery method in the 19th-century, and it is reasonable to assume that most or all of the sawn beef bones were procured from Anglo butchers, either directly by consumers or by Chinese resellers. The sheared pork bones, on the other hand, most likely represent Chinese cleaver-based pork butchery, suggesting local Chinese pork production for sale in the Market Street Chinatown. The presence of sawn pork bones is notable, and these specimens may either represent cuts of pork purchased by Chinese consumers from Anglo butchers or experimentation with saws for by Chinese butchers. Regardless, the butchery mark evidence clearly demonstrates the consumption of meat procured from both Chinese and Anglo butchers.

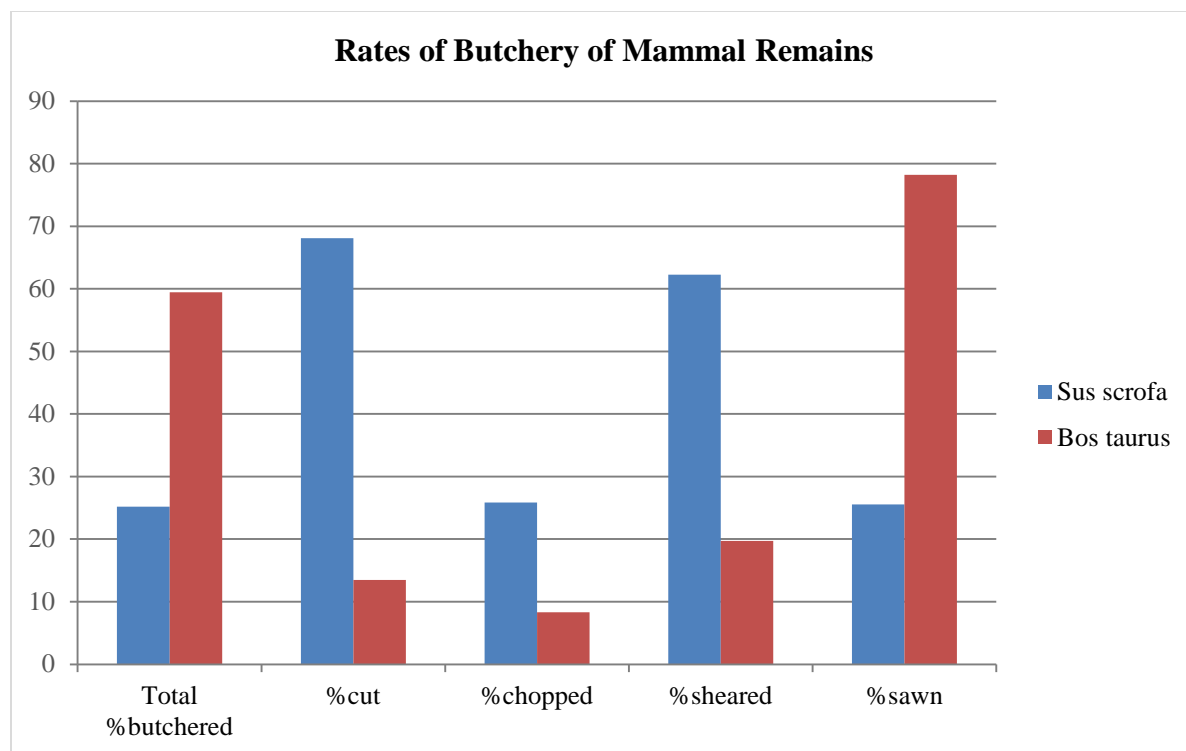


Figure 6-6: Rates of butchery types observed on pork and beef bones.

While these patterns accurately describe overall trends within mammal consumption at site, breakdowns between features within both merchant (Figure 6-7) and tenement context (Figure 6-8) groups suggests that food practices may be more variable within groups than the aggregate data suggest. The importance of pork and beef vary considerably between contexts within each group, though there is no discernable correlation between this variability and the presence, absence, or relative importance of non-mammal taxa in any of these features. Further, the skeletal part distributions remain similar to the overall observed patterns regardless of the relative amounts of pork and beef present in individual features. While these distributions may be reflective of individual differences in food practices it is also possible they reflect the variable dumping and mixing of waste from multiple individuals or groups semi-randomly across several nearby trash pits. The communal nature of the trash pits at the Market Street Chinatown likely

smooth out fine-grained differences and thus are more appropriate for communal or large-scale interpretations (Voss 2008:41). Regardless, these data are suggestive of either distinct meals and preparations or entire dietary patterns drawing upon differing amounts of pork and beef, and they hint at underlying variability within food practices at the Market Street Chinatown.

Taken as a whole, mammal remains reveal several interesting trends in the food practices of Chinese migrants living in the Market Street Chinatown. First, while merchants ate greater amounts of pork than did laborers both groups seem to have consumed roughly the same portions and parts of the animal. Site residents also utilized the entire pig, indicating that perhaps the Market Street Chinatown had a similar pork raising infrastructure as seen in San Francisco and other large, urban Chinatowns. Beef consumption, on the other hand, did not rely on whole animals but instead focused primarily on the forelimb and axial skeleton with hyoids and soup bones forming the basis for at least some tenement meal plan dishes. While the

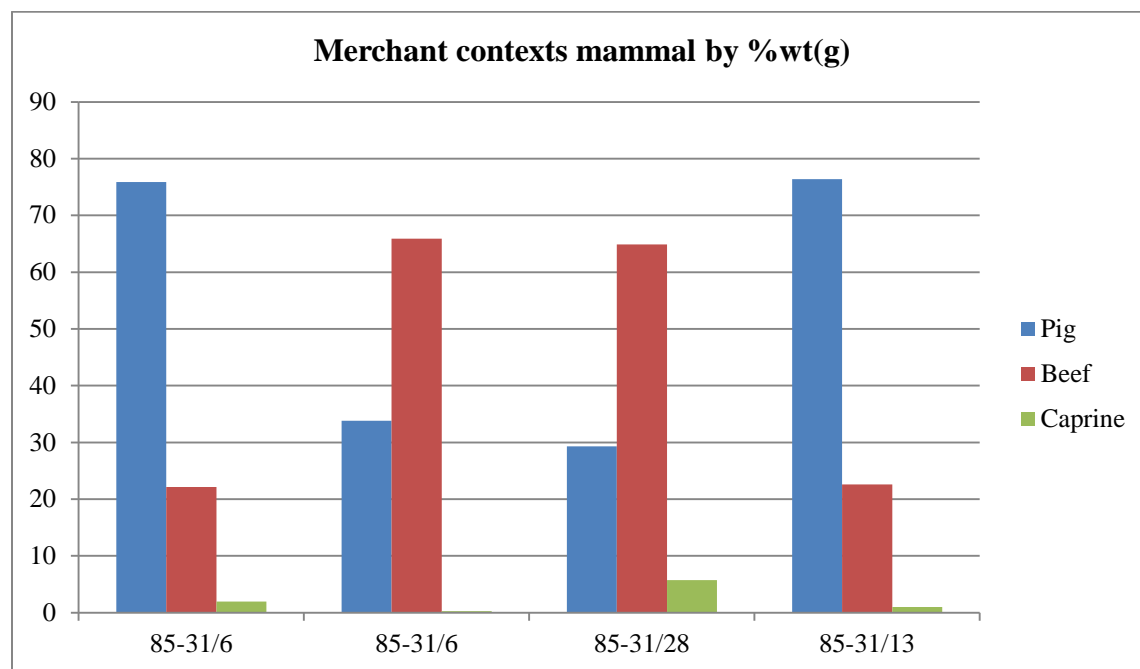


Figure 6-7: Pig, beef, and caprine proportions by weight in merchant features.

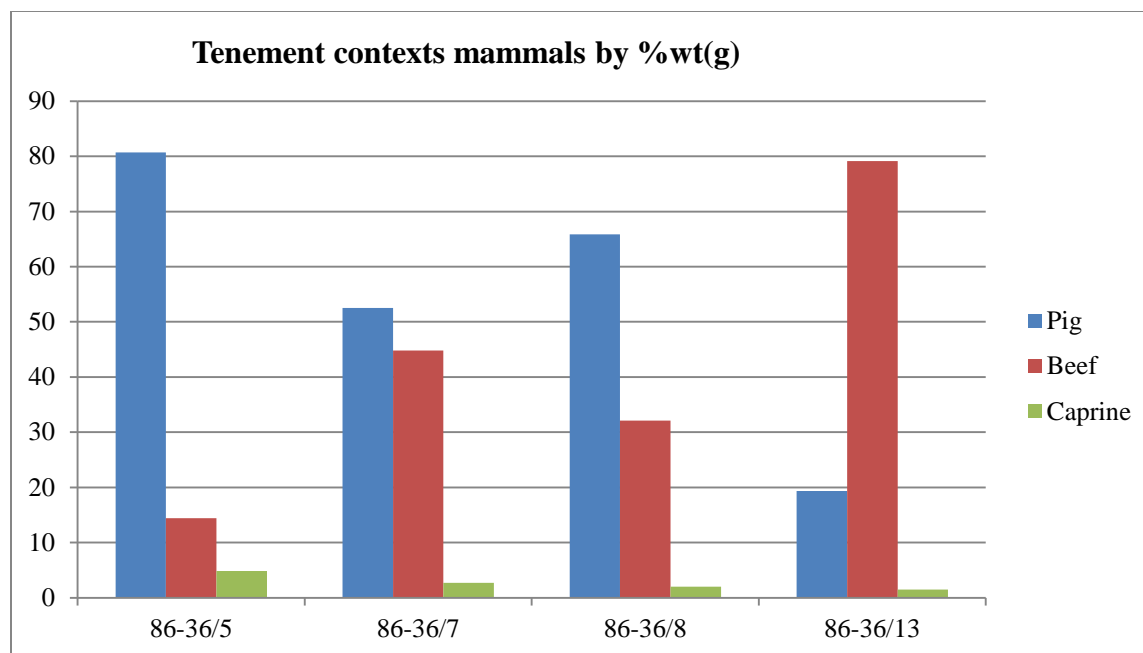


Figure 6-8: Pig, beef, and caprine proportions by weight in laborer features.

consumption of beef marks a divergence from rural Chinese food practices in Guangdong that has long been recognized by zooarchaeologists (e.g., Gust 1993; Henry 2012; Warner 2014), I would also argue that regular access to pork, and particularly fresh pork, marked a similar difference as well. Regardless of absolute quantity per dish consumed by merchants and laborers, it is clear from the considerable number of bones within the assemblage that meat played a key role in the Market Street Chinatown residents' food practices. This stands in stark contrast to the limited role meat played in rural food practices in Guangdong outside of festivals and holidays. The presence of the pork roasting furnaces in the northern portion of the Market Street Chinatown punctuate this difference, as this cooking architecture would have served little purpose in rural villages where residents typically sold most of the pigs they raised to elite consumers (Anderson 1988:177;). Likewise, dog, cat, and bear were all specialty food items in 19th-century Guangdong with medicinal or feasting connotations, and their consumption merits

mention (Simoons 2001). The presence of remains of these animals in contexts related to both merchants and laborers highlights not only the culinary practices shared between these two groups but also their increased access to these ingredients as well.

Birds and Reptiles

Just as the mammal assemblage is dominated by two primary taxa, bird remains are represented by significant numbers of chicken and duck bones (Table 6-3). Chicken accounts for the bulk of the total NISP and weight for birds, with ducks making up about half this amount of the bird assemblage. Owing to the difficulty in differentiating between individual duck taxa, many of these specimens are size-graded rather than attempting to identify them at a genus or species level. Duck remains likely represent some combination of birds bought at market, collected in the wild, and imported in salted form as was commonly produced in 19th-century Guangdong (Anderson 1988: 180). These numbers underrepresent the importance of chicken and duck, as many of the unspecified bird remains are fragmented bones from chicken- and duck-sized birds which have been butchered beyond recognition through the common Chinese practice of chopping whole birds into bite-sized pieces either before or after cooking (Figures 6-9 and 6-10). Chicken and duck remains display a correspondingly high number of shears and chops which represent butchery techniques aimed at completely severing meat and bone, whereas cut marks indicative of simply removing meat from bone are much less frequent. Additionally, egg shell fragments recovered in two tenement features indicate the consumption of eggs and/or the raising of birds within this area of the site, and the presence of five chicken long bones from merchant contexts with medullary bone, a calcium deposit present in egg-laying female birds,

TENEMENT CONTEXTS			MERCHANT CONTEXTS						
Taxonomic name	Common name	Total NISP	NISP%	Total Wt(g)	Wt(g)%	Total NISP	NISP%	Total Wt(g)	Wt(g)%
<u>Birds</u>									
<i>Gallus gallus</i>	Chicken	148	1.96	153.96	0.36	235	2.68	186	1.34
<i>Meleagris gallopavo</i>	Turkey	4	0.05	31.37	0.07	5	0.06	6.12	0.04
<i>Anas</i> sp.	Ducks	18	0.24	20.25	0.05	35	0.40	38.23	0.28
<i>Aythya</i> sp.	Ducks	1	0.01	0.5	0.00	0	0.00	0	0.00
Anatidae	Ducks	66	0.88	34.08	0.08	104	1.19	59.46	0.43
Anserinae	Geese	9	0.12	8.04	0.02	10	0.11	12.79	0.09
Anatidae	Duck or Goose	2	0.03	0.89	0.00	12	0.14	3.96	0.03
Strigidae	True owls	1	0.01	0.54	0.00	0	0.00	0	0.00
<i>Columba</i> sp.	Pigeon	13	0.17	2.24	0.01	11	0.13	2.47	0.02
<i>Callipepla californica</i>	California quail	4	0.05	0.48	0.00	1	0.01	0.08	0.00
<i>Columba</i> sp.	Pigeon	0	0.00	0	0.00	1	0.01	0.43	0.00
Unspecified bird		398	5.28	150.39	0.35	968	11.04	229.4	1.65
Bird egg shell		29	0.07	1.77	0.00	0	0.00	0	0.00
<u>Reptiles</u>									
Testudines	Pond turtle	17	0.23	17.44	0.04	219	2.50	269.26	1.94
Trionychidae	Softshell turtle	2	0.03	0.18	0.00	2	0.02	0.37	0.00
<i>Crotalus</i> sp.	Rattlesnake	2	0.03	1.03	0.00	0	0.00	0	0.00

Table 6-3: Bird and reptile taxonomic representation by context group.

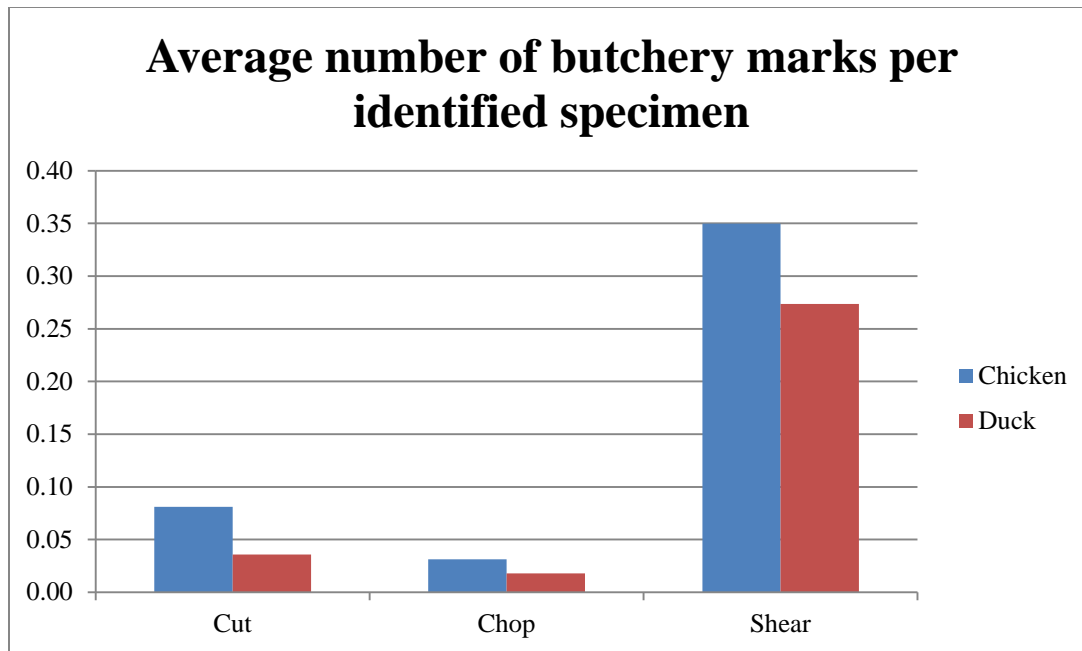


Figure 6-9: Average number of butchery marks per identified bird specimen.

lends credence to the fact that at least some chickens and possibly other birds were being raised in or near the Market Street Chinatown. Poultry, and chicken in particular, was one of the most expensive meats in 19th-century China and its presence in relatively large amounts in both merchant and tenement contexts indicates a significant increase in access to these food items for Chinese migrants (Anderson 1988:179).

Beyond chicken and duck, small amounts of goose, turkey, pigeon, and quail all played a role in Chinese migrant food practices at the Market Street Chinatown, though combined they do not come close to the primary two taxa in terms of NISP or weight. This discrepancy could certainly be driven by taste preferences, though it could also represent economic decisions or perhaps streamlining of cooking in restaurants and tenement lodging contexts towards a smaller number of taxa which could be cooked efficiently in rapid succession. Chicken and duck also



Figure 6-10: White-cut chicken chopped with a cleaver, Guangzhou, China.

feature most prominently in modern and historical whole-bird preparations in Guangdong such as roasted duck and poached (“white-cut”) chicken (Figure 6-10), and there may be a functional reason to favor birds of this size for these cooking techniques. The single owl bone, likely belonging to either genus *Strix* or *Asio*, may represent an animal that was consumed or one that simply entered the trash pit in pursuit of prey and died. Simoons (1991:436) notes owls were a luxury food in Guangdong, so it is entirely possible this bone is from an animal sought specifically for consumption which would not have frequently been available in 19th-century rural Chinese villages.

A number of turtle and snake remains were also present in the assemblage, and these include numerous pond turtle shell fragments, four fragments of softshell turtle shell, and two rattlesnake vertebra. The pond turtle remains are likely those of the western pond turtle (*Actinemys marmorata*), the only pond turtle native to California, however in absence of a comparative specimen from this species I have conservatively identified these remains as Testudines/pond turtle. These turtles were available in marshes, ponds, rivers, lakes, and streams in and around San Jose and elsewhere in California, and they were also frequently sold in urban California markets (e.g., *California Farmer* 1877). Thus the present specimens may have been either collected locally by hand or purchased from either Chinese or Anglo merchants. Softshell turtle is an entirely different case and no members of this family are native to California. While the specimens in the assemblage were too fragmented to permit species-level identification they were certainly imported, most likely from China as a live export supplied by *jinshanzhuang*. Both pond turtles and softshell turtles are sold in Chinese markets in California today and they were common foods in 19th-century Guangdong as well (Simoons 1991:452-454), Softshell turtle in particular has connotations as a strengthening food and thus may have been consumed either in a culinary or medicinal preparation (Anderson 1988:180).

The rattlesnake remains in the Market Street Chinatown assemblage may well represent the medicinal practices of laborers. Anderson (1988:180) notes that snake is rarely consumed in a purely culinary fashion in China but instead usually consumed medicinally. Snake remains have been ascribed medicinal uses at other Chinese migrant sites (Heffner 2013), and this may well be the case in the Market Street Chinatown as well. Little information exists regarding the potential culinary uses of this ingredient in 19th-century rural Guangdong, however, and there is always the possibility that rattlesnake could have been used in daily meals. However, given its

low NISP and the propensity to ascribe potent medicinal power to highly venomous snakes, it seems relatively safe to assume this specimen was consumed with at least some emphasis on its health properties.

Fish

Finally, a wide variety of fish remains are present in the Market Street Chinatown faunal assemblage and they include taxa from California fresh water fisheries, multiple Chinese-operated fisheries throughout the West Coast, Anglo-operated fisheries and markets, and salt fish shipped from China by *jinshanzhuang* (Table 6-4, see chapter 7). The fish remains in the Market Street Chinatown assemblage follow broad patterns seen at other Chinese migrant sites, and these include a focus on freshwater fish including cyprinids and the Sacramento perch, consumption of a wide range of mild, white-fleshed marine taxa including rockfish and a variety of flatfish, and the importation of a small selection of Chinese salt fish, especially white herring, threadfin bream, puffer fish, and yellow croaker (Schulz 2004). It is important to note that an extensive Chinese industry focusing on the production of salt fish existed throughout the West Coast (Armentrout-Ma 1981), and many of the fish remains likely arrived at the site in the form of salt fish though this is difficult to determine via zooarchaeological methods. In some cases, the geographic range of fish indicate its status as salt fish, as in the case of California sheephead and ocean whitefish which are endemic to southern California; in other taxa with extensive ranges overlapping nearby marine fisheries, such as the rockfish and many of the identified flatfish, it is likely that both salt and fresh versions of these fish were consumed.

While the kinds of fish eaten by merchants and laborers tend to be similar and emphasize the same general taxa, some notable differences exist. First, a greater variety of fish taxa are

		TENEMENT CONTEXTS				MERCHANT CONTEXTS			
	Common name	Total NISP	NISP%	Total Wt(g)	Wt(g)%	Total NISP	NISP%	Total Wt(g)	Wt(g)%
<u>Freshwater/Anadromous Fish</u>									
	Sacramento blackfish	9	0.12	1.81	0.00	4	0.05	0.94	0.01
<i>Orthodon microlepidotus</i>									
<i>Ptychocheilus grandis</i>	Sacramento pikeminnow	37	0.49	13.85	0.03	9	0.10	1.96	0.01
cf. <i>Gila</i> sp.	Chub	1	0.01	0	0.00	10	0.11	1.06	0.01
Cyprinidae	Carps and Minnows	51	0.68	4.52	0.01	210	2.40	12.01	0.09
<i>Catostomus occidentalis</i>	Sacramento sucker	6	0.08	0.6	0.00	6	0.07	0.24	0.00
<i>Archoplites interruptus</i>	Sacramento perch	15	0.20	1.59	0.00	28	0.32	1.64	0.01
<i>Oncorhynchus</i> sp.	Salmon	1	0.01	0.04	0.00	101	1.15	29.03	0.21
<i>Acipenser</i> sp.	Sturgeon	39	0.52	15.11	0.04	16	0.18	9.94	0.07
<u>Marine Fish</u>									
<i>Sebastes</i> sp.	Rockfish	68	0.90	16.08	0.04	197	2.25	45.66	0.33
Scorpaenidae	Scorpionfish	4	0.05	0.41	0.00	10	0.11	1.82	0.01
<i>Scorpaena guttata</i>	Cal. scorpionfish	0	0.00	0	0.00	1	0.01	0.27	0.00
<i>Scorpaenichthys marmoratus</i>	Cabezon	2	0.03	2.22	0.01	3	0.03	0.52	0.00
Cottidae	Sculpins	0	0.00	0	0.00	6	0.07	0.2	0.00
<i>Damalichthys vacca</i>	Pile perch	0	0.00	0	0.00	3	0.03	1.73	0.01
Embiotocidae	Surfperches	10	0.13	0.61	0.00	11	0.13	0.58	0.00
<i>Peprilus simillimus</i>	Pacific pompano	0	0.00	0	0.00	1	0.01	0.02	0.00
<i>Ophiodon elongatus</i>	Lingcod	0	0.00	0	0.00	2	0.02	0.5	0.00
<i>Hexagrammos</i> sp.	Greenling	3	0.04	0.31	0.00	1	0.01	0.31	0.00
<i>Atractoscion nobilis</i>	White seabass	1	0.01	0.23	0.00	2	0.02	3.74	0.03
Sciaenidae	Drums	2	0.03	0.24	0.00	23	0.26	2.25	0.02
Atherinopsidae	Silversides	35	0.46	1.27	0.00	251	2.86	7.81	0.06
<i>Clupea pallasii</i>	Pacific herring	3	0.04	0.08	0.00	3	0.03	0.02	0.00
Clupidae	Herrings	6	0.08	0.03	0.00	38	0.43	0.23	0.00
Osmeridae	Smelt	1	0.01	0	0.00	1	0.01	0.01	0.00
<i>Scomber japonicus</i>	Pacific mackerel	0	0.00	0	0.00	3	0.03	0.71	0.01
cf. <i>Scomberomorus</i>	Spanish mackerels	0	0.00	0	0.00	1	0.01	0.04	0.00
<i>Paralichthys californicus</i>	California halibut	2	0.03	1.18	0.00	0	0.00	0	0.00

<i>Paralichthys</i> sp.	Large-tooth flounders	1	0.01	0.4	0.00	9	0.10	1.38	0.01
<i>Eopsetta jordani</i>	Petrale sole	2	0.03	0.13	0.00	9	0.10	0.91	0.01
<i>Platichthys stellatus</i>	Starry flounder	2	0.03	0.07	0.00	21	0.24	2.25	0.02
<i>Citharichthys sordidus</i>	Pacific sanddab	0	0.00	0	0.00	3	0.03	0.18	0.00
<i>Microstomus pacificus</i>	Pacific dover sole	0	0.00	0	0.00	1	0.01	0.04	0.00
<i>Parophrys vetulus</i>	English sole	0	0.00	0	0.00	3	0.03	0.06	0.00
Cynoglossidae	Tonguefish	0	0.00	0	0.00	11	0.13	0.34	0.00
Pleuronectiformes	Flounders	20	0.27	3.26	0.01	21	0.24	1.68	0.01
<i>Semicossyphus pulcher</i>	California sheephead	8	0.11	6.89	0.02	21	0.24	8.42	0.06
<i>Caulolatilus</i> sp.	Tilefish	0	0.00	0	0.00	1	0.01	0.42	0.00
<i>Sphyræna</i> sp.	Barracuda	0	0.00	0	0.00	2	0.02	0.48	0.00
<u>Asian Fish</u>									
<i>Ilisha</i> sp.	Chinese white herring	12	0.16	0.69	0.00	65	0.74	5.28	0.04
Nemipteridae	Threadfin bream	1	0.01	0.09	0.00	88	1.00	8.5	0.06
<i>Branchiostegus</i> sp.	Horsehead	0	0.00	0	0.00	23	0.26	4.42	0.03
<i>Pseudorhombus</i> sp.	Large-tooth flounders	31	0.41	3.34	0.01	2	0.02	0.14	0.00
Pleuronectiformes (Asian)	Flounders	1	0.01	0.09	0.00	0	0.00	0	0.00
<i>Larimichthys crocea</i>	Large yellow croaker	1	0.01	0.06	0.00	25	0.29	5.87	0.04
<i>Johnius</i> sp.	Croaker	1	0.01	0.08	0.00	0	0.00	0	0.00
<i>Lagocephalus</i> sp.	Pufferfish	0	0.00	0	0.00	3	0.03	8.73	0.06
Tetraodontidae	Pufferfish	0	0.00	0	0.00	13	0.15	17.66	0.13
<i>Sepia</i> sp.	Cuttlefish	22	0.29	8.85	0.02	52	0.59	11.6	0.08
<u>Unspecified Fish</u>									
Lutjanidae	Snappers	2	0.03	0.25	0.00	3	0.03	0.28	0.00
<i>Epinephalus</i> sp.	Groupers	0	0.00	0	0.00	1	0.01	0.37	0.00
Sharks	Sharks	13	0.17	1.17	0.00	2	0.02	0.08	0.00
Unspecified fish	Unspecified fish	323	4.29	37.04	0.09	1271	14.50	103.4	0.74

Table 6-4: Fish taxonomic representation by context group.

present in merchant contexts, which have 47 unique taxa identifications compared to 33 in tenement contexts. Merchant contexts also contain a wider variety of rare taxa represented by small numbers of specimens, and these include Pacific harvest fish, California scorpionfish, mackerel, Pacific sanddab, Pacific dover sole, English sole, tonguefish, and ocean whitefish. Likewise, merchant contexts held several well-represented taxa that were uncommon in tenement contexts including salmon, white herring, threadfin bream, horsehead, pufferfish, and large yellow croaker. Given the overall high levels of preservation within the faunal remains, the diversity represented within the fish assemblage is likely indicative of similar diversity in past Chinese migrant food practices at the Market Street Chinatown. The specific taxonomic differences between the merchant and tenement contexts shed light on differential access to food-based trade networks and connections within the community. Though some of the fish remains present in merchant contexts may represent discarded, unsold product from stores, the relative lack of imported Chinese taxa in tenement contexts compared to merchant contexts (Figure 6-11) suggests a real economic or logistical divide in access to these ingredients. This makes logical sense as merchants were responsible for bringing these ingredients into the community for sale as well as wealthy enough to regularly purchase them. While merchants' roles as fish sellers raises questions as to whether the presence of fish in related contexts is due to their consumption by merchants, as a byproduct of selling salt fish, or from the despoil of spoiled product, the tendency of Chinese cooks to utilize all portions of salt fish in cooking, the sale of this product as whole units rather than by weight, and its long shelf life all suggest the fish remains in merchant contexts were, for the most part, consumed by merchants and those living with them. That imported *Pseudorhombus* sp., a genus of flounder, is more common in tenement contexts than in merchant ones is striking and marks this taxa as the only Asian imported fish

more common in tenement contexts than in merchant contexts. While it is impossible to say with certainty, perhaps this taxa was cheaper than other imported fish or not as desirable than the many North American flatfish more commonly found in merchant contexts. Finally, mackerel and salmon are oilier and fattier fish not typically favored in Chinese cooking preparations (Anderson 1988:173; Simoons 1991), and their presence in merchant contexts could indicate experimentation with these foods, purchase of expensive non-Chinese products as a way to differentiate merchant food practices from that of laborers, or even gift giving by the Anglo-American counterparts of Chinese merchants.

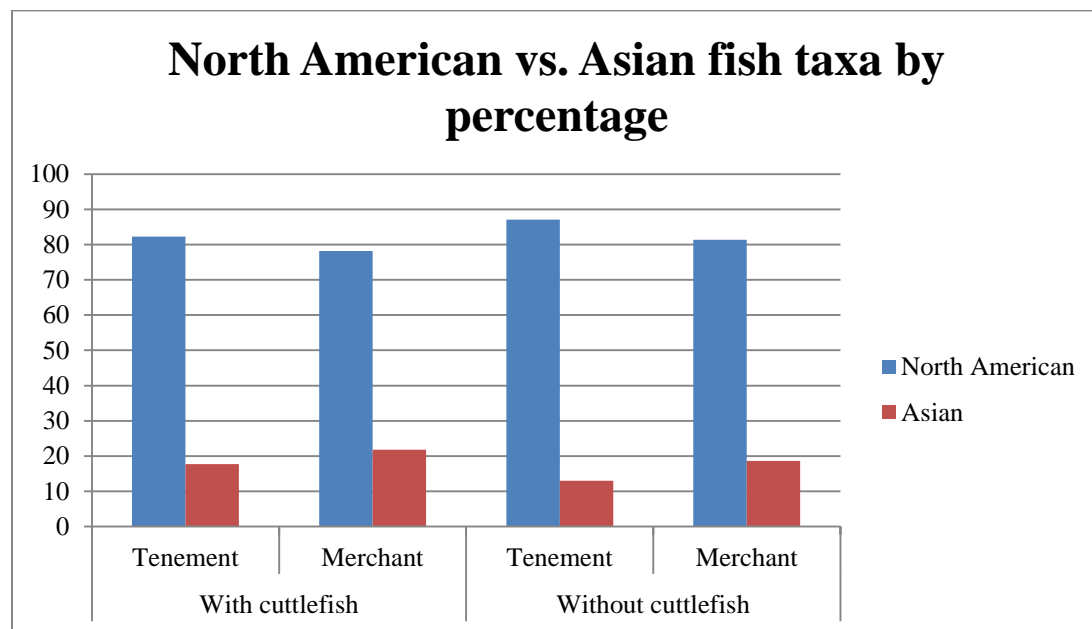


Figure 6-11: Comparison of North American and Asian fish taxa by context group.

Finally, it bears noting the relationship the identified fish taxa have to those most commonly consumed in 19th-century Guangdong. While coastal populations would have subsisted primarily on the many mild, white-fleshed fish found in the South China Sea, inland populations' food practices centered primarily on freshwater taxa including cyprinids and

numerous smaller fishes. Most rural villages maintained a central fish pond for the rearing of fish, which could be consumed fresh or more typically used for the production of salted or dried fish (Lin 1997:70). These fish, as well small numbers of imported marine salt fish bought at market, would have provided much of the regularly consumed animal protein eaten by rural Chinese populations, while regular consumption of fresh fish of all kinds was typically restricted to the tables of the elite (Simoons 1991:337-338). Thus, while the copious amounts of cyprinid remains including those of the Sacramento pikeminnow, Sacramento blackfish, and chub all are suggestive of southern Chinese food practices, in reality the regular consumption of these fish likely marks a departure from the daily food habits of most of the Market Street Chinatown's residents prior to migration. Likewise, the inclusion of significant numbers of marine taxa marks a similar shift for migrants not originally from coastal areas, as while rural farmers would have had at least limited access to these ingredients in Guangdong they would not have formed the bulk of the fish they consumed. It is perhaps ironic that the diets of merchants in the Market Street Chinatown seemed to have been differentiated by the consumption of large amounts of imported Chinese salt fish, an ingredient used by all social classes in Guangdong but one that is most readily associated with the food practices of non-elites who used it as a potent seasoning in a variety of preparations. However, the Chinese salt fish shipped by *jinshanzhuang* were typically marine taxa which would have been more expensive than the village-produced dried fish made from freshwater fish locally raised in rural Chinese villages. By consuming imported Chinese marine fish in large numbers, it appears that Chinese merchants were in effect eating up the social ladder not based on the recreation of food practices from home but instead through the consumption of ingredients previously expensive and hard to procure in rural villages in Guangdong.

Discussion

It would be tempting to cast the faunal data from the Market Street Chinatown in terms of the traditional as it fits the patterns so often seen in zooarchaeological studies of Chinese migrant communities. The Market Street Chinatown's residents dined primarily on a combination of pork and beef which they supplemented with poultry, turtles, and fish, and they also had access to a wide range of imported goods from China including softshell turtles and Asian fish taxa such as yellow croaker and pufferfish. This diversity could suggest adherence to the traditional cooking practices of Cantonese cuisine with a few additional ingredients thrown in due to cost considerations and availability, and it matches similarly diverse patterns observed at other urban Chinese migrant sites (e.g., Allen et al. 1992; Langenwalter 1987; Praetzelis and Praetzelis 1993). However, as discussed at the beginning of this article such an interpretation ignores the history of Chinese migration to North America, the supply of migrant communities by *jinshanzhuang*, and the nature of the localization of Chinese cooking practices in the United States. Further, couching interpretation in terms of idealized high Cantonese cooking practices obscures the profound changes that access to the variety of animal ingredients not easily obtainable in Chinese villages brought not only to migrant food practices but also to conceptions of self. Archaeologists consistently overlook some of the most fundamental changes which occurred during 19th-century Chinese migration to the United States when they frame their interpretations in reference to the traditional. This is not to say that many of the conclusions drawn in past zooarchaeological studies of Chinese migrant food practices are incorrect, but rather that they can and should be reframed in reference to understandings of Chinese migration within a transnational context.

The data from the Market Street Chinatown make clear that both merchants and laborers dined primarily on pork and beef, and that with a few exceptions they ate generally the same cuts of meat. Merchants ate more pork than did laborers, and some laborers frequently ate cheap meals made with beef broth and beef tongue. This follows patterns seen at other 19th-century Chinese sites (Praetzellis and Praetzellis 1997), and it suggests economically driven differences in food practices between these two groups. Several other differences exist as well, including the presence of a greater variety of fish and a heavier emphasis on imported Asian salt fish in merchant contexts compared to those of laborers. More broadly, when comparing animal consumption by taxonomic class it is clear that by both NISP and weight birds and fish made up significantly more of the diets of merchants living in the Market Street Chinatown than of laborers (Figure 6-12). Thus while both merchants and laborers ate large amounts of beef and pork, merchants were able to more consistently consume a wide variety of birds and fish as well. It is notable that within southern Chinese cuisines in general, and not just within high Cantonese cuisine, variety of ingredients in dishes and meals is considered desirable (Anderson and Anderson 1977:355-358; Simoons 1991:57). The data from the Market Street Chinatown suggest that merchants, with their greater purchasing power, pursued variety in their diets through the consumption of poultry and a wide range of fish taxa from both North America and China. This variety, while subtle, provides one of the few culinary lines of differentiation visible within the zooarchaeological data collected in this study. The data make clear that proportion and variety marked a major difference between the diets of merchants and laborers, as did the consumption of imported salt fish.

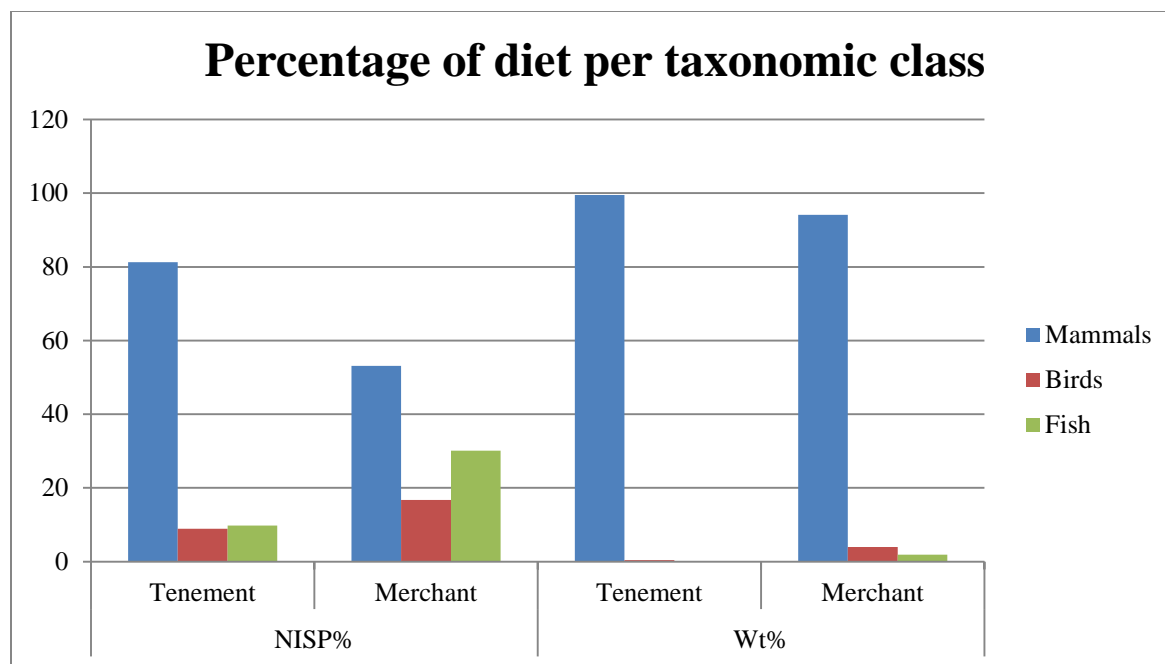


Figure 6-12: Proportion of mammal, bird, and fish by context group.

While merchants differentiated themselves from laborers through their food practices, a number of dietary commonalities served to simultaneously form the basis of a shared community identity that crosscut class lines. The most fundamental of these is that pork and beef provided the bulk of both merchant and laborer meat diets and the cuts and portions of these animals consumed by each group were largely the same. While the extra variety in merchant diets provided by poultry and fish was no doubt important in marking class-based differences, there seems to also be a generally shared base meat diet consumed by both merchants and laborers. Additionally, the shared consumption of both bear paw and cat meat deserves mention. Bear paw, a luxury item in 19th-century Guangdong, seems to have been available at least in small amounts to all segments of society in the Market Street Chinatown; this marks a significant change in culinary practices as prior to migration few if any of the Market Street Chinatown's residents would have been able to afford to consume this ingredient. Chinese migrants in North

America were able to incorporate bear paw and other luxury items into their diets, in large part through economic success and the increased availability of this and other ingredients. Chinese migrants of all social classes effectively ate up the social ladder by consuming luxury goods, and they took on the trappings of what they perceived to be upper class food practices but which became shared across labor lines in ways they were not in China. Whether or not this was a truly intentional decision or an incidental result of availability, circumstance, or the pursuit of culinary pleasure is unimportant; in the end, the consumption of bear paw ingredient, previously unavailable to the Market Street Chinatown's residents, became a commonly shared food that both marked success and created shared culinary practices. This is not an uncommon pattern in the foodways of migrants and the experience of a "land of plenty" can profoundly shape identities in relation to life in the home country (Diner 2001; Parasecoli 2014). The consumption of cat meat also extended beyond class lines, though it likely contributed to community identity in a different way. Cat consumption, a normal practice in Guangdong, was the frequent target of Anglo racist rhetoric and public discourse, and the willingness of Chinese migrants to consume this ingredient despite the stigma attached to it suggests that it held a strong place in Chinese culinary practices. I contend that the continued consumption of cat meat may have occurred not only in reference to culinary practices in Guangdong, but also, if not primarily, in relation to the way it clearly differentiated Chinese cookery from that of surrounding Anglo populations. In this case, the consumption of cat meat connected Chinese migrants to home via nostalgic memories as well as served as a way of bonding over a shared sense of Chineseness in direct opposition to Anglo stigmatization of the practice of eating cats (c.f. Galinsky et al. 2003).

Beyond providing the basis for both intracommunity difference and shared group identity, Chinese migrant food practices also served as the foundation for a broad, imagined

Chinese migrant culinary identity. Many of the Market Street Chinatown's residents would have had come from different families, villages, and regions in Guangdong, and they likely would have had a variety of food practices prior to migration. However, the majority of 19th-century Chinese restaurants in North America served food most familiar to Taishanese migrants, the most populous Chinese subgroup by region (Coe 2009; Liu 2009). While this means that those of Taishanese origin could more readily find familiar dishes, it likewise suggests that non-Taishanese residents in the Market Street Chinatown and other Chinatowns would have regularly eaten less familiar food in these contexts. However, it is important to emphasize that the amount of meat, poultry, and fish consumed in the Market Street Chinatown and other Chinese migrant communities dwarfed that eaten by the average Chinese rural farmer in 19th-century Guangdong, whether from Taishan or elsewhere, and that even Taishanese diners experienced food that marked a major departure from their pre-migration diets. Thus, even though Taishanese-inspired cooking became the default formalized cuisine within the Market Street Chinatown and other 19th-century Chinatowns in North America, changes introduced by the patterns of goods imported by *jinshanzhuang* and the increased availability of animal protein drastically altered the nature of dishes and meals served in American Chinatowns compared to their equivalents in China. This change had a profound impact on the ability of migrants to portray and/or view their experiences in North America in a positive light following return to their home villages, despite the rigors of labor and the prejudice and racism they encountered abroad (c.f. Hsu 2000:44). Further, increased utilization of meat and the continued consumption of formerly new ingredients such as the Sacramento blackfish were solidified within Chinese migrant cuisine and they ultimately became one of the attributes that marks a notable difference between Chinese food in Guangdong and North America today (Newman 2007).

The above discussion has shown how Chinese food practices in the Market Street Chinatown simultaneously differentiated merchants from laborers while also providing a shared base diet around which a migrant community identity could form. While perhaps counter-intuitive this is not surprising, as food can function variously in different social settings to produce wildly different effects and construct multiple identities. In the context of the 19th-century United States, varying degrees of economic success within Chinese migrant communities led to social differentiation which became marked by unique sets of foodways along class lines. On the other hand, intense anti-Chinese sentiment and the experience of being Chinese in North America served as commonalities which were reinforced by a broad, shared base diet within communities such as the Market Street Chinatown. This process did not occur as an isolated phenomenon in the United States, however, but was instead directly linked to migrant conceptions of life in Guangdong. Merchants food practices harkened back to an idealized view of upper class Chinese foodways through the consumption of imported Chinese marine salt fish, while on a community level the Market Street Chinatown's residents all enjoyed newfound access to large amounts of meat and luxury foods such as bear paw. These culinary changes signified movement up the social ladder, and they took place in reference to and connection with home via the continued shipment of Chinese goods and foods by *jinshanzhuang* and correspondence and remittance payments between Chinese migrants in North America and their families at home. These connections continued to root aspects of migrant identities firmly in the home village, maintaining and reinforcing village and family identities alongside emerging Chinese migrant ones.

While this discussion has drawn on zooarchaeological data that are similar to those collected from other large, urban Chinatowns in 19th-century North America, the conclusions I

draw are fundamentally different. I have attempted to highlight the ways that Chinese migrant food practices were altered following migration to the United States, as well as the multiple effects this process had upon the associated identities with which these practices intersected. This would not be possible by operating under conceptions of the traditional as imagined in previous studies of Chinese migrant zooarchaeology. Instead, archaeologists must reorient their work on Chinese migration and food practices towards models highlighting internal diversity, the nature of rural Chinese life prior to migration, and the transnational connections and frame of reference in which migrants operated. Only by understanding these factors can a fuller understanding of the changes in food practices, daily life, and identity brought about through migration be fully understood. While this is only a single case study, it demonstrates the power of such an approach and it attempts to begin to answer some of the calls made by others to pursue transnational and diasporic approaches to Chinese migrant archaeology (González-Tennant 2011; Ross 2013; Staski 2009; Voss 2016; Voss and Allen 2008). This is just a first step, however, and additional studies need to take up this goal, both by including additional sites and by exploring similar themes through additional datasets.

Chapter 7. The Fresh and the Salted: Chinese Migrant Fisheries Engagement and Trade in 19th-century North America

A version of this of this chapter has been submitted as:

Kennedy, J. Ryan. (under review). The Fresh and the Salted: Chinese Migrant Fisheries Engagement and Trade in 19th-century North America.

Abstract

The copious amounts of fish remains recovered from 19th-century Chinese archaeological sites in North America demonstrate that fish played an important role in the cuisine of Chinese migrants. Zooarchaeologists have frequently identified diverse inventories of fish taxa at Chinese sites procured from local, regional, and international sources, and Chinese consumers maintained connections with a number of discrete fisheries to satisfy their desire for both fresh and salted fish products. However, to date no archaeological study has addressed the broader complexity of the Chinese fish trade in North America. This paper explores these intricacies by drawing on historical observations of 19th-century Chinese fishing operations in North America, existing zooarchaeological fish data from sites across the American West, and an in-depth case study of archaeologically recovered fish remains from the Market Street Chinatown in San Jose, California. To better understand the fish data from the Market Street Chinatown, the author uses indicator groups to identify several likely sources of the specimens identified at the site. Overall, the data show that while Chinese migrants typically consumed fish taxa that resembled those eaten in 19th-century southern China, they sourced their fish from multiple Chinese and Anglo fisheries throughout the American West and China.

Introduction

Fish played a vital role in 19th-century southern Chinese cookery, and the continued consumption of both fresh and salt fish was central to the creation and maintenance of group identities with Chinese migrant communities through shared nostalgia-driven food practices (Kennedy and Popper 2016). Fish provided variety and diversity of ingredients in dishes, played multiple culinary roles (e.g., as a seasoning versus main component), and ultimately became directly associated with Chinese cooking through the distinct odor of salt fish (Alta California 1885) and the sale of live fish in Chinese markets and restaurants in the late 19th-century United States (San Francisco Call 1897). Nineteenth-century Chinese fish consumption garnered enough attention from Anglo outside observers to warrant frequent description, such as in artist Theodore Wores' 1881 oil painting *The Chinese Fishmonger*, inspired by fish sellers in San Francisco's Chinatown. Outside interest was particularly great when it involved the distinctive Cantonese-style salt fish either imported from China or made in the United States by Chinese fishermen (Spier 1958a, 1958b).

While fish were central to Chinese migrant daily culinary practices in North America, a complex web of connections at multiple scales was required to supply Chinese consumers with the various fish products they cooked and ate. These included small-scale fishing, engagement with Anglo-American and Chinese-run local and regional market fisheries, and the international trade of dried fish products between China and the United States. Such sources provided Chinese communities in the West with a plethora of fish products including fresh local catch, 'fresh' fish shipped by rail following the completion of a number of rail lines beginning in the 1860s, and salt fish procured from local, regional, and international sources. Unfortunately, few accounts of the 19th-century trade fish products by Chinese migrants were recorded, and those that do exist

often lack vital information necessary for reconstructing the chain of connections bringing fish to Chinese consumers (Armentrout-Ma 1981; Collins 1987). While many accounts omit mention of specific taxa, where they are provided species tend to be presented without mention of quantity or abundance in either laundry lists of taxa caught by Chinese fishermen (e.g., Jordan 1887:612) or as individual taxa with special notes such as their collection specifically for salting and shipment to San Francisco for redistribution (e.g., Jordan 1887:596). While many modern studies have explored the important role Chinese fishermen played in many of California's early fisheries (Armentrout-Ma 1981; Bentz and Schwemmer 2002; Lydon 1985), they are subject to these same limitations in documentary evidence and instead tend focus more broadly on Chinese engagement with regional fisheries and their political and economic implications.

Zooarchaeology offers great potential to explore the procurement and trade of fish by 19th-century Chinese migrants in the United States, and this chapter draws upon data from archaeologically recovered fish remains from the western United States to better understand the fish-based trade networks Chinese migrants in the 19th-century United States participated in. The first section of the chapter provides historical and cultural background about 19th-century Chinese migration to the United States, including Chinese migrant dietary practices, the engagement of Chinese migrants in fisheries throughout North America, and the salt fish trade. The next section discusses previous archaeological research on from sites across the Western United States to help establish broad patterns in the origin points of commonly consumed fish and their distribution to Chinese communities throughout the country. Finally, examination of data from the large, urban Market Street Chinatown in San Jose, California provides an in-depth look at Chinese fisheries engagement.

Historical and Cultural Background

In the last half of the nineteenth century, nearly 380,000 Chinese people arrived in the United States, the majority of them coming from China's southern Guangdong province (Takaki 1998:32; McKeown 2004). They left China for a variety reasons including unrest, violence, famine, and the economic prospects of the land they termed "Gold Mountain" (Hsu 2006). Upon arriving in the United States many settled in urban Chinese communities, commonly termed Chinatowns, while others found employment in rural locales, often as a part of small labor gangs contracted to various employers. Chinese migrants found employment in a wide range of industries and jobs including railroad construction and maintenance, agriculture, mining, work in laundries and restaurants, cigar and shoe making, and of course fishing (Takaki 1998:240). Others, especially merchants, played an important role in the sale and distribution of all manner of merchandise, including the shipment of goods and foods such as salt fish to and from China (Hsu 2006; Tsai 1993).

Fish Consumption in 19th-century Guangdong

Fish consumption and the associated activities of fishing and aquaculture have a long history in Guangdong. Fish raised in freshwater ponds formed the bulk of 19th-century Southern Chinese fish consumption outside of coastal communities, and species commonly raised in Guangdong include primarily Asian cyprinids such as the common carp (*Cyprinus carpio*) (Anderson 1991:172-173; Simoons 1991:343-346). In addition to a number of commonly collected wild freshwater species, 19th-century Southern Chinese cuisine also made heavy use of Guangdong's plentiful marine resources, and popular marine food fish are primarily white-fleshed and mild-tasting species including sturgeon, shad, sea-bream, butterfish, croakers, sharks, and a variety of flatfish (Simoons 1991:338-339). Chinese fisherman used of a wide range of

collection methods including hook-and-line, net fishing, and even the use of trained cormorants to catch small fish (Gray 1878:288-298; Simoons 1991:339-346). When feasible Chinese fisherman and cooks maintained freshness by keeping fish alive until as close to the point of cooking as possible, and a wide variety of solutions existed to achieve this; freshwater fish were often transported live in buckets to restaurants and markets, and marine fish could be purchased from boats with submerged cages designed to keep fish alive and oxygenated.

While fundamentally a food preservation technique found in cultures around the world, salt fish occupies its own unique space in Cantonese cooking. Several distinct methods of salting fish existed in southern China, and these include the salting and drying of whole fish, the gutting of large fish followed by hanging and air-drying, the soaking of fish in brine before subsequent drying, and the drying of small fish sans salt (Anderson 1988:175). While knowing the specific methods required to salt numerous kinds of fish would have necessitated training or practice, the general process of drying fish would have been familiar to most members of 19th-century Chinese society in Guangdong and it can be assumed many migrants to the United States would have understood the basic steps needed to create this product. This is particularly true amongst the many rural Chinese who migrated to the United States, as salt fish was heavily utilized as a relatively cheap source of protein and an economical seasoning for rural populations. However, despite its connotation as a poor person's food, people of all socio-economic levels in 19th-century Guangdong ate salt fish; its consumption provided a shared commonality between people occupying a variety of different social positions.

Salt fish was central to local and regional trade networks in southern China, and the long-distance trade of salt fish was very common. Salt fish made from marine taxa was produced in great quantity in Hong Kong, Guangzhou, and other coastal cities and towns, and it was sold not

only locally but also to rural farmers further inland, many of whom in turn supplied nearby urban areas with necessary fresh vegetables and live fish such as carp (Anderson and Anderson 1977:335; Simoons 1991:345-346). This exchange provided rural farmers with a supply of salt fish and kept the wealthier residents of major cities supplied with fresh fish. While nearly any fish taxa could be dried, some taxa such as flounders and croakers lent themselves more readily to salting owing to the individual properties of their flesh, body shapes, etc. However, many taxa native to China's South China Sea and its connected waterways were dried, as were pond-raised and the occasional wild-caught freshwater fish, thus extending the taxa used to make this product to a variety of freshwater fishes including carps, snakeheads, and others.

Chinese Migrant Fishermen and Salt Fish Trade

To meet demand for fresh and salt fish in Chinese migrant communities, Chinese entrepreneurs founded fishing villages up and down the North American Pacific Coast beginning in the early 1850s (Figure 7-1; Armentrout-Ma 1981; Collins 1987; Lydon 1985). While the exact origin of the first Chinese fishermen in North America is unknown, it is assumed that they were likely experienced fishermen from coastal Guangdong owing to their knowledge of Chinese fishing techniques and equipment (Armentrout-Ma 1981:151). While early Chinese fishing communities tended to be small, the number of Chinese fishermen operating in the United States increased to the thousands in the 1870s with the release of many Chinese laborers from railroad jobs. Chinese fishermen made heavy use of Chinese fishing methods in North American waters, particularly highly effective bag nets commonly used in Guangdong. When staked into the bottom of shallow waters these nets could be filled with tremendous amounts of shrimp and fish including small species and the fry of larger, often commercially important taxa through tidal action (Goode 1884: 612-613). Chinese fishermen also utilized set lines, gill nets, and other



Figure 7-1. Fisheries and locations mentioned in this chapter.

capture methods, and they built Chinese junk from California redwood to harvest and transport vast amounts of seafood along the coast (Bentz and Schwemmer 2002:145-147). Many of the earliest Chinese fishing communities began collecting a wide array of species for general drying before ultimately transitioning into specialization in particular species or kinds of seafood products by the late nineteenth century (Armentrout-Ma 1981:145; Collins 1987; Lydon 1985). Still, the use of bag nets meant that even specialized Chinese fishing villages collected and dried many additional species beyond those they were targeting. The vast majority of fish caught in this method were dried by Chinese fishermen and sold to merchants in larger Chinese communities (principally San Francisco's Chinatown) for subsequent distribution across the West and to China (Armentrout-Ma 1981:146).

The majority of Chinese fishermen operated in one of several fisheries: in San Francisco and Monterey Bays, the Sacramento/San Joaquin River system, Southern California (primarily San Diego, Los Angeles, and the Channel Islands), Oregon and Washington, and Canada's Vancouver Island (Armentrout-Ma 1981:142). Perhaps the most notable of these were the San Diego-based abalone fisheries in the California Channel Islands (Braje et al. 2007) and the large Chinese fishing villages near Monterey Bay (Lydon 1985). Other operations included Chinese fishing efforts near Los Angeles, California, bag net fishing and later shrimping operations in and around San Francisco Bay, a short-lived fishing effort in Humboldt Bay north of San Francisco that targeted large populations of petrale sole (*Eopsetta jordani*), several fishing villages in Oregon and Washington which procured pile perch (*Rhacochilus vacca*) and other common coastal species, and scattered freshwater fishing operations in the Sacramento/San Joaquin River system which collected sturgeon, shad, smelt, cyprinids, and Sacramento perch (Armentrout 1981:149-150). In most cases, the majority of the catch was utilized to produce salt

fish and only portion were sold as fresh locally (Collins 1987). Notable exceptions include the Chinese fishing community in Monterey which shipped fresh fish by rail to San Francisco and San Jose (Lydon 1985) and the fishing operation in Humboldt Bay which shipped petrale sole fresh to San Francisco's markets by boat (Jordan 1887:612). Additionally, while these communities exported tremendous amounts of salt fish throughout the United States, over 80% of their catch was dried and shipped back to China (Collins 1892). Whether the exported salt fish was sold in Chinese markets or re-distributed to other Chinese migrant communities within the Pacific world remains unexplored, and archaeologists and historians should considering the ultimate fate of this product as it has important implications in tracing 19th-century distribution networks and better understanding the commodification of salt fish.

Chinese migrants also procured salt fish from China, though 19th-century North American observers rarely noted (or perhaps even knew) the species of fish imported (Spier 1958a; Tsai 1993:30). Likewise, they also purchased fish directly from Anglo markets near Chinese communities, especially cyprinids and other white-fleshed fish (e.g., Collins 1892:123-124). Since most Chinese fishermen targeted species collectable with nets from the shore waters or cast from Chinese junks in shallow waters, archaeologically-recovered bones from fish taxa occupying deep water and requiring hook-and-line methods favored by Anglo fishermen can be taken as indicative of fish purchased by Chinese consumers in Anglo markets rather than . It is more difficult to discern an exact point of origin for species taken by *both* Chinese and Anglo fishermen, though it can be conservatively assumed that Chinese consumers made use of a mix of fish procured from both market channels.

Despite playing a key role in the creation of California's marine fishing industry, Chinese fishermen faced intense opposition and were the targets of discriminatory laws in the nineteenth

century. Rival Anglo fishermen and government officials spoke out against the Chinese use of bag nets, which they argued were detrimental to the health of the United States' fisheries (Goode 1884 617-618; Walsh 1893). Despite the fact that Chinese fishermen dried and utilized the vast majority of their catch, American popular sentiment viewed this practice as wasteful as it utilized the fry of popular game and commercial fish. Ultimately, a series of racially-motivated pieces of legislation targeting Chinese fishermen were passed amid growing anti-Chinese fervor and repeated calls for action by competing Anglo fisherman and scientific authorities (Armentrout-Ma 1981:144). The first of these laws, a \$4 monthly head tax on Chinese fishermen in California, was passed in 1860 before being repealed following an 1864 lawsuit. Another attempt at cutting Chinese fishermen out of the fishing industry was the 1880 Fishing Act which banned Chinese from participating in any fishing business; this was, however, ruled unconstitutional. An 1897 California law forbade Chinese fishermen from catching shrimp during the peak shrimp season, and a 1905 California law prohibited the shipment of shrimp products to China. An additional 1905 California law specifically prohibited the use of Chinese-style bag nets by Chinese fishermen, and by 1913 legislation and discrimination had driven most Chinese fishermen into other jobs or back to China (Armentrout-Ma 1981).

Zooarchaeology and the Chinese Fish Trade

Zooarchaeology, or the archaeological study of animal remains, has the potential to contribute greatly to our understanding of the 19th-century Chinese fish trade and the use of multiple fisheries by Chinese fishermen in the United States. Fish data have proven quite useful in reconstructing past trade networks, primarily through the identification of non-local fish remains from taxa outside their known historical distributions (Reitz and Wing 2008; Lubinski

and Partlow 2012). This can be a more difficult task than it appears, as one must consider shifting distributions of taxa through time, the availability of local microenvironments suitable for individual taxa, and seasonal variability in the range of a given taxon. It is particularly difficult to determine local catch versus imported fish for taxa with broad native ranges, however the task becomes significantly easier when considering taxa with well-defined environmental requirements such as saltwater versus freshwater salinity tolerances. In this case, the recovery of marine taxa at inland sites well away from any bodies of saltwater can be taken as clear evidence for the long-distance trade of these fish. Lubinski and Partlow (2012) argue that the definition of “local catch” changes based on fishing practices, technologies of transport, and potentially other factors, thus making the idea of localness variable in fisheries research. I use local catch to refer to any fish caught near enough to a site to be transported to market live or fresh by foot, cart, and even short distances in unrefrigerated rail cars used in 19th-century California.

Central to the ability of zooarchaeologists to determine local versus non-local fisheries engagement is the concept of indicator taxa or indicator groups. Kenward and Hall (1997:665) define these, respectively, as individual species and groups of species which provide evidence of “ecological conditions or human activities relevant to the aims of the study being carried out.” Palmiotto (2016) has directly employed the concept of indicator groups in the study of seasonal exploitation of fish in prehistoric coastal Florida, demonstrating how archaeological data can correlate to subtle changes in fish populations across local microenvironments during different seasons. Despite the effectiveness of these concepts, few zooarchaeologists utilize them systematically; instead, they are most often employed informally to identify taxa that were likely imported to a site. Whereas indicator groups are most often used to identify taxa that are in

locations that they do not occur naturally, I employ them here to identify distinct sets of fish indicative of Chinese fishery activity in different areas of the American West.

Zooarchaeologists have informally employed indicator taxa or groups in attempts to reconstruct broad geographic areas from which fish at 19th-century Chinese sites originated. Collins (1987a) was one of the first to do so, and her study of fish remains from the Riverside Chinatown outside of Los Angeles draws upon the native ranges of identified taxa to highlight connections Riverside's residents had to multiple fisheries including those in coastal California, the east Texas coast, the Louisiana-Texas coast, the west Mexico coast, and China. While locally available fishes such as California sheephead (*Semicossyphus pulcher*), croakers (Sciaenidae), surfperches (Embiotocidae), rockfish (*Sebastes* spp.), and tuna (*Thunnus* sp.) represent the bulk of the assemblage, non-local fish including Atlantic weakfish (*Cynoscion regalis*), squirrelfish (Holocentridae), and yellow croaker (*Larimichthys crocea*) served as indicator taxa for long-distance trade of salt fish from other areas. The broad trends Collins observed are similar to that seen at other sites: a preponderance of locally available fishes supplemented with fish from regional and international sources that would have been imported as salt fish. Collins (1987b) also highlights several patterns important when considering Chinese engagement with multiple fisheries: the broad exploitation and trade of Pacific coast marine species (especially rockfish), the existence of a Chinese freshwater fishery targeting cyprinids and other fish, and the long-distance importation of exotic taxa as salt fish from China.

Similar patterns have been noted by Schulz (e.g., 1984, 1997, 2002, 2004), who has produced by far the greatest body of Chinese migrant fisheries data to date. His work spans large, urban Chinatowns as well as smaller, rural communities, and it highlights the origins of individual taxa identified at these sites as they relate to geographic range, the collection of fish

by Chinese fishermen versus purchase in Anglo markets, and the broader production and trade of salt fish by Chinese migrants. In particular, Schulz has highlighted the myriad taxa salted and dried by Chinese fishermen as well as their potential for trade over long distances within their native ranges, challenging the frequent assumption that locally available fish were likely collected locally (e.g., 1997, 2002). Schulz' work has demonstrated that Chinese consumers (and by extension the fishermen who supplied them) utilized fish that primarily fit into 19th-century Chinese preferences for mild, white-fleshed fishes, particularly taxa closely related to or similar in cooking properties to those commonly consumed in Guangdong. These fish include marine species such as California sheephead, croakers, flatfish including starry flounder (*Platichthys stellatus*), petrale sole, and California halibut (*Paralichthys californicus*), and rockfish, as well as freshwater taxa including California's many endemic cyprinids and the Sacramento perch (*Archoplites interruptus*). Schulz (2004) also identified four central imported species which appear frequently on 19th-century Chinese sites: threadfin breams (*Nemipterus* spp.), white herring (*Ilisha elognata*), yellow croaker (*Larimchthys crocea*), and pufferfish (Tetrodontidae/*Lagocephalus* sp.). This suggests a focus on local catch (either fresh or salted) supplemented with lesser amounts of Chinese-produced salt fish from regional and international sources. This pattern constitutes, to Schulz, a localization of 19th-century Southern Chinese fish preferences onto the locally available fish in California's freshwater and marine fisheries.

Data from additional 19th-century Chinese sites exhibits the same general patterns. A number of rural sites in California and directly along the Pacific coast (e.g., Bowden 1999; Gill 1985; Gust 1993) again show a preference for white-fleshed marine taxa (particularly rockfish, croakers, and flounders), locally available cyprinids, and a small number of imported Chinese salt fish (typically yellow croaker and pufferfish). These sites also often feature imported

southern California taxa, particularly the California sheephead which was intensively collected by Chinese fishermen in San Diego and Los Angeles for salting and export to China and Chinese communities throughout the American West (Goode 1884:274; Stephens 2001). The Riverside Chinatown demonstrates one of the few Pacific coast exceptions to this pattern, with several examples of tuna and mackerel, fish which sit outside of the typically mild, white-fleshed fish targeted by Chinese fishermen and consumers, identified in the collection (Collins 1987b). Nineteenth-century Chinese communities outside of California also conform to expectations. Fish data from the El Paso, Texas Chinatown demonstrates localization of Chinese fish preferences to fish native in the Gulf of Mexico and the regions freshwater rivers, particularly locally available sciaenids such as black drum (*Pogonias cromis*) (McEwan 1985). Likewise, Schulz's (2004) analysis of fish remains from the Tucson, Arizona Chinatown also generally conform to this pattern, including an emphasis on local catch of cyprinids; however, given Tucson's location the only marine taxa present were common salt fish produced by Chinese fishermen in Southern California (e.g., California sheephead).

Previous research by Schulz, Collins, and others highlights three broad trends in market fishery engagement by 19th-century Chinese migrants:

1. Localization of 19th-century Chinese preferences for mild, white-fleshed fish onto fishing efforts and purchasing patterns in North America.
2. Evidence for Chinese fishing communities targeting both freshwater fish in local waterways (e.g., Sacramento/San Joaquin River system) and numerous marine coastal taxa including rockfish, drums, and flatfish, and the distribution of this catch as fresh fish over short distances and extensively as salt fish over longer distances.

3. Importation of a limited range of Asian taxa, particularly threadfin bream, white herring, yellow croaker, and pufferfish.

These trends suggest not only consistent localization of Chinese taste preferences and fishing techniques to North American fisheries, but also standardization of fishing practices targeting a distinct range of taxa. There may have been a practical side to this strategy, in part owing to social pressures that limited the ability of Chinese fishermen to participate in certain fisheries (e.g., salmon) due to legal and social prohibitions (Jordan and Gilbert 1884:735-736). However, these trends may also be the result of entrepreneurial strategies by Chinese merchants and fishermen to meet market demands (e.g., Braje et al. 2007). Targeting a limited range of taxa would have allowed fishermen to not only reliably produce a quality product, it would have also made it easier to incorporate and train new workers such as occurred after the influx of former railroad workers into the fishing industry in the 1870s.

The Market Street Chinatown

While existing data reveal several broad patterns in Chinese fisheries engagement, an in-depth case study can provide a more detailed understanding of the nature and extent of Chinese involvement with fisheries in multiple locations at multiple scales. The following section outlines data collected from fish remains recovered from the Market Street Chinatown, a large, urban Chinese community in 19th-century San Jose, California. While many of the fish identified in this study have broad ranges, indicator groups for different fisheries help tease out the Market Street Chinatown's connections to multiple fisheries in the American West and China.

Methods

All fish remains were analyzed using standard zooarchaeological laboratory methods (e.g., Reitz and Wing 2008). Identifications were made using the comparative skeletal collection at Indiana University's William R. Adams Zooarchaeology Laboratory, the author's personal collection focused on California and Asian fish taxa, and in rare cases detailed photographic examples of individual taxa. When only a limited number of comparative specimens were available or where photographic comparison was used, identifications were conservatively kept at an appropriate level such as family (e.g., unspecified cyprinid). In some cases taxa were grouped into archaeologically accepted categories based on the osteological similarities and difficulties of differentiating closely-related taxa (see Gobalet 2001 for discussion). To compare taxa I report the number of identified specimens (NISP) and the total weight in grams, and while neither measure is perfect together they provide a reasonable estimates of the importance of each taxa (Reitz and Wing 2008). Despite these limitations, the data in this study more than allow for exploration of the involvement of Chinese fishermen in multiple fisheries at multiple scales.

Finally, I report the known range for each identified taxa. Where possible I use historical information, and otherwise the ranges reported are the modern known geographic distribution of the taxa (e.g., Froese and Pauly 2016). While the historical distributions of taxa can change through time (Lubinski and Partlow 2012:230), the general correlation between historical and modern ranges for taxa in this study suggest the ranges used should be sufficient to identify indicator groups for the discrete fisheries utilized by Chinese fishermen. Finally, where available I also include known Chinese fisheries targeting identified taxa, and while it is impossible to tie taxa with broad ranges to these fisheries it does serve to suggest possible points of origin for some fish remains.

The Market Street Chinatown

The Market Street Chinatown was founded in 1866 in San Jose, California, where it was home to over 1,000 permanent residents and a “home base” to an additional 2,000 to 3,000 laborers working jobs (Laffey 1993; Yu 2001; Voss 2008). Historical accounts and an 1884 Sanborn insurance map document the many shops and markets which formed the commercial heart of the community and served as housing for store owners, their families, and their workers, as well as the over 20 tenement buildings where primarily male laborers resided. The Market Street Chinatown provided protection for its residents against rising anti-Chinese sentiment and violence in late 19th-century California, however in May of 1887 the Market Street Chinatown was burned to the ground in an arson fire. Excavations at the Market Street Chinatown took place in the early 1980s during an urban renewal project in San Jose, and archaeologists identified and excavated more than 60 features, primarily wood-lined rectangular trash pits containing domestic refuse (Voss 2008:42). These trash pits contained a tremendous amount of material culture including Chinese and European ceramics, glass bottles, metal tools, plant remains, and copious amounts of animal bone including a substantial fish bone assemblage.

This study uses a subset of the complete faunal collection, and it includes material from 10 trash pits spanning both mixed merchant/laborer households as well as laborer tenement contexts. The assemblage contains a total of 5,759 specimens, of which 3,021 could be identified to a level of at least family (Figure 7-2; Tables 7-1 to 7-3). The remainder consists of scales, fragmented remains with no discernable identifiable landmarks, and rays, spines, and other skeletal elements that are difficult to differentiate between taxa. The identified remains are discussed below in relation to Chinese exploitation of numerous fisheries including freshwater and marine fisheries in both North America and China.



Figure 7-2: Examples of fish remains recovered from the Market Street Chinatown.

Freshwater fisheries

Freshwater fish account for 30% of the Market Street Chinatown assemblage by count, and the fish represented included cyprinids, suckers (Catostomidae), and Sacramento perch (Table 7-1). All are native to the Sacramento/San Joaquin River system, and they serve as an indicator group for engagement with these fisheries. Cyprinids represent 19% of the total NISP and 13.5% total weight, making them the most important family in the assemblage. All diagnostic remains are from species native to the Sacramento/San Joaquin River drainages, including Sacramento pikeminnow (*Ptychocheilus grandis*), Sacramento blackfish (*Orthodon microlepidotus*), hitch (*Lavinia exilicauda*), and unspecified chubs (*Gila* sp.) which are likely from the now extinct thicktail chub (*Gila crassicauda*). No specimens in the collection match introduced cyprinids such as the common carp (*Cyprinus carpio*), goldfish (*Carrasius auratus*), or any of the many Asian carp species, and thus all can be assumed to be North American and likely Californian in origin. A small number of Sacramento sucker (*Catostomus occidentalis*) bones were also identified, and when these are included with the minnows as they were in 19th-century California fish markets (Schulz 2002), the cypriniformes (cyprinids and suckers) account for over 20% of the assemblage by NISP and nearly 14% by weight.

The Sacramento perch (*Archoplites interruptus*), which occupied a similar range as did California's native cyprinids, represents nearly 10% of the assemblage by NISP (5.9% by weight) making it numerically the single most common freshwater species identified. While a generally esteemed food fish in the mid-1850s (Schulz 2002) by the late 1880s Jordan (1884a) and others observe that it was eaten primarily by Chinese consumers who paid comparatively high prices for the fish. When the Sacramento perch is combined with those from minnows and

Taxonomic Name	Common Name	NISP^a	%NISP^c	Wt(g)^b	%Wt(g)^c
Sacramento/San Joaquin Indicator Group					
<i>Ptychocheilus</i> sp.	Pikeminnow	78	2.6	25.12	5.1
<i>Orthodon microlepidotus</i>	Sacramento blackfish	40	1.3	7.17	1.4
<i>Lavinia exilicauda</i>	Hitch	2	0.1	0.45	0.1
<i>Gila</i> sp.	Chub	8	0.3	0.84	0.2
Cyprinidae	Minnow family	451	15.0	33.78	6.8
<i>Catostomus occidentalis</i>	Sacramento sucker	24	0.8	1.69	0.3
Cypriniformes	Minnows/suckers	7	0.2	0.32	0.1
<i>Archoplites interruptus</i>	Sacramento perch	295	9.8	29.26	5.9
Anadromous species, unspecified					
<i>Acipenser</i> sp.	Sturgeon	90	3.0	33.76	6.8
<i>Oncorhynchus</i> sp.	Salmon/trout	96	3.2	26.78	5.4

Table 7-1: Freshwater and anadromous fish remains from the Market Street Chinatown.

^a Number of identified specimens

^b Weight in grams

suckers, they represent 30% of the total fish assemblage by NISP and 19.8% by weight, reflecting the importance that freshwater fisheries played in the supply of fish to the Market Street Chinatown.

While the above fish would have been available fresh from Anglo merchants in San Jose, Chinese fishermen collected significant numbers of these fish in the Sacramento/San Joaquin Rivers. Jordan and Gilbert (1884:735-737) describe the use of both bag and fyke nets by Chinese fishermen on the rivers, the drying of fish on specially constructed platforms, and the practice of these fishermen to live in boats rather than on shore, however they pay little attention to the actual fish being harvested and whether individual taxa were treated in different manners. The author has identified remains of both Sacramento blackfish and Sacramento perch at a Chinese mining camp in southwestern Wyoming, indicating that at least two taxa in the Market Street Chinatown assemblage were dried for export by Chinese fishermen operating in this fishery. Given the heavy use of nets, it can be assumed that Chinese fishing operations on these

bodies of waters likely collected a wide variety of fish including the taxa identified above as well as the occasional anadromous species such as sturgeon and salmon identified in the assemblage. However, given accounts of sturgeon caught by Chinese fishermen in San Francisco Bay (Jordan 1887:616-617) and the availability of smoked and canned salmon products from Anglo merchants, it is hard to pinpoint the origin of either of these two taxa. The cyprinids, suckers, and Sacramento perch, while available from Anglo merchants, provide strong evidence of the Chinese freshwater fishery within the Sacramento/San Joaquin River system, especially given the relative abundance of these taxa in the assemblage.

Marine fisheries

Marine fishes native to the North American West Coast account for 46.1% of the assemblage by NISP and 46.7% by weight, and the taxa represented include a wide array of white-fleshed fishes with native ranges extending from Alaska to Northern Mexico (Table 7-2). The silversides family (Atherinopsidae), commonly sold as smelt in markets, and the rockfish are the two most common taxa by NISP (16.1% and 12.4% respectively), though owing to the small size of the silversides the rockfish and the California sheephead actually account for significantly more of the assemblage by weight (18.8% and 14% respectively). While no individual flatfish (Pleuronectiformes) accounts for more than 2.5% NISP, as a group the flatfish represent 6.9%

Taxonomic Name	Common Name	NISP^a	%NISP^c	Wt(g)^b	%Wt(g)^c
Marine fishes, unspecified					
<i>Sebastes</i> spp.	Rockfish	373	12.4	93.26	18.8
Scorpaenidae	Scorpionfishes	23	0.8	3.78	0.8
<i>Ophiodon elongatus</i>	Lingcod	2	0.1	0.5	0.1
<i>Hexagrammos</i> sp.	Greenlings	6	0.2	0.78	0.2
<i>Scomber japonicus</i>	Pacific mackerel	1	0.0	0.25	0.1
<i>Parophrys vetulus</i>	English sole	3	0.1	0.06	0.0

<i>Paralichthys californicus</i>	California halibut	2	0.1	1.18	0.2
<i>Rhacochilus vacca</i>	Pile perch	8	0.3	3.78	0.8
<i>Embiotoca</i> sp.	Surfperch	1	0.0	0.04	0.0
Embiotocidae	Surfperches	69	2.3	4.78	1.0
Atherinopsidae	Silversides	484	16.1	14.93	3.0
Cottoidea	Sculpins	6	0.2	0.2	0.0
<i>Clupea pallasii</i>	Pacific herring	12	0.4	0.16	0.0
Clupeidae	Herrings and sardines	59	2.0	2.9	0.6
Osmeridae	Smelts	4	0.1	0.01	0.0
<i>Genyonemus lineatus</i>	White croaker	3	0.1	0.07	0.0
Sciaenidae	Croakers	32	1.1	3.57	0.7
Malacanthidae	Horseheads/tilefish	2	0.1	0.28	0.1
Scrombidae	Mackerels	1	0.0	0.13	0.0
<i>Paralichthys</i> sp.	Flounder	11	0.4	2.05	0.4
Pleuronectiformes	Flatfish	71	2.4	6.47	1.3
Cynoglossidae	Tonguefish	16	0.5	0.43	0.1
Chondrichthyes	Sharks	20	0.7	1	0.2

San Francisco/Monterey Bay Indicator Group

<i>Scorpaenichthys marmoratus</i>	Cabazon	5	0.2	2.52	0.5
<i>Peprilus simillimus</i>	Pacific pompano	3	0.1	0.05	0.0
<i>Atractoscion nobilis</i>	White seabass	4	0.1	7.15	1.4
<i>Sphyræna</i> sp.	Barracuda	3	0.1	0.69	0.1
<i>Platichthys stellatus</i>	Starry flounder	75	2.5	4.14	0.8
<i>Eopsetta jordani</i>	Petræ sole	17	0.6	1.29	0.3
<i>Citharichthys sordidus</i>	Pacific sanddab	11	0.4	0.49	0.1

Southern California Indicator Group

<i>Semicossyphus pulcher</i>	California sheephead	63	2.1	69.44	14.0
<i>Scorpaena guttata</i>	Scorpionfish	17	0.6	6.07	1.2
<i>Caulolatilus</i> sp.	Ocean whitefish	1	0.0	0.42	0.1
<i>Selene</i> sp.	Lookdowns	1	0.0	0.1	0.0

Anglo Fishery Indicator Group

<i>Microstomas pacificus</i>	Dover sole	1	0.0	0.04	0.0
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Table 7-2: Marine fish remains from the Market Street Chinatown.

^a Number of identified specimens

^b Weight in grams

total NISP and 3.2% total weight. No other marine taxa accounts for more than 2.3% NISP or 1.4% weight individually.

Many of the identified marine taxa have ranges extending through all or most of the known Chinese Pacific Coast fisheries, and these include the rockfish, surfperches (Embiotocidae), English sole (*Parophrys vetulus*), lingcod (*Ophiodon elongatus*), greenlings (*Hexagrammos* spp.), Pacific herring (*Clupea pallasii*), Pacific mackerel (*Scomber japonicas*), California halibut (*Paralichthys californicus*), and silversides. The most notable of these are the rockfish, which include over 50 species in California alone (Love et al. 2002) and which have been frequently identified at Chinese sites in the United States (Collins 1987b). Rockfish were regularly available in markets in San Francisco and elsewhere under a variety of vernacular names (Schulz 2002; Jordan 1884b), and they are known to have been taken by Chinese fishermen in multiple locations (Jordan 1887:596, 604). Likewise, the English sole was frequently collected in many locations including San Francisco Bay, Humboldt Bay, and Puget Sound, and it is impossible to say where the present specimens originated from (Jordan 1887:612, 622). The surfperches (including pile perch [*Rhacochilus vacca*] and black/striped surfperch [*Embiotoca* sp.]) have native ranges similarly extending from Alaska to Baja California, and are noted as being eaten as fresh local catch by Chinese consumers in San Francisco (Jordan 1884c:276-279), salted by Chinese fishermen in Monterey Bay (Collins 1892:70), as incidental capture in Chinese shrimp nets in nearby San Francisco Bay (Jordan 1887:612), and (in the case of pile perch) specifically targeted in Puget Sound (Jordan 1887:628). The remaining taxa receive less historical attention, though greenlings were known to be readily available in San Francisco markets (Jordan 1884d:267-268), lingcod frequently dried by Chinese fishermen without mention of specific fishery location (Jordan and Gilbert 1882:54),

and herring collected in Southern California for salting (Jordan 1887:596) and with nets cast from Alameda wharf near San Francisco (Jordan 1887:619). Thus, while all of these taxa ranged into the marine waters near San Jose they all could have been also been readily imported from elsewhere as salt fish.

Other taxa at the site also have wide ranges but were of particular importance to the Chinese fisheries of San Francisco Bay and Monterey Bay, and thus they serve as an indicator group representative of these fisheries. These taxa include the starry flounder, petrale sole, Pacific sanddab (*Citharichthys sordidas*), barracuda (*Sphyraena* sp.), cabezon (*Scorpaenichthys marmoratus*), Pacific pompano (*Peprilus simillimus*), and the white seabass (*Atractoscion nobilis*). Starry flounder were commonly collected in Chinese shrimp nets in San Francisco Bay and its associated estuaries (Jordan 1887:612), while petrale sole and Pacific sanddab were caught on set lines using dried fish such as anchovies as bait in Monterey Bay (Jordan 1884e:186-7, 1887:603). Upwards of 500 pounds of petrale sole were dried daily by Chinese fishermen in Monterey Bay, accounting for nearly 95% of the Chinese catch in the Bay with sanddab making up much of the remainder (Lockington 1880:25). These three fish were also commonly found in San Francisco's market as fresh local catch, and were likely shipped by rail from Monterey Bay to San Jose as well. Barracuda, which migrate along the California coast, were commonly collected by Chinese fishermen in both Monterey Bay and the waters near San Diego, and the catch was seasonal (Sommer 1995). Cabezon, a large sculpin native to the North American Pacific Coast, was exceptionally abundant in both San Francisco and Monterey Bay and available as fresh and salt fish (Goode 1884: 259-260). The Pacific pompano was noted as being an esteemed food fish taken in Monterey Bay by Chinese fishermen but uncommon in markets due to a tendency to spoil quickly (Alta California 1876); given the difficulty in

transporting this fish even short distances without spoilage the individual represented by the identified specimen was very likely consumed as salt fish. Finally, the white seabass, a large sciaenid, was common south of San Francisco in the nineteenth century but was particularly common as fresh local catch in San Francisco markets (Lockington 1880:45).

Additional taxa serve as an indicator group for Chinese fisheries in Southern California, mostly based out of Los Angeles and San Diego and frequently targeting fish along the Channel Islands. These taxa include the California sheephead, California scorpionfish (*Scorpaena guttata*), ocean whitefish (*Caulolatilus cf. princeps*), and moonfish (*Selene* sp.). While these fish represent only 3.5% of the assemblage by NISP they account for 15.3% total weight, with the seemingly anomalous disparity a function of the large size of the many sheephead cranial elements present in the assemblage. Sheephead, known historically as red-fish, was targeted by Chinese fishermen with hook and line and represented about half of the Chinese fish catch south of Point Conception (Goode 1884:274). The California scorpionfish was noted as being taken off of Santa Catalina Island in the winter by a small group of Chinese fishermen for salting and shipping to San Francisco (Jordan 1887:596), though the specimens present could be from anywhere south of Point Conception. The ocean whitefish was rarely if ever seen in San Francisco markets (Jordan and Gilbert 1882:53) and thus the single specimen in the Market Street Chinatown collection likely arrived in salted form (Goode 1884:112). Finally, the single bone from a moonfish is intriguing as this genus tends to range no further north than Baja California; while the present specimen could be from a stray individual in Southern California, it could also be the result of Chinese fishing excursions into Mexican waters prior to the enactment of the Chinese Exclusion Act of 1882, which made re-entry into the United States after crossing the Mexican border a difficult task at best.

Finally, one taxa stands out as distinctly not of Chinese fisheries origin: the dover sole (*Microstomas pacificus*). This deep water fish was discovered in 1876 following the advent of trawling by Anglo fishermen in California (Hagerman 1952). Lockington observed it as fresh local catch in San Francisco markets in 1878, after which it was periodically available. Given the deep water habitat of this fish, it is highly unlikely the present specimen was taken by Chinese fishermen; instead, this fish was likely purchased from Anglo merchants.

Chinese fisheries

The Market Street Chinatown collection contains a number of imported Asian taxa which account for 14.3% of the total NISP and 16.4% of the total weight of the assemblage. If cuttlefish, a cephalopod, is included these numbers rise to 17.0% and 21.1%. While Asian taxa do not account for as much of the assemblage as North American taxa do, they still represent a significant portion of the fish consumed by the Market Street Chinatown's residents. Identified taxa include horsehead (*Branchiostegus* sp.), threadfin breams (*Nemipterus* sp.), white herrings (*Ilisha* sp.), croakers (*Larimichthys crocea*, *Johnius* sp.), flounder (*Pseudorhombus* sp.), pufferfish (*Lagocephalus* sp./Tetraodontidae), and snakehead (*Channa* sp.). White herrings and threadfin breams are the two most commonly represented Asian taxa in the collection, accounting for 5.1% NISP (2.3% weight) and 3.9% NISP (2.6% weight) respectively. Pufferfish, while numerically less important, accounts for 5.89% of total assemblage weight owing to their large size. No other individual Asian finfish exceeds 1.1% total NISP or 1.4% total weight.

Taxonomic Name	Common Name	NISP^a	%NISP^c	Wt(g)^b	%Wt(g)^c
South China Sea Indicator Group					
<i>Branchiostegus</i> sp.	Horsehead	26	0.9	5.34	1.1
<i>Nemipterus</i> sp.	Threadfin bream	119	3.9	13.15	2.6
<i>Ilisha</i> sp.	White herring	154	5.1	11.22	2.3
<i>Larimichthys crocea</i>	Yellow croaker	28	0.9	5.93	1.2
<i>Johnius</i> sp.	Croaker	3	0.1	0.17	0.0
<i>Lagocephalus</i> sp.	Pufferfish	5	0.2	9.3	1.9
Tetraodontidae	Pufferfish	23	0.8	25.84	5.2
<i>Pseudorhombus</i> sp.	Flounder	34	1.1	3.45	0.7
Pleuronectiformes, Asian	Flounder	2	0.1	0.16	0.0
<i>Epinephelus</i> sp.	Grouper	2	0.1	0.8	0.2
<i>Lutjanus</i> sp.	Snappers	4	0.1	0.34	0.1
<i>Sepia</i> sp.	Cuttlefish	84	2.8	23.77	4.8
China Freshwater Indicator Group					
<i>Channa</i> sp.	Snakehead	36	1.2	6.81	1.4

Table 7-3: Asian fish remains from the Market Street Chinatown.

^a Number of identified specimens

^b Weight in grams

All of the identified Asian marine taxa are commonly found in the South China Sea, a primary source of fish for Guangdong Province adjacent to major shipping ports like Hong Kong (Wang 1993). These taxa could be collected with the same methods that Chinese fishermen transplanted to North America, namely bag nets and hook and line fishing, and they are available throughout most of Guangdong's coastal waters. While few English-language documents discuss the specifics of 19th-century fishing in southern China, accounts indicate that fishermen used similar methods as those transplanted to North America (Simoons 1991:339-343). Interestingly, archaeologists encounter only a small but consistent handful of Asian marine taxa on North American Chinese archaeological sites, despite many other marine fish being commonly dried in Guangdong including beltfish, various members of Carangidae, snappers, groupers, and sea

bream. I have noted no obvious patterns among the Asian taxa represented in the Market Street Chinatown assemblage, and the taxa represented could be the result of historical availability, standardization of product for shipping, or the unavailability of North American equivalents in some cases (e.g., threadfin bream, white herring, pufferfish, and snakehead).

The snakehead specimens from the Market Street Chinatown are the only Asian freshwater fish remains identified to date from a Chinese migrant site, and they link Chinese consumers in North America to freshwater fisheries in China. Snakeheads are commonly found in slow-moving bodies of freshwater including flooded rice paddies, though they were not typically farm-raised in the nineteenth century (Anderson and Anderson 1977:335). I have compared the skeletal remains (all vertebrae) from the Market Street Chinatown to the Guangdong-native striped snakehead (*Channa striata*) and the northern snakehead (*Channa argus*), endemic to rivers drainages in central and northern China. While the northern snakehead provides a nearly identical match, there are additional Asian snakeheads that I have not yet been able to compare them to (e.g., *Channa asiatica*). Thus, while the snakehead remains from the Market Street Chinatown may show evidence of the long-distance trade of freshwater fish from central and northern China, I have opted to conservatively leave the taxonomic designation of these specimens as *Channa* sp., indicating at minimum the shipment of salted freshwater snakehead from Guangdong to Chinese migrants in the United States.

Discussion and Conclusions

The zooarchaeological data from the Market Street Chinatown generally conform to previously identified trends in Chinese migrant fish consumption, however, by employing indicator groups the data clearly demonstrate the engagement of Chinese consumers with several

distinct fisheries in North America and China. Cyprinids, suckers, and Sacramento perch identified in the assemblage constitute the bulk of fish collected by Chinese fishermen in the Sacramento/San Joaquin River fisheries, and they provided fresh local catch as well salt fish. Likewise, two other sets of taxa constitute indicator groups for Chinese fisheries in Southern California (sheephead, scorpionfish, whitefish, and moonfish) and in San Francisco and Monterey Bays (starry flounder, petrale sole, sanddab, pompano, and others). While fish from Southern California undoubtedly arrived in San Jose as salt fish, the specimens from both San Francisco and Monterey Bays could have been fresh local catch transported via rail or salt fish. The remaining California marine taxa have broad ranges that render attempts to discern their point of origin via zooarchaeological analysis impossible, however some such as the pile perch raise the possibility of their procurement from additional fisheries including that at Puget Sound. The dover sole provides the lone indisputable example of a fish procured from Anglo merchants and collected by Anglo fishermen via trawling. The Market Street Chinatown also contains a number of imported Asian fish remains and while most previous zooarchaeological analysis has simply classed these taxa as exotic or Asian, an examination of the fish present reveals that all marine taxa would have been readily available throughout the South China Sea, the center for the extensive trade of fish throughout Guangdong and internationally. The snakehead remains belong to a distinct Chinese freshwater fishery and for the first time indicate the sourcing of non-cyprinids from inland sites for shipment to North America.

This study has demonstrated Chinese migrant connections to multiple, distinct fisheries, but it remains difficult to determine their relative importance in meeting Market Street's consumer demands (Figure 3). Although the Sacramento/San Joaquin River and South China Sea indicator groups represent considerable amounts of the assemblage, unspecified North American

marine taxa represent over 40% of the total NISP which greatly exceeds that represented by the San Francisco and Monterey Bay indicator group and the Southern California indicator group. Since morphological comparisons offer no way to determine the point of origin of the unspecified marine taxa, these fish could have originated from any number of widely disbursed West Coast Chinese fisheries and both Chinese and Anglo markets, radically altering the relative importance of the individual North American fisheries. Archaeologists should consider the use of ancient DNA, stable isotope analysis, and other analytical techniques that can provide a more fine-grained examination of the origin of these taxa in future studies.

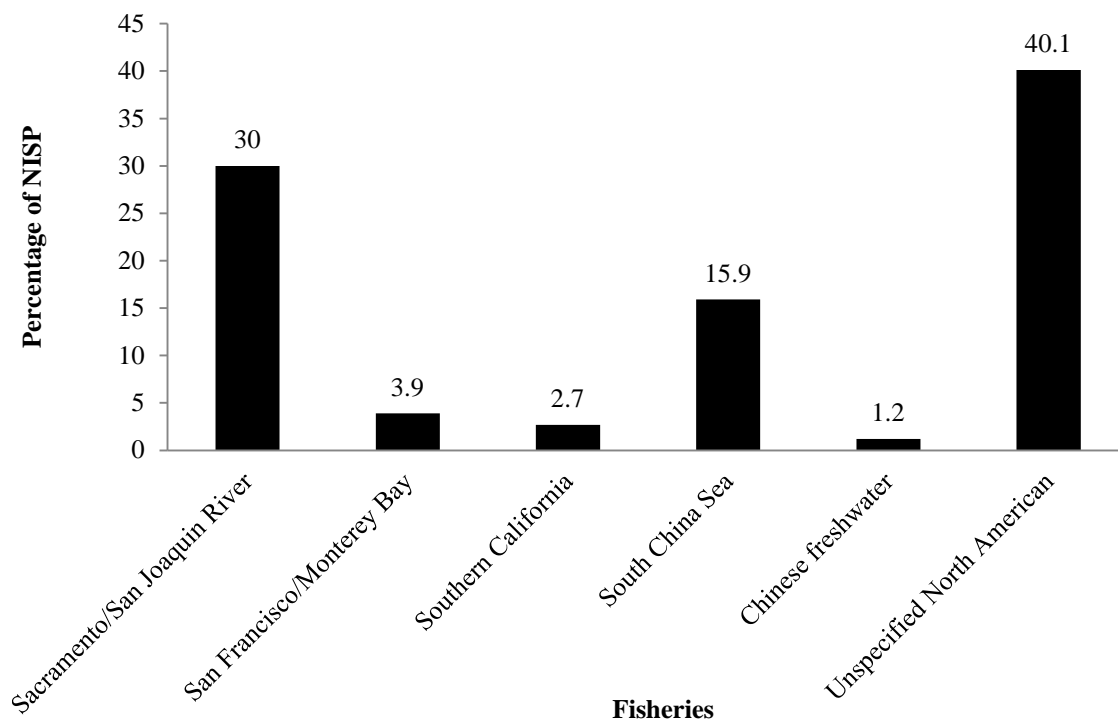


Figure 7-3. Percentage of total identified fish remains by indicator group.

Though historians and zooarchaeologists have long known that 19th-century Chinese communities traded fish over long distances, details of this exchange have been lacking. The Market Street Chinatown data begin to provide an in-depth understanding of the Chinese fish trade. They also highlight the Chinese role in the emergence of the West Coast fishing industries (Armentrout-Ma 1981) and the effort expended by Chinese consumers to obtain the wide variety of fish products they desired. In the Market Street Chinatown, Chinese consumers purchased fresh local catch procured from nearby freshwater bodies as well as marine fish shipped via rail from Monterey and cart from San Francisco. They also enjoyed fresh fish and likely numerous dishes utilizing salt fish at restaurants in the Market Street Chinatown (*Evening Herald* 1885). Chinese merchants also supplied consumers with salt fish sourced from China and multiple locations on the West Coast, including nearby freshwater and bay fisheries as well as those in Southern California and elsewhere.

Fresh fish necessitated direct shipment to San Jose to avoid spoilage, but this was not necessary for the dried seafood products identified in the Market Street Chinatown assemblage which instead typically passed through San Francisco Chinese merchants before being redistributed to communities such as the Market Street Chinatown. The passage of salt fish through San Francisco is particularly true of imports from China (Hsu 2006), but it also seems to be the case for salt fish prepared in much of the West Coast (e.g., Jordan 1887:596). The movement of goods through the city's Chinese merchants makes sense given San Francisco's role in the international salt fish trade, which saw 80% of the Chinese catch in North America sent to China. This practice, however, has important implications for understanding the origin of salt fish in communities such as the Market Street Chinatown. While the taxa identified in the Market Street Chinatown may have originated from a specific fishery, they would have likely

arrived in the Market Street Chinatown from San Francisco instead. The extent to which this is true for nearby fisheries including San Francisco and Monterey Bays is unclear and deserves further inquiry, though documentary evidence suggests the bulk of the salt fish prepared in these locations was intended for shipment to San Francisco as well (Lockington 1880). Thus, outside of fresh local catch the fish assemblage from the Market Street Chinatown represents a primary connection to Chinese merchants in San Francisco, and through them a secondary connection to the fisheries from which the identified specimens originated.

Historical accounts attest to the prominent role which Chinese fishermen had in multiple fisheries throughout the American West Coast, though few details exist regarding the trade of the products they produced. While studies have previously explored Chinese fisheries along the West Coast (e.g., Armentrout-Ma 1981; Bentz and Schwemmer 2002; Lydon 1985), these works have been subject to limitations inherent in the documentary record and tend to focus on this history at broad scales. Zooarchaeologists, particularly Schulz, have made significant contributions to our understandings of the distribution and consumption of fish amongst Chinese communities, and this study builds upon this prior work by employing the concept of indicator groups to better understand the engagement of Chinese consumers in the Market Street Chinatown with multiple fisheries in North America and Asia. The use of indicator groups allows linkages to be made between the Market Street Chinatown and multiple Chinese-run fisheries including those in the Sacramento/San Joaquin River system, San Francisco and Monterey Bays, Southern California, the South China Sea, and a freshwater fishery in either Guangdong or central/northern China, as well as Anglo-operated trawling fisheries in California. Still, there is much to learn about the Chinese trade of salt fish, particularly as it relates to spatial and temporal patterns in the distribution of individual taxa in relation to social and legal

pressures placed on Chinese fishermen in the United States. Future studies should focus not only on adding additional zooarchaeological data from more sites, but also incorporating additional analytical techniques including stable isotope analysis to provide a much more fine-grained examination of the origins and distribution of individual fish taxa.

Chapter 8. Opportunities and crisis: an archaeological study of food practices in the Market Street Chinatown, San Jose, California

A version of this paper has been submitted as:

Kennedy, J. Ryan and Virginia Popper. (in review). Opportunities and crisis: an archaeological study of food practices in the Market Street Chinatown, San Jose, California.

My roles in this manuscript included conception and design of the overall study, zooarchaeological data collection, analysis, and interpretation, drafting of the initial manuscript, and critical revision of the manuscript. Dr. Popper's roles included conception of the study, paleoethnobotanical data collection, analysis, and interpretation (provided via technical report), and critical revision of the manuscript, particularly as it relates to paleoethnobotanical data.

Abstract

Nearly 400,000 Chinese people immigrated to the United States of America in the second half of the 19th century. While finding economic opportunities they also faced crisis; they encountered racial prejudice, were the targets of racist state and national legislation, and were victims of violence, arson, and even murder. In the face of these experiences, activities such as cooking and eating were central to how Chinese people dealt with these challenges. This chapter uses archaeologically recovered plant and animal remains from the Market Street Chinatown, a 19th-century Chinese community in San Jose, California, to examine how Chinese migrants in the United States creatively used food to navigate crisis. The authors draw specifically on food remains recovered from trash pits linked to both merchants and laborers in the community, and they explore similarities and differences in the food practices of each group. The data show that while subtle dietary differences existed within the community, the Market Street Chinatown's

residents were strongly connected through a shared community-level base diet. Ultimately, this chapter argues that this shared diet was central to the construction of a community identity, and that it helped the Market Street Chinatown's residents contend with the challenges of immigrant life in the United States.

Introduction

In the afternoon of May 4th, 1887 a devastating arson fire spread through the Market Street Chinatown, a bustling Chinese community with over 1,000 Chinese residents in San Jose, California (Daily Alta California 1887c; Voss 2008). While the city's fire department responded to the blaze, firefighters made no attempt to save buildings and property in Chinatown; instead, they focused their efforts solely on protecting the property of white Americans in the surrounding neighborhoods (Figure 8-1; Yu 2001). The fire caused the Market Street Chinatown's residents to lose the bulk of their material possessions and their homes, however the tragedy was openly hailed as a great benefit to the city for driving the Chinese out. Although the Market Street Chinatown's residents did not ultimately leave San Jose, the fire marked the culmination of a growing crisis in the community, namely the Chinese struggle against American racism and the mounting fervor of the anti-Chinese movement in California and the broader United States.

This chapter uses archaeologically recovered faunal (animal) and floral (plant) remains to explore the role of food in the lives of the Market Street Chinatown's residents prior to the 1887 arson fire. The authors first explore the role of food in diasporic immigrant communities and the spread of Chinese food practices during migration. Next, the authors provide contextual background on the Market Street Chinatown and the archaeological material recovered from the

site. Finally, the authors present faunal and floral data from the Market Street Chinatown and explore its implications for the creation and maintenance of shared group identity in the face crisis.

Food in Diasporic Communities

Food's daily, repetitive preparation and consumption serve as a key influence in the process of social distinction and the formation of social identities (Barthes 1979; Dietler 2007; Hastorf and Weismantel 2007:309; Voss 2008). Driven by culturally shared beliefs, food

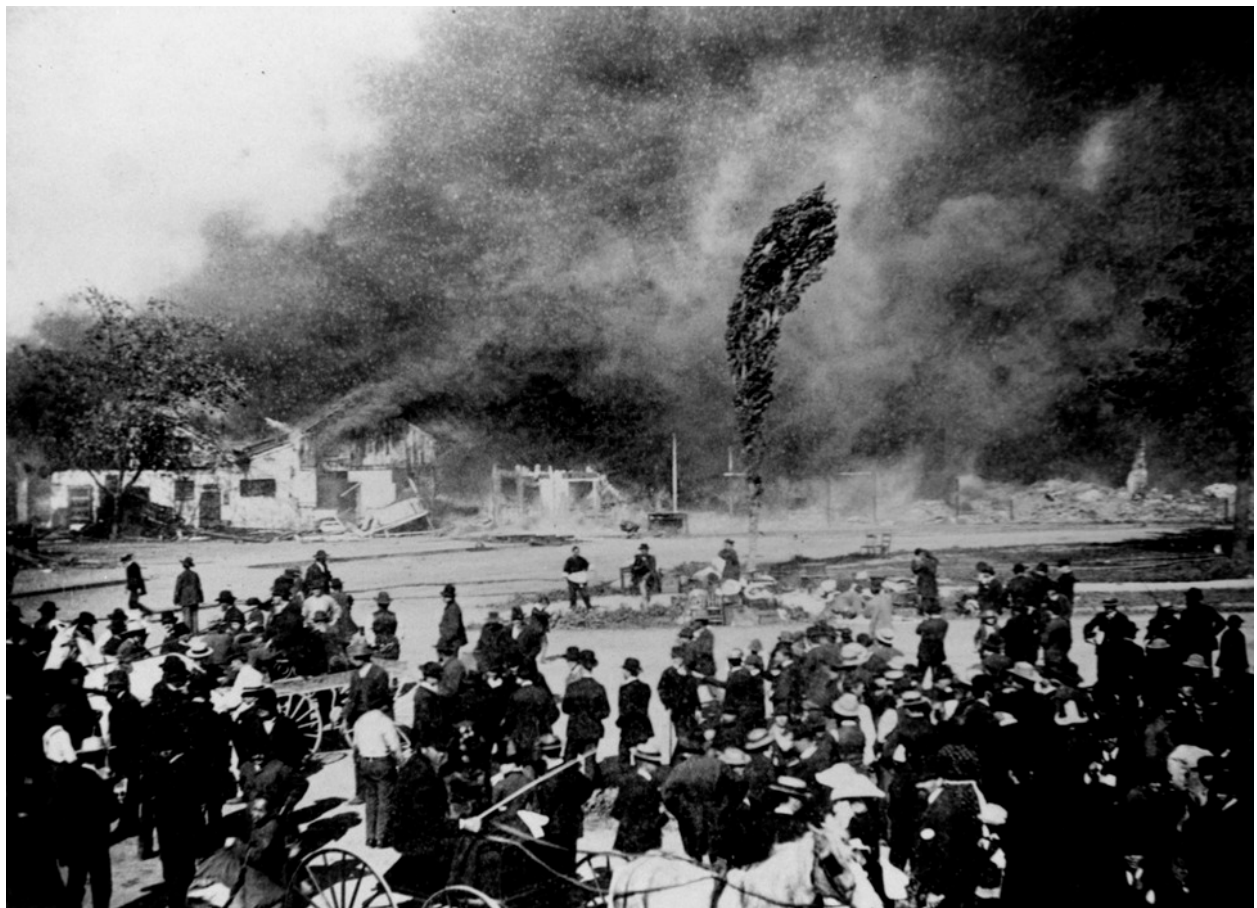


Figure 8-1: Photograph of the Market Street Chinatown arson fire on May 4, 1887.
(Image courtesy of History San Jose)

practices can serve as the foundation for group inclusion and exclusion, and the consumption of unfamiliar foods or differences in table manners or meal structure are easily observed cultural and social lines that divide (Douglas 1972). Within communities, differing food practices provide the basis for internal social differentiation along class, gender, and labor lines (e.g., Bourdieu 1984). Despite food's important role in marking social difference, it also has undeniable importance in the punctuation of daily life and it serves as the "ultimate social glue" (Braudel 1981; Giard 1998; Hastorf 2012:65; Parker Pearson 2003; Twiss 2007). Thus shared foods along with cooking and eating practices can bring groups together, even across lines of class or other divides.

Food may play an even more integral role in the lives of migrants due to its centrality in maintaining diasporic cultural ties, building new social groupings, and creating divisions both within and between communities (Janowski 2012a). As immigrants and others in diasporic populations move to foreign places, they come into contact with new people, build new social relations, and experience novel foods and ways of cooking. They also at times encounter barriers of access to desired foods from home. While potentially a source of crisis, the food decisions immigrants make in response to these situations also provide opportunity; shared food practices help strengthen group bonds, reposition individuals within their own communities and in relation to their homeland, and create connections between immigrant and majority populations in their new homes (e.g., Mandy 2004). Food practices also allow immigrants to "eat back" at home, drawing on the sensory nature of food-based memories to remember a distant place through nostalgic food consumption (Sutton 2001; Duruz 2010). Immigrants can even eat back at a time or place that never existed, remembering a home that was beyond their reach for economic or social reasons.

Food in the Chinese Diaspora

Researchers have explored the spread of Chinese cuisine within the broader Chinese diaspora (Tan 2011; Wu and Cheung 2002). A frequently described pattern is the initial farming of Chinese staple crops, followed by the creation of trade and supply networks to deliver desired ingredients, and ultimately the opening of restaurants once population levels grow large enough to support them (Pilcher 2006b). This pattern can be seen in Australia, where Chinese migrants who arrived during the 19th century gold rush imported and grew much of their food in contrast to present-day Hongkongese and Chinese in Australia who can partake in *yumcha* (tea service with *dimsum*) owing to populations large enough to support dedicated *yumcha* restaurants (Tam 2002). Variations on this pattern can also be seen amongst Chinese diasporic populations in Papua New Guinea, who not only import and grow Chinese crops but also incorporate local foods such as taro into their cooking (Wu 2002), as well as those in Malaysia who localized their cooking practices to fit the expectations of the country's Muslim majority by replacing pork with other meats in many dishes (Tan 2001). The ability of Chinese cooks to localize their food to local conditions and thus spread Chinese food practices and preparations throughout the Pacific world has been hailed as one of the great contributions of Chinese cuisine and the Chinese diaspora in the Pacific (Pollock 2011). It is also a testament to the creativity of Chinese migrants in sourcing ingredients from diverse places, modifying their food practices to work under local social, dietary, and environmental restrictions, and ultimately in forming a shared immigrant identity based in part on these new culinary practices.

Shared food practices can serve as the foundation for strengthening group cohesion, particularly in the face of drastically changed daily life. For instance, Chinese migrant communities usually consisted primarily of men who migrated to pursue economic opportunities,

and life in these so-called “bachelor societies” would have been quite different than that at home (Williams 2008). Not only would Chinese men have been thrust into roles such as serving as professional cooks (Rogers 1997), they would have also been tasked with cooking daily meals at home, an activity usually undertaken by women in 19th-century Guangdong. Despite changing gender roles, having a familiar meal as well as the opportunity to cook it would have given these immigrants some sense of control over their everyday situation and a common, shared experience over which to bond. Further, through cooking familiar foods Chinese migrants could have maintained a strong connection to home, both through nostalgic food memories as well as through the transnational connections that facilitated the flow of ingredients as well as communication and money between Chinese migrants in the United States and their home villages (Hsu 2000).

19th-century Chinese Migration to the United States

In the latter half of the 19th century over 2.5 million people left China, and of these 380,000 arrived in the mainland United States (Takaki 1998:32; McKeown 2004). The vast majority of these immigrants arrived from Guangdong province in Southeastern China, home to the port city of Guangzhou (Canton). While there is not a single story for all emigrants leaving China there are several broad, overarching themes that helped lead to large-scale emigration from Guangdong at that time. By the early 19th century the area was politically unstable as the Qing Dynasty (1644-1911) began to collapse under a series of crises including the British Opium Wars (1839-1842, 1856-1860), the Taiping Rebellion (1851-1864), and the Punti-Hakka Clan Wars (1855-1867). At the same time, people in Guangdong province were subjected to increased taxation, local warfare and violence, famine, and other hardships that were the result of both

governmental crackdowns and increased governmental disorganization (Voss and Allen 2008:9). In place of government, clans and families became the sole source of personal protection and they also figured prominently in migration; merchants and other emigrants passed along information about new opportunities and often encouraged their kin to join them, sometimes even paying their way to their new homes and jobs in the United States and elsewhere (Yu 2001:4; Liu 2002:29). Migration offered not only relief from local hardships but also opportunity to earn more money than would be possible in Guangdong and thereby provide for family members from afar. Chinese migrants frequently sent money and goods back to their home villages, and in some cases this money was the primary source of funding for the construction of vital infrastructure such as schools and hospitals in rural Guangdong (Hsu 2000).

Upon arrival in the United States, most Chinese migrants found themselves paying off immigration brokers' fees through contracted labor with work groups from the same family, clan, or village (Wormser 1987:183). Many Chinese labored as miners, railroad workers, farmers, personal servants or chefs, or in the service of local Chinese-run business such as restaurants or laundries (Spier 1958a, 1958b), though after working off their debt a small number were able to become merchants and business owners themselves. Most of these immigrants lived in communities termed "Chinatowns," which served as hubs of Chinese-owned business and were places where Chinese migrants could buy meat, produce, and other material goods as well as specialty items imported from mainland China. Larger Chinatowns such as San Francisco's bustling community of nearly 20,000 residents offered residents relatively easy access to highly desired ingredients including dried and fresh meats and seafood, fresh produce, pickled vegetables and sauces, and medicinal items (Spier 1958a), while the residents of smaller communities had to make more compromises in cooking and daily life. In addition to importing

culturally important goods for sale in Chinatowns, Chinese merchants and entrepreneurs were also invested in industries such as fishing and shrimping to produce both fresh and dried seafood for consumption by Chinese people in the United States and export to mainland China (Schulz and Lortie 1985; Bentz and Schwemmer 2002). Chinese farmers in the United States also grew a variety of Chinese and European/American plants for sale to both Chinese and non-Chinese customers (Gunther 1987; Kent et al. 1987).

While many Chinese migrants experienced economic success and some were even able to become merchants, racism remained a constant detrimental force in the lives of early Chinese migrants to the United States. Numerous pieces of anti-Chinese legislation were passed at the city, state, and federal levels, and these included San Francisco's Pigtail Ordinance of 1873 which targeted Chinese men wearing their hair in a Chinese-style queue, the 1880 Fishing Act which prohibited Chinese people from engaging in commercial fishing in California waters, and attempts to regulate and control San Francisco's Chinatown through the use of public health ordinances driven by the fear of epidemics originating amongst the community's Chinese population (Shah 2001). An influx of Chinese workers back into California after the completion of the transcontinental railroad in 1869 and a simultaneous economic slowdown in California, in particular, ignited tensions in the state and ultimately helped lead to the passing of the Federal Chinese Exclusion Act of 1882 which forbade the immigration of any unskilled Chinese laborers into the United States. After this, Chinese migrants were detained for questioning upon arrival to the United States, and they faced the burden of proving that they were eligible for reentry into the country every time they left (E. Lee 2003). Besides the practical difficulty of proving one's identity through possession of the proper documentation, the Exclusion Act effectively separated family members who could not for one reason or another produce the required evidence

necessary for immigration. Chinese migrant communities also had to contend with mobs of angry, vigilante United States citizens, and by the latter portion of the 19th century Chinese district associations had begun to offer protection to their members, Chinatowns became better defended and fortified, and overseas Chinese began to directly challenge racism through legal action and protests (Baxter 2008). The shared experience of overt and often violent racism reinforced a shared community identity through repeated, similar experiences that crossed class bounds (c.f. Yaeger and Canuto 2000).

The Market Street Chinatown

The Market Street Chinatown provides a case study to examine the role of food amid the crisis of racism and violence that Chinese migrants faced in California. Founded in 1866, at its peak the Market Street Chinatown was the second largest Chinese community in the United States, housing over 1,000 permanent residents and serving as a “home base” for an additional 2,000 to 3,000 laborers working nearby jobs who would return to the Market Street Chinatown periodically on work breaks and for festivals and holidays (Laffey 1993; Yu 2001; Voss 2008). Historical accounts and an 1884 Sanborn insurance map show that the Market Street Chinatown was a dense urban center with shops, entertainment, and restaurants, and at its height, the Market Street Chinatown included over 20 tenement buildings that housed primarily male laborers working in agriculture, industry, mining, and domestic service jobs. Businesses such as grocery stores, restaurants, butchers, a fish market, pharmacies, medical practices, and small-scale manufacturers of commercial goods also served as the homes for mixed households made up of merchants, their employees, and their families, who represented the majority of the few women and children living in the Market Street Chinatown (Laffey 1993; Yu 2001; Voss 2005:430).

Daily life was drastically different in the Market Street Chinatown compared to Guangdong, particularly for men living in tenement housing, and laborers would have variously bought into cheap meal plans (Xia 2001), pooled their resources to hire a cook (Van Bueren 2008), or prepared home-cooked meals in their cramped quarters.

As with other Chinatowns, the Market Street Chinatown provided protection amid rising anti-Chinese racism in California. In addition to the safety that sheer numbers provided, the Market Street Chinatown's layout centered on internal courtyards and Ah Toy Alley, the main business thoroughfare running through the heart of the community, allowing the exterior of Chinatown to act as a defensive wall (Voss 2008:42). Despite this protection, however, violence directly impacted the community in May of 1887 when the Market Street Chinatown was burned to the ground. While this was a devastating event in the history of San Jose's Chinese community, its residents remained in the city, rebuilding Chinatown on land leased from John Heinlein, a San Jose businessman who had dealings with the city's Chinese residents (Yu 2001). Racial tension continued after the move to the new "Heinleinville" Chinatown, but community members took protection even further into their own hands by creating a private fire department to deal with future arson attempts.

Archaeology at the Market Street Chinatown

The Market Street Chinatown first received archaeological interest in the early 1980s during planning for an urban renewal project in San Jose, and the site was ultimately excavated as a salvage project designed to recover as much archaeological material as possible before the site was destroyed for the construction of a new hotel. Archaeologists from Archaeological Resource Services (ARS), a private archaeological consulting firm, identified and excavated

more than 60 features, primarily wood-lined rectangular trash pits containing domestic refuse (Voss 2008:42). Unfortunately, the excavated trash pits do not have a direct association with buildings or other distinct units in the Market Street Chinatown, and some buildings and areas of the site contain multiple pits while others seem to be lacking them altogether (Clevenger 2004; Voss 2008:45). However, since historical documents show that structures with similar functions or residential populations in the Market Street Chinatown tend to be grouped together (Michaels 2005; Voss 2008: 45), we make the assumption that excavated features can be provisionally linked to both tenement and mixed merchant-laborer household concentrations illustrated on the 1884 Sanborn map.

The excavated pits revealed a tremendous amount of material culture including Chinese and European ceramics, glass bottles, metal knives, cleavers, and other tools, preserved leather and fabric, and copious amounts of animal bone and plant remains including wood, charcoal, and seeds. ARS archaeologists collected 135 bulk soil samples for future analysis, including specialist recovery of small seeds and animal bones. Due to funding constraints, the majority of artifacts from the site were placed in storage until the Market Street Chinatown Archaeological Project (MSCAP), a collaborative project between Stanford University, History San José, Past Forward, Inc., the Chinese Historical and Cultural Project, and the City of San Jose Redevelopment Agency, was formed in 2002 with the goal of cataloguing, analyzing, and curating the Market Street Chinatown collection. While still ongoing, research carried out under the MSCAP has given insight into the daily lives of the Market Street Chinatown's residents, and a number of recent studies have focused on the food practices of the community (Henry 2012; Puseman et al. 2013; Cummings et al. 2014).

Materials and Methods

This discussion presents the analysis of faunal and floral data from eight representative features in two distinct loci from the Market Street Chinatown (Table 8-1, Figure 8-2). The first locus is in the area of tenement housing concentrated near pork roasting furnaces in the north of the Market Street Chinatown and east of the main thoroughfare of Ah Toy Alley, and it is surrounded by storage sheds, laundries, and the buildings in which Chinese laborers lived. The second locus, also east of Ah Toy Alley, is in the southern half of the Market Street Chinatown and is contained within a small courtyard located behind several of the businesses considered to be in the commercial heart of the Market Street Chinatown. The food waste recovered from these trash pits represents the remains of meals eaten by store owners, their families, and their employees, and is thus representative of mixed merchant-laborer households in the community. Taken together, the data from these two loci provide an overview of the food practices of both tenement and mixed merchant-laborer households, and they can be used to understand food practices across the Market Street Chinatown.

Feature No.	Demographic context
85-31/6	Mixed merchant/laborer
85-31/13	Mixed merchant/laborer
85-31/18	Mixed merchant/laborer
85-31/28	Mixed merchant/laborer
86-36/5	Tenement
86-36/7	Tenement
86-36/8	Tenement
86-36/13	Tenement

Table 8-1: Archaeological features included in this study.

The animal bone assemblage (Table 3) was collected from eight trash pits during fieldwork using a ¼” mesh screen, and I analyzed all faunal specimens using standard zooarchaeological methods. All bones were identified to the most precise taxonomic classification possible with the aid of modern, known comparative specimens and laboratory manuals. In some cases species level identifications could be easily made while in others the identification is at the genus, family, or even class level due to heavy fragmentation of individual bones, lack of diagnostic landmarks on specimens, or extreme osteological similarities between closely related taxa (e.g., Gobalet and Jones 1995). Two standard zooarchaeological measures are used to report taxonomic importance; NISP, or the total number of identified specimens for each taxa, and the total weight of specimens in grams (Reitz and Wing 2008). While NISP reports the total number of skeletal fragments represented by a single taxon, skeletal weight provides a way of comparing elements from animals or skeletal elements of different sizes (e.g., rabbits versus pigs) that may more accurately represent the relative dietary importance of each taxa present in the assemblage.

The majority of the floral data (Table 2) reported in this chapter were collected from sixteen soil samples from seven features analyzed in two separate studies (Puseman et al. 2013; Popper 2015). Macrobotanical remains were extracted by flotation using water to separate the lighter plant materials from the surrounding soil matrix. As with the zooarchaeological analysis, the botanical remains recovered during flotation were identified to the most specific taxonomic level possible using modern comparative material and laboratory manuals. These results are supplemented with plant remains ARS collected from the same features, either as (1) macrobotanical specimens selectively removed during the processes of screening feature soils and laboratory analysis of recovered artifacts, or (2) matrix samples collected during feature



Figure 8-2: Detail of 1884 Sanborn map of the Market Street Chinatown showing the location of tenement contexts (L1) and mixed merchant-laborer contexts (L2). (Image courtesy of History San Jose)

screening (Popper 2014). These supplemental samples contain some plant taxa not found in the flotation samples used in this study, and taken together these datasets provide a fuller picture of the plant remains present in the Market Street Chinatown. The aggregate data is presented as presence/absence of each taxon for individual soil samples and by feature for the macrobotanical

specimens and matrix samples. Presence/absence allows for easy calculation of ubiquity and rarity of individual types across features and loci, and it also avoids error in attempting to estimate the importance of individual plant taxa based on botanical remains that may be affected by differential rates of decomposition, removal by scavengers such as rodents, processes of trash disposal, and difficulty in estimating importance across taxa with different sizes or numbers of seeds.

This study utilizes ubiquity and rarity measures for both plant and animal remains recovered from the site to make broad interpretations of the food practices of the Chinese residents in the Market Street Chinatown. Ubiquity thresholds for floral and faunal ingredients differ due to the different numbers of total samples for each category, however, they represent the same total percentage of samples in each category to allow for easier comparisons. For the purposes of this study, plant taxa are classified as ubiquitous if they are found in ten or more of the sixteen total flotation samples, and are considered rare if they are found in four or fewer total samples. In these calculations, the presence of plant taxa in the supplemental macrobotanical specimens and matrix samples (labelled “B” in Table 2) were added to the flotation sample count only if the taxon was not already present in the flotation samples from that individual feature. Further, we use the differential distribution of individual plant taxa to discuss which plant foods played more important roles in either tenement or mixed merchant-laborer households. The faunal data for each feature include NISP and MNI measures, and ubiquity and rarity is also derived from these data. For faunal remains, a given taxa is considered ubiquitous if it is found in five or more of the eight total features, and rare if it is found in two or less, and like the plant data we consider differential distribution for animal ingredients as well. For faunal taxa present across much of the site (such as domesticated mammals), percentages of NISP and MNI are used

to give a general idea of the importance of each of these taxa within each loci. Finally, when discussing both faunal and floral measures we use a qualitative rather than quantitative approach, focusing on broad trends such as which particular ingredients tend to correlate with others and what ingredients may be notably absent in different areas of the site.

The Faunal and Floral Data

The data below are presented in terms of the Chinese dietary categories of *fan*, or the starch or grain component of a meal, and *tsai*, or vegetable and meat side dishes, which influence the way that meals in 19th-century Guangdong were structured (Anderson 1988; Chang 1977: 6–7, 10; Simoons 1991). Under this dichotomy, *fan* dishes formed the base of meals while *tsai* were eaten more sparingly, however meals in restaurants or for festivals would upend this pattern. Though beyond the scope of this chapter, 19th-century cooking in Guangdong also incorporated the concepts of hot and cold humors intimately connected to idea of yin and yang to provide a well-balanced healthy diet, as well as a rich history of the use of foods for specific medicinal purposes (Simoons 1991; Heffner 2013).

Fan Ingredients

A small variety of grains were identified from these features (Table 8-2). Though none were ubiquitous, rice (*Oryza sativa*) was the most common, recovered from five of the seven features, followed closely by wheat (*Triticum durum/aestivum*), also recovered from five features. Barley (*Hordeum vulgare*), millet (*Setaria*), and maize (*Zea mays*) were rare, present only in the mixed merchant-laborer contexts of this assemblage. The preponderance of rice is expected given its status as the staple grain of southern China as well as the large amounts

<i>Sambucus</i> sp.	Elderberry	x	x	x	x	x	3	x	x	x	x	4	7
<i>Solanum lycopersicum</i>	Tomato	x	x	x	x	x	6	x	x	x	x	3	9
<i>Vitis vinifera</i>	Grape	x	x	x	x	x	3	x	x	x	x	6	9
<u>Imported fruits and vegetables</u>													
<i>Canarium</i> cf. <i>album</i>	Chinese olive	x					x	2	x	x	x	3	5
<i>Dimocarpus longan</i>	Longan						0	x	x	x	x	4	4
<i>Dimocarpus longan/Litchi chinensis</i>	Longan/Litchi						0	x	x			2	2
<i>Dracotomelon dupperreanum</i>	Asian pheasant tree						x	1		x	x	2	3
<i>Litchi chinensis</i>	Litchi						x	1		x	x	2	3
<i>Sesamum indicum</i>	Sesame	x					x	2			x	1	3
<i>Siraitia grosvenorii</i>	<i>Luo han guo</i>	x						1			x	1	2
<i>Ziziphus</i> sp.	Jujube	x					x	2		x	x	3	5

Table 8-2: Ubiquity/rarity of food plants identified from the Market Street Chinatown by sample and context. Note that samples labelled “B” are macrobotanical and matrix supplemental samples, “U” is the total number of samples with a particular taxon present, and “cf.” denotes specimens that compare favorably with the designated taxon

imported for sale to Chinese migrants in the United States (Spier 1958a). Cummings et al. (2014) attributed the uneven distribution of cereal grains between the tenement and mixed merchant-laborer contexts to increased access to a variety of grains by the Market Street Chinatown's wealthier merchants. However, following the analysis of additional samples from the site Popper (2014, 2015) suggested that this pattern more likely reflects the differences between privy and trash deposits, burnt versus unburnt garbage, scavenger activity, and other plant use and disposal behaviors rather than less access to rice and other *fan* foods by the tenement residents associated with these features. Given this, it seems likely that most of the Market Street Chinatown's residents, whether merchant or laborer, consumed primarily rice for their *fan* meal component and supplemented this with other grains or grain products such as noodles, bread, and buns. The importance of a focus on rice within all socio-economic levels of the community cannot be understated, as rice was the core fundamental component of any 19th century southern Chinese meal and would have given a feeling of home to any setting in which it was served.

Tsai Ingredients - Plants

This discussion presents a representative sample of the cultivated plants from the Market Street Chinatown macrobotanical assemblage, a subset of the more than 100 identified plant taxa. As such, it is not exhaustive, but shows some of the ubiquitous and rare ingredients used in side dishes, and compares their presence in trash pits associated with tenement and mixed merchant-laborer households.

A tremendous variety of squashes, melons, and gourds (cucurbits) were identified in the Market Street Chinatown assemblage, and as a group this family (Cucurbitaceae) was ubiquitous across both loci. These foods serve a variety of culinary purposes in Chinese cooking including

as the main component of dishes, a seasoning or flavor additive as with the potent bitter melon (*Momordica charantia*) and sweet *luo han guo* (*Saraitia grosvernorii*), and even as a cooking and serving vessel as with large winter melons (*Benincasa hispida* var. *hispida*). Most of the unspecified Cucurbitaceae seeds were fragments too small to distinguish among bitter melon, fuzzy melon (*Benincasa hispida* var. *chiehqua*) and winter melon, so only the two uppermost samples from Feature 86-36/5, samples with very few remains, did not contain evidence of one of these three important southern Chinese vegetables. The high numbers of these Chinese cucurbits and the ease of growing them in California suggest they were grown locally, perhaps in Chinese kitchen or truck gardens that began in the 1850s (Chan 1986:86), and were as important foods in the Market Street Chinatown as in southern China. The rarer members of this family, muskmelon (*Cucumis melo*), cucumber (*Cucumis sativus*), *Cucumis* fragments and *luo han guo* were identified in both tenement and mixed merchant-laborer contexts. *Luo han guo* (*Saraitia grosvernorii*) is notable since this southern Chinese squash does not grow in California and would have been imported dried perhaps for use in medicinal teas or soups (Hu 2005:169, 218-221).

The Market Street Chinatown's residents ate a variety of locally available fruits and vegetables in addition to cucurbits. Figs (*Ficus* sp.) and blackberries or raspberries (*Rubus* sp.) were ubiquitous, and strawberries (*Fragaria* sp.), grapes (*Vitis vinifera*), watermelon (*Citrullus lanatus*), and tomatoes (*Solanum lycopersicum*) were all found in nine individual samples. Peanuts (*Arachis hypogaea*), peaches (*Prunus persica*), apricots and plums (*Prunus* sp.), and elderberry (*Sambucus* sp.) were found in fewer samples. These plants or their close relatives were all known in China prior to 19th-century immigration to the United States, and they may have occupied a familiar space in Chinese foodways and medicinal practices in the Market Street

Chinatown. Many of these plants also provide evidence of linkages between the Market Street Chinatown's residents and employment in nearby agricultural jobs; strawberries, blackberries, raspberries, grapes, and peaches were important crops for Chinese farmers near San Jose (Chan 1986).

Rare taxa include a number of local plants including chili pepper (*Capsicum* sp.), prickly pear (*Opuntia* sp.) walnut (*Juglans regia*), and currant/gooseberry (*Ribes* sp.). All of these were found exclusively or primarily in the tenement contexts, but again this seems to reflect the types of deposits in these trash pits compared to those in the mixed merchant-laborer contexts. One seed that closely resembles winter radish (*Raphanus sativus*) was found in the Feature 85-31/18 matrix sample. Winter radish is one of the most important vegetables in China. It seems likely that this was a crop planted in the local Chinese truck gardens since it is an easily grown cool weather crop, but it is possible that this seed comes from the medicinal use of the plant. Pollen analysis of some of the Market Street Chinatown features identified mustard family (Brassicaceae) in all samples, suggesting that members of this family, which include mustards, broccoli, and numerous other green leafy vegetables, actually made up a significant portion of the plant foods eaten in both tenement and mixed merchant-laborer households (Cummings et al. 2014). These plants are harvested and eaten before they set seed, which is why their seeds are rarely found in archaeological deposits. This points out a limitation of macrobotanical analysis; in spite of the excellent preservation of plant remains at the Market Street Chinatown, this assemblage still does not completely represent the foods eaten by its residents, in particular those that do not produce a dense by-product that would end up in a trash pit.

The Market Street Chinatown's residents also ate a variety of foods that did not grow in California and must have been imported from China: Chinese olive (*Canarium* cf. *album*), Asian

pheasant tree (*Dracotomelon dupperreanum*), jujube (*Ziziphus* sp.), longan (*Dimocarpus longan*), litchi (*Litchi chinensis*), and sesame (*Sesamum indicum*). These were all somewhat rare and recovered only slightly more often in mixed merchant-laborer contexts. Dried Chinese olives and litchis were available in San Francisco's Chinatown in the late 1800s (Blasdale 1899:43) and the jujube is thought to have solely been an import prior to 1900 in California, thus making it likely that these plants were all imported in dried form rather than being grown locally in San Jose.

Tsai Ingredients – Mammals and Birds

Pork (*Sus scrofa*), beef (*Bos taurus*), cat (*Felis domesticus*), sheep or goat (Caprinae), chicken (*Gallus gallus*), duck (Anatidae), goose (Anserinae), turkey (*Meleagris gallopavo*) and pigeon (*Columba livia*) were ubiquitous ingredients within the faunal assemblage (Table 8-3). Of these, pork and beef were by the far the most important and they combined to account for 83% of the total bone weight in both tenement and mixed contexts. Interestingly, while pork was the preferred meat in 19th-century Guangdong and beef rarely if ever consumed (Chang 1977:8), greater amounts of beef than pork were seen in both tenement (52.5% versus 38.6%) and mixed (57.1% versus 32.1%) contexts. This same pattern has been seen in other Chinese archaeological sites in the United States, and it has been at times attributed to Chinese restaurant workers bringing cheap leftovers home for consumption (Warner et al. 2014) or the remains of cost-effective meals provided by merchants for laborers living in tenement housing (Praetzellis and Praetzellis 1997). No matter the reason, these results suggest that the Market Street Chinatown tenement and mixed merchant-laborer households were consuming significant amounts of both

Taxonomic name	Common name	TENEMENT CONTEXTS				MIXED CONTEXTS				TOTAL	
		NISP	NISP%	Wt(g)	Wt(g)%	Ubiquity	NISP	NISP%	Wt(g)	Wt(g)%	Ubiquity
<u>Mammals</u>											
<i>Sus scrofa</i>	Pig	1664	46.39	13350.3	38.57	4	1117	29.88	8986.1	32.09	4
<i>Bos taurus</i>	Cow	398	11.10	20901.9	52.52	4	193	5.16	15979.1	57.06	4
Caprinae	Sheep/goat	56	1.56	722.2	1.81	3	30	0.80	435.1	1.55	4
Canidae	Dog or wolf	2	0.06	13.3	0.03	1	2	0.05	13.5	0.05	1
Ursidae	Bear	2	0.06	7.4	0.02	1	7	0.19	14.7	0.05	1
<i>Felis domesticus</i>	Cat	18	0.50	17.2	0.04	3	51	1.36	44.3	0.16	3
<i>Procyon lotor</i>	Raccoon	1	0.03	1.9	0.00	1	1	0.03	1.2	0.00	1
Leporidae	Hares and rabbits	4	0.11	0.8	0.00	3	1	0.03	0.4	0.00	1
Large mammal	Large mammal	134	3.74	1373.3	3.45	4	133	3.56	1068.0	3.81	4
Medium mammal	Medium mammal	646	18.01	1068.8	2.69	4	650	17.39	964.4	3.44	4
Small mammal	Small mammal	16	0.45	4.7	0.01	4	38	1.02	7.9	0.03	4
<u>Birds</u>											
<i>Gallus gallus</i>	Chicken	148	4.13	154.0	0.39	4	216	5.78	191.0	0.68	4
<i>Meleagris gallopavo</i>	Turkey	4	0.11	31.4	0.08	3	5	0.13	12.8	0.05	2
Anatidae	Ducks	94	2.62	54.8	0.14	4	120	3.21	82.8	0.30	4
Anserinae	Geese	10	0.28	8.0	0.02	4	8	0.21	12.5	0.04	3
Anatidae	Duck or Goose	1	0.03	0.4	0.00	4	14	0.37	3.9	0.01	4
<i>Columba</i> sp.	Pigeon	13	0.36	2.2	0.01	4	15	0.40	2.9	0.01	3
<i>Callipepla californica</i>	California quail	4	0.11	0.5	0.00	3	1	0.03	0.1	0.00	1
<u>Local Fish</u>											
<i>Sebastes</i> sp.	Rockfish	64	1.78	15.4	0.04	4	169	4.52	41.5	0.15	3
Scorpaenidae	Scorpionfish	8	0.22	1.1	0.00	4	33	0.88	3.8	0.01	4
<i>Scorpaenichthys marmoratus</i>	Cabezon	2	0.06	2.2	0.01	1	4	0.11	2.7	0.01	2
Embiotocidae	Surfbetches	10	0.28	0.6	0.00	4	16	0.43	2.5	0.01	3
<i>Hexagrammos</i> sp.	Greenling	3	0.08	0.3	0.00	3	0	0.00	0.0	0.00	0
Scianidae	Drums	2	0.06	0.2	0.00	2	17	0.45	3.0	0.01	3
<i>Atractoscion nobilis</i>	White seabass	1	0.03	0.2	0.00	1	0	0.00	0.0	0.00	1

Atherinopsidae	Silversides	35	0.98	1.3	0.00	4	242	6.47	7.8	0.03	3	7
<i>Clupea pallasii</i>	Pacific herring	3	0.08	0.1	0.00	2	4	0.11	0.1	0.00	2	4
Clupidae	Herrings	6	0.17	0.0	0.00	3	25	0.67	0.1	0.00	2	5
Osmeridae	Smelt	1	0.03	0.0	0.00	1	0	0.00	0.0	0.00	0	1
<i>Scomber japonicus</i>	Pacific mackerel	0	0.00	0.0	0.00	0	3	0.08	0.7	0.00	1	1
cf. <i>Scomberomorus</i>	Spanish mackerels	0	0.00	0.0	0.00	0	1	0.03	0.0	0.00	1	1
Pleuronectiformes	Flounders	55	1.53	8.1	0.02	4	71	1.90	15.7	0.06	4	8
Cynoglossidae	Tonguefish	0	0.00	0.0	0.00	0	11	0.29	0.3	0.00	1	1
<i>Oncorhynchus</i> sp.	Salmon	1	0.03	0.0	0.00	1	99	2.65	28.7	0.10	2	3
<i>Archoplites interruptus</i>	Sacramento perch	15	0.42	1.6	0.00	3	31	0.83	2.5	0.01	4	7
<i>Acipenser</i> sp.	Sturgeon	38	1.06	14.9	0.04	3	17	0.45	11.8	0.04	2	5
Cyprinidae	Carps and Minnows	75	2.09	18.4	0.05	4	170	4.55	17.8	0.06	4	8
<i>Castostomus occidentalis</i>	Sacramento sucker	6	0.17	0.6	0.00	2	5	0.13	0.2	0.00	2	4
<i>Semicossyphus pulcher</i>	California sheephead	8	0.22	6.9	0.02	2	25	0.67	13.5	0.05	3	5
<i>Caulolatilus</i> sp.	Tilefish	0	0.00	0.0	0.00	0	22	0.59	4.4	0.02	3	3
Lutjanidae	snappers	2	0.06	0.3	0.00	1	3	0.08	0.3	0.00	2	3
<u>Imported fish</u>												
<i>Ilisba</i> sp.	Chinese white herring	12	0.33	0.7	0.00	3	67	1.79	5.2	0.02	4	7
Nemipteridae	Threadfin bream	1	0.03	0.1	0.00	1	84	2.25	6.3	0.02	3	4
<i>Larimichthys crocea</i>	Yellow croaker	1	0.03	0.1	0.00	1	1	0.03	0.1	0.00	1	2
<i>Johnius</i> sp.	Unspecified croaker	1	0.03	0.1	0.00	1	1	0.03	0.1	0.00	1	2
<i>Lagocephalus</i> sp.	Pufferfish	0	0.00	0.0	0.00	0	6	0.16	12.0	0.04	2	2
<i>Sepia</i> sp.	Cuttlefish	22	0.61	8.9	0.02	4	9	0.12	2.4	0.01	4	8
Total		3387	100	39795	100		3738	100	28004	100		

Table 8-3: Relative importance and ubiquity/rarity of animal taxa identified from the Market Street Chinatown by context. Note that “NISp” is the number of identified specimens, “Wt(g)” is the total weight of each taxon measured in grams, and “Ubiqu.” is the total number of samples with a particular taxon present.

pork and beef, with an emphasis on beef. Outside of these two taxa, no identified mammal or bird represented more than two percent of the overall total bone weight in the assemblage, and they can individually be seen as supplementing food practices centered on pork and beef.

The ubiquitous chicken, duck, goose and pigeon are all commonly consumed foods in Guangdong, and the California quail (*Callipepla californica*), which was identified in four of eight features, may have served as a readily available local substitute for Chinese quail species. Turkey, although ubiquitous, was consumed in relatively small quantities, and it does not seem to have supplied significant quantities of meat to the diets of the Market Street Chinatown's residents. Many of these remains show butchery patterns indicative of being chopped into small pieces with a cleaver, a common way to butcher fowl whether for stir-frying or after cooking for table service. Likewise, cat (*Felis domesticus*) remains from the Market Street Chinatown exhibit a similar cleaver-based butchery pattern, and it is clear that people living in both tenement and mixed merchant-laborer contexts were eating cat meat on a regular basis. Raccoon (*Procyon lotor*) and canid (Canidae) remains are both rare food taxa in the assemblage. The canid remains could be from a coyote (*Canis latrans*), a wolf (*Canis lupus*), or a large domestic dog (*Canis familiaris*), and they show clear butchery marks from a heavy bladed instrument such as a cleaver. As with cats, dogs were commonly consumed for both culinary and medicinal purposes in 19th-century Guangdong.

Finally, bear paw is particularly noteworthy as an expensive food item used in Chinese feasts, and all the bear bones in this and previous work at the Market Street Chinatown were from skeletal parts related to paws (Henry 2012). This suggests that both tenement and mixed merchant-laborer households participated in feasts or meals that included this item on the menu. It is important to note that the Market Street Chinatown's merchants typically were not wealthy

before immigrating to the United States, and bear paw would have most likely been out of their purchasing potential at home in Guangdong. Thus, the consumption of bear paw by merchants as well as laborers may represent an “eating up” at a style of consumption neither could participate in in China, either as a way to move up the social ladder or to experience previously inaccessible culinary preparations. Since both merchants and laborers seem to have been able to experience the consumption of this ingredient, it may also have helped to provide a sense of sameness that marked the Market Street Chinatown’s residents as a group as bear eaters, something they could not have been in China.

Tsai Ingredients - Fish

Twenty-nine individual fish taxa were identified for this study and their distribution demonstrates that the Market Street Chinatown residents in both loci enjoyed a wide variety of fish in their diet. Most of the identified taxa are mild, white-fleshed fish conforming to typical preferences in southern Chinese cuisines (Simoons 1991). While it is subtle, fish bones represent over twice as much of the overall weight in mixed merchant-laborer faunal assemblage than they do in tenement households (.66% versus .21%), suggesting that fish appeared as part of meals in merchant’s homes at a higher frequency than they did in tenement housing.

A number of ubiquitous fish species provided the bulk of fish in the diet, and these include marine taxa such as rockfish and other scorpionfish (*Sebastes* sp. and Scorpaenidae), surfperches (Embiotocidae), silversides such as the jacksmelt and topsmelt (Atherinopsidae), drums (Sciaenidae) and flounders (Pleuronectiformes), as well as freshwater carps and minnows (Cyprinidae) and the Sacramento perch (*Archoplites interruptus*). These fish that would have fit well into existing Chinese culinary preparations, especially the carps and minnows which could

have served as locally available replacements for the many Asian carp species preferred in Guangdong. Many of the non-ubiquitous marine taxa including the cabezon (*Scorpaenichthys marmoratus*) and greenling (*Hexagrammos* sp.) also fit into this category, and as a whole these taxa suggest that mild-flavored fishes were regularly consumed by all segments of the Market Street Chinatown's population. Salmon and mackerels provide two notable exceptions to this pattern, however. Both of these have oilier flesh than fish typically consumed in Guangdong, and both are found predominantly in mixed merchant-laborer contexts. While it is difficult to be certain, it is possible that both salmon and mackerel are reflective of new tastes acquired by the Market Street Chinatown's merchants during their dealings with Euro-Americans who regularly consumed these taxa. Dining between Chinese and non-Chinese business partners was a relatively common long-standing occurrence (Coe 2009), and it could have served as a venue for exposure to new ingredients and cooking methods as well as a marker of difference between the Market Street Chinatown's merchant and laborer populations.

Finally, a number of imported fish provide evidence for the lengths that Chinese consumers in the Market Street Chinatown went to procure desired ingredients. California sheephead (*Semicossyphus pulcher*) is found in both tenement and mixed merchant-laborer contexts in moderate numbers. Not typically found in the waters near San Jose, the identified California sheephead were likely imported as salt fish from southern California where they were heavily targeted by Chinese fisherman and played an important role in the Chinese salt fish trade (Stephens 2001). There are also several Asian taxa found in the collection, all of which would have been imported as salt fish from China. These include the ubiquitous Chinese white herring (*Ilisha* sp.) and threadfin bream (Nemipteridae), two different croakers (*Larumichthys crocea* and *Johnius* sp.), and ocean pufferfish (*Lagocephalus* sp.). While the white herring was found in

seven of the eight features it is much more numerous in mixed contexts (N=67) than tenement contexts (N=12), as is the threadfin bream (N=84 versus N=1) and the ocean pufferfish (N=6 versus N=0). Taken as a whole, these data suggest that mixed households consumed a much greater amount of Cantonese-style salt fish, and this difference highlights one of the few key distinctions in meat diet between tenement residents and those living in mixed households. Perhaps merchants were better able to afford the high cost of importing Chinese-made salt fish to satisfy a nostalgic longing for the taste of home than were tenement residents. Interestingly, however, cuttlefish (*Sepia* sp.) is ubiquitous across all features and more common by NISP in tenement features. While not a fish at all it is a commonly consumed dried and salted seafood snack and seasoning in Chinese cuisine; today it is cheaper than salt fish and historically also may have been a less costly alternative to salt fish within tenement households.

Discussion and Conclusions

Whether members of tenement or mixed merchant-laborer households, the Market Street Chinatown's residents faced a similar set of challenges; they were separated from family and relatives in their home villages, they worked in new and often unfamiliar jobs, and they felt the harsh effects of racism and prejudice on a daily basis. In the Market Street Chinatown and other communities, however, Chinese migrants found ways to adapt to these problems and find success in their new homes. Some Chinese laborers were lucky or skilled enough to become merchants, and while merchants were generally considered low class in 19th-century China these individuals became the elites of Chinatown society. The majority, however, remained laborers throughout their time in the United States, though many of them earned enough money to continue supporting their families and relatives back home in China by sending regular

remittance payments (Hsu 2000). Regardless, Chinese laborers and merchants found both protection in numbers and a sense of community in Chinatown, either as fulltime residents or by returning for holidays and festivals (Voss 2008). Shared food practices contributed to this shared community identity by providing a strong connection within and between the different social classes within Chinese migrant society, and we argue that the adaptation of southern Chinese cooking practices to conditions in 19th-century San Jose by the Market Street Chinatown's residents was key to their ability to manage life in the United States.

The macrobotanical and faunal data presented here demonstrate that both tenement and mixed merchant-laborer households ate a similar variety of foods, and that while differences existed between the two groups a shared base diet cross-cut the community. The *fan* portion of meals in the Market Street Chinatown was made up primarily of rice, the primary food grain of China, and this was supplemented with a variety of other grains including wheat, barley, and maize. For the flavorful *tsai* component, the Market Street Chinatown's residents creatively combined local ingredients, including California grown Chinese crops, and, particularly in the case of mixed merchant-laborer households, a variety of imported food items. They ate a wide range of local fruits and vegetables such as strawberries, figs, tomatoes, and melons, and they followed typical Chinese diasporic practice and grew Asian crops such as bitter and winter melons and Chinese cabbages and greens. Alongside these fruits and vegetables they ate large amounts of pork and beef, as well as chicken, duck, goose, and a variety of mild, white-fleshed fish. These meats were supplemented by cat butchered in a Chinese style, and on rare occasions with bear paws, dog, and rabbit. Finally, in addition to these local ingredients, the Market Street Chinatown's residents cooked with a variety of imported food items including *luo han guo*, Chinese olives, litchis, longans, jujubes, and several different kinds of salted fish from China and

southern California. This diet drew on residents' understanding of southern Chinese food practices to provide a healthy mix of both *fan* and *tsai*, and it highlights their ability to ensure a constant supply of fresh staples and imported food items.

On the surface, these food practices may appear like the wholesale transfer of Chinese culinary patterns from Guangdong to the United States. However, while the Market Street Chinatown's residents certainly maintained key aspects of southern Chinese foodways including the use of rice as the staple grain, dishes combining a variety of plants and fish, and even the consumption of imported and locally grown foods, there are key differences compared to the food practices of 19th-century Guangdong. First, the heavy consumption of beef by residents of both tenement and mixed merchant-laborer households is divergent from southern Chinese practices. Beef would have required the development new methods of cooking, and it also has become a key ingredient in localized Chinese migrant cuisines in the United States where it is a much more common ingredient on restaurant menus than it is in present-day Guangdong. The consumption of beef, along with other unfamiliar ingredients such as tomatoes, maize, elderberry, grapes and local carp species, would have provided the Market Street Chinatown's residents with a set of shared experiences that simultaneously set them apart from their relatives in China and brought them closer together as a group. Thus, common consumption of these new ingredients by both tenement and mixed merchant-laborer households may have served as a social glue alongside institutions such as family and clan units that held the Market Street Chinatown together.

In addition to the use of new ingredients, the sheer volume and diversity of foods consumed by the Market Street Chinatown's residents likely differs significantly from what they ate before immigrating. While no accurate data exists for 19th-century Guangdong, accounts

from elsewhere in China suggests that rural Chinese ate a diet primarily of locally available vegetables and preserved food products, and that they ate meat only on rare occasions until well into the 20th century (Buck 1956). Since most Chinese migrants including merchants were relatively poor upon arrival, the wide variety of vegetables and the tremendous amount of meat including pork, beef, poultry, and fish would have been a significant change from their foodways in China. Whether this heavy consumption of meat was the result of the site's residents eating back at an idealized cuisine of Guangdong's upper class, or instead simply the result of Chinese migrants eating foods they enjoyed and could not previously afford is unclear. It is interesting to note the subtle differences between laborer and mixed merchant/laborer contexts, such as the handful of imported fish products that were primarily restricted to mixed merchant-laborer households. While everyone in the Market Street Chinatown could, to a certain degree, enjoy what must have seemed like a bounty of food, perhaps only the more successful merchants could afford to nostalgically indulge in consuming imported treats from home: the salted and preserved fish that are often associated with poor peoples' food in southern China.

While the food practices that cross-cut the Market Street Chinatown's tenement and mixed merchant-laborer households were born in part out of members' shared roots as rural farmers and the relative bounty of foods they had access to in North America, they also served an important role in the face of racism. In a city that joyfully proclaimed "Chinatown is dead. It is dead forever," (*San Jose Daily Herald* 1887) following the May 1887 arson fire that destroyed the Market Street Chinatown, the city's Chinese residents would have felt very little welcome by or connection with at least some of their American neighbors. Consequently, the culinary practices shared by both laborer and mixed merchant-laborer households become not only a commonality of being Chinese in the United States, but also key to San Jose's Chinese

community's ability to survive this crisis. Nineteenth-century American popular discourse denigrated Chinese cuisine as greasy, disgusting, and featuring a variety of animals perceived to be vermin by Americans including rats, cats, and mice (Coe 2009: 58-59, 151-53). Although there is no archaeological evidence for rat or mouse consumption in the Market Street Chinatown or any other Chinese community in the 19th-century United States, cats were commonly eaten at the site. The fact that community members were willing to consume these animals in the face of intense racism suggests that being able to eat cat meat was more important than the potential downside of playing into American racist stereotypes. This could have been for a number of reasons, as cats and other foods items similarly derided by Anglo-Americans could have become symbols of solidarity amongst community members who consumed them, been consumed out of convenience, or eaten for nostalgic reasons or pleasure. Regardless, the continued presence of cats alongside numerous other food items shared by both laborers and merchants in the Market Street Chinatown demonstrates that the sites residents continued to consume a distinctive diet despite rising anti-Chinese sentiment.

In other contexts, archaeologists have argued that food practices shared between elites and commoners are avenues of control designed to mask social differences within communities (Hayden and Villeneuve 2011). In these examples, shared public consumption of luxury foods during feasts serves to downplay elite wealth or access to other valued food items that are in turn consumed in private settings. In the case of the Market Street Chinatown, however, the remains of shared food practices observed via archaeological faunal and floral analyses were found in deposits containing the remains of both household and public consumption activities. Though it is difficult to tie any single specimen or deposit to either setting, the distribution of similar remains across most strata and features at the site implies that the Market Street Chinatown's

residents participated in similar food practices at home in addition to during feasts or festivals. With the exception of a handful of imported ingredients, the archaeological data demonstrate that members of both tenement and mixed merchant-laborer households truly were eating the same things and thus this does not appear to be a case of attempted social control. Instead, while merchants certainly used their wealth to import salt fish from China, the bulk of their food would have looked relatively similar to that being served in tenement housing. This is not to suggest that differences did not exist between these households, as the archaeological data certainly demonstrate that they did. Rather, we argue that in the case of the Market Street Chinatown, its residents seem to have had more shared culinary practices that cross-cut class boundaries than differences which marked them as distinct.

While a strong community identity was invaluable in surviving the racism and violence of the anti-Chinese movement in the United States and the hardships that the Market Street Chinatowns's residents dealt with following the arson fire that burned Chinatown to the ground in May of 1887, it was not easily constructed. The Market Street Chinatown's residents had to creatively draw on multiple sources to bring together the foods they used to craft their unique cuisine. They purchased foods from Chinese and American merchants, butchers, and fish mongers, they brought foods such as grapes and other fruits home after working in nearby agricultural fields, they starting farming truck gardens and small plots of land to grow Chinese crops including bitter and winter melons, they imported a handful of ingredients that could not be produced locally, and they ultimately started their own restaurants. While some of these activities were the result of opportunity and chance, they all combined to create the shared food practices found in the Market Street Chinatown. These foodways, emphasizing group identity over very real difference, ultimately served to reinforce family and clan linkages and the shared

experience of being a Chinese migrant in an often hostile foreign land. The simple act of eating a Chinese-style meal with family and friends would have given the Market Street Chinatown's residents a sense of home and comfort in the United States and helped to ameliorate many of the pains they experienced in day-to-day life. Perhaps most importantly, the acts of procuring ingredients and cooking and eating them also gave the Market Street Chinatown's residents a sense of control over their lives, something that was often under attack in American courts and their daily trips outside the protective bounds of Chinatown.

Chapter 9. Conclusion

In this study I have utilized a contextually- and historically-driven approach to 19th-century Chinese migrant food practices to achieve two primary goals: (1) explore the interconnectedness of food and identity in the Market Street Chinatown; and (2) reconstruct connections made between community residents and other people and places via their food practices. To achieve the first goal, I utilize a combination of faunal and floral data collected from eight trash pit features at the Market Street Chinatown, and I use these data to highlight the importance of food in the creation of community identity in Chapter 8 and the many ways food intersected with multiscalar identities in the Market Street Chinatown in Chapter 6. Together, these two chapters demonstrate how food function in the Market Street Chinatown to mark internal difference, create bonds that crossed class lines, enable movement up the social ladder, and maintain connections to home. To achieve the second goal, in Chapter 7 I draw on the extensive fish remains from the Market Chinatown and I trace their origins to numerous fisheries using the concept of indicator groups. These data highlight the complexity of the salt fish trade and the way that food practices drove connections at multiple scales including with local, regional, and international trade networks. In total, this work highlights the ability to explore diverse research questions through a lens of food as well as the many corresponding roles food plays in the daily lives of migrants.

In addressing the above goals, I draw heavily upon the growing body of migrant food studies literature which emphasizes the numerous important roles food plays in daily life following migration (e.g., Janowski 2012a). As seen in this study, food can help create, change, and maintain connections, provide opportunities for social movement and identity construction, be a tool to evoke nostalgic memories, and serve as a powerful dividing or uniting force. In Chapter 5 I also highlight the numerous changes that occur via the process of localization

wherein food practices are modified based on local economic, environmental, and social conditions. In the case of the Market Street Chinatown's residents, the localization process introduced copious amounts of meat while reducing the range of food products residents previously utilized in China to a subset available via trade from *jinshanzhuang*, the Chinese shipping firms which supplied goods to many Chinese populations abroad. Racism and anti-Chinese sentiment in California also impacted Chinese foodways by providing an impetus for the creation of shared community practices which emphasized a common Chineseness over internal differences. Thus, while the food practices at the Market Street Chinatown follow general trends seen in other Chinese migrant populations (Pilcher 2006b; Wu and Tan 2001), the unique ways they played out were contingent upon both the historical specificities of 19th-century Chinese migration to the United States as well as the individual goals and desires of community residents.

I also heed recent calls within the archaeology of Chinese migrants to reframe our research questions within transnational or diasporic perspectives (González-Tennant 2011; Ross 2009, 2010, 2011; Voss 2015b). Such approaches are important in that they not only recognize the global history of 19th-century Chinese migration but that they also foreground the internal heterogeneity which existed within Chinese communities in the United States and elsewhere. By contextualizing this project within a framework of migration and the transnational meanings of food and eating, I aim to emphasize how both of these trends played out in the Market Street Chinatown and the important considerations this bring to the interpretation and understanding of food in the community. In particular, this approach allows me to move beyond notions of tradition and change often emphasized in acculturative approaches to the archaeological study of Chinese migrant food practices, and I explicitly draw into question past associations between high class Cantonese cooking and Chinese populations in the 19th-century United States. Instead,

by acknowledging the rural Taishanese origins of many Chinese migrants along with their broader population heterogeneity (e.g., Hsu 2000), I am better able to explore the effects that localized cooking practices had on Chinese migrant conceptions of self. For instance, the presence of copious amounts of pork, beef, poultry, fish, and various luxury ingredients in the Market Street Chinatown faunal assemblage is representative of a profound change in the diets of the site's residents rather than continuation of prior foodways with minor modifications as would typically be argued in past archaeological interpretations. Thus, instead of continuity this pattern marks divergence and it highlights the generative capabilities of migrant foodways; the Market Street Chinatown's residents, whether merchants or laborers, were able to eat up the social ladder via their food practices, which in turn ultimately became solidified as the foundation for emerging Chinese migrant and Chinese-American food traditions. However, these changes and practices did not occur in isolation but were instead framed through conceptions of self intimately linked with home. Ultimately, this helped form and maintain transnational connections through which individuals constructed identities which simultaneously acknowledged life in both China and the United States.

While this project hopefully begins to turn the archaeological study of Chinese migrant food practices away from models privileging continuity and change, it is but one step towards the larger goal of achieving a truly transnational approach to Chinese migrant archaeology. Additional studies are needed to explore other dimensions of Chinese experiences in North America, as while food is important it is not the only component of migrants' daily lives. Further, there is a need for broad, comparative studies examining food and other daily practices across a range of sites including those in both urban and rural contexts. Gust's (1993) prior work on faunal remains from multiple Chinese sites in the United States demonstrates that a

comparative approach can be useful; however, there is a need for additional such studies especially from a transnational perspective.

Just as importantly, archaeologists cannot lose sight of the business and economic aspects of migration which intersected in numerous ways with the daily lives of Chinese migrants. The tremendous amounts of goods, including numerous food products, which flowed between China and North America necessitated tremendous investment in production and shipping. In China, *jinshanzhuang* (Hsu 2000, 2006) were heavily involved in the shipment of goods, people, and money to and from Hong Kong and other Chinese shipping ports. To meet demand, *jinshanzhuang* drew on the production capabilities of a variety of industries in Guangdong, especially those in the vicinity of Hong Kong and other shipping ports (e.g., Choy 2014; Hsu 2006:26-27; Tsai 1993:26-27). In North America, Chinese merchants served as local interfaces between migrants and *jinshanzhuang*, and they also facilitated the shipment of prepared goods from Chinese migrant-owned businesses to markets in China and beyond. These prepared goods, such as salt fish and North American ginseng, in turn formed the basis for a variety of extractive industries employing thousands of Chinese laborers, and they offered potential financial opportunities to Chinese migrant entrepreneurs. Although these industries have been recognized by archaeologists as a mechanism behind the supply of goods to Chinese migrant communities, they were also important pull factors for Chinese migration and byproducts of increased Chinese entrepreneurship that went beyond simple sources of goods.

Finally, Voss (2016) in particular has pointed out the necessity for collaboration with scholars in allied fields and especially those from or working in China. This is a critical next step in the development of the subfield, and it has the potential to open up valuable new sources of information such as Chinese family archives and gazetteers typically not utilized by

archaeologists. Besides allowing for a fuller understanding of Chinese migrant life prior to migration such interaction will also likely lead to new approaches to different aspects of migrant life. This intersects with observations by Ross (2013b) that archaeologists' frequent use of acculturative models limits their ability to engage in broader discussions and debates, and it is clear that only by pursuing a transnational/transpacific approach as called for by Voss and others can archaeologists truly move beyond conversations with themselves (Praetzellis and Praetzellis 2015). However, while there is still much work to be done to push the archaeology of Chinese migrants forward the recent reinvigoration of the subfield through the Chinese Railroad Workers in North America Project (CRWNAP) offers a potential avenue to come closer to this goal. The CRWNAP has already helped to generate discussion between archaeologists and allied scholars in both the United States and China, and it has also led to multiple international conferences in which archaeology has played an important role. Not only has the CRWNAP exposed non-archaeologists to the data which archaeologists working on Chinese migrant sites have at their disposal, the project has likewise introduced many archaeologists to the theoretical debates happening in History, Asian and Asian-American Studies, and other related fields. The subfield will greatly benefit if more archaeologists begin to engage in these discussions and incorporate ideas from other fields into their work.

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