结果分析

6 INTERPRETATIONS

The preceding chapters in this report present the data obtained from archaeological and historical research for the District 8 Headquarters Demolition Project: information gleaned from documents, artifacts, seeds, pollen, and soils has been distilled into tables, drawings, photographs, and summaries. In this chapter, information is synthesized and humanized. The topics chosen were guided by questions posed in the research design, but ultimately focused on aspects of archaeology and history specific to this site. Every archaeological study uncovers unique episodes of the past—remnants of individual lives. For sites destined for demolition and development, this is the last chance for these people's stories to be told. This chapter tells some of these stories.

Table 6-1 provides a summary of the important features that were discovered, the people or events they were associated with, and their dates of use. The format of this chapter follows the table outline. The butchered cattle bones, the only material recovered from the Rancho Period, are discussed briefly following the table. The first major topic is the deposits from the late 1880s and the 1890s associated with Starke's Hotel (later Bradford House). The following sections address aspects of San Bernardino's Chinatown, where 90 percent of the artifacts were recovered. Included are sections on demographics, life in Chinatown, meal-taking, recreation, and the community's final decline.

6.1 HOTEL CULTURE

Four of the excavated features were in Lot 5 and are associated with the operations of Starke's Hotel in the 1890s. The artifacts in these collections represent activities of the hotel visitors and staff, reflecting life at this San Bernardino enterprise just before the turn of the century. The history of the hotel is presented first, followed by discussion of the archaeological findings illuminated in the light of the documentary evidence.

STARKE'S—THE BEST HOTEL IN TOWN

A month after Dudley and Elizabeth Pine retired from the hotel business and left for Santa Barbara, an advertisement in the *Guardian* (1867b:2) appeared:

> PINE'S HOTEL, San Bernardino
>
> This well-known hotel is open for the reception of guests at all hours of the day or night. The table is abundantly supplied with everything of the best, and the sleeping accommodations of the house are excellent.
>
> Attached to the hotel is a BAR, well stocked with the very best WINES, LIQUORS, and CIGARS, of the choicest brands.
>
> A BILLIARD TABLE is connected with the hotel.
>
> The stages arrive and depart from the hotel.
>
> [signed] Aug. Starke

Table 6-1
Important Archaeological Features by Type and Association

EA[a]	Feature No.	Type	Association/Comments	Feature Construction	Artifact/Fill Abandonment	MNI	Selected MNI[b]
Rancho Period Deposits							
8-1	1047	Bone concentration	Silted-over butchering remains	1840s	—	—	—
8-1	1048	Bone concentration	Silted-over butchering remains	1840s	—	—	—
8-1	1049	Bone concentration	Silted-over butchering remains	1840s	—	—	—
8-1	1050	Bone concentration	Silted-over butchering remains	1840s	—	—	—
Starke's Hotel/Bradford House Deposits							
5-1	1009	Privy	Starke's Hotel/Bradford House	1888–1894	1897	301	219
5-3	1022	Pit	Hotel refuse	1897	1897	222	59
5-1	1023	Privy	Hotel refuse	By 1885	1894	364	308
5-1	1025	Privy	Domestic refuse; Anglo hotel employees (?)	By 1885	1897	603	406
Chinatown							
Pits and Privies Filled with Artifacts							
7-1	1032	Pit	Mostly whole bottles	1920s	1920s	125	78
7-1	1035	Privy	Replaced Privy 1058, filled with building contents during demolition	ca. 1910	1944	6,801	3,933
7-1	1056	Privy	Earliest privy	1880s	ca. 1900	312	129
7-1	1058	Privy	Replaced by Privy 1056	1900	ca. 1910	1,745	162
Sheet Refuse and Artifact-filled Drains							
7-1	1057/ 1002	Sheet Refuse	Backyard midden, filled Drain 1002	1880s	1930s	403	79
		Drain	Wood lined; filled with Sheet Refuse 1057	1880s	1910	480	—
7-1	1031	Drain	Contemporary with Drain 1002	1880s	1910	309	65
7-1	1060	Drain	Replaced by Drain 1002	ca. 1800	1870s	9	9
Cooking Structures							
7-1	1001	Roasting Oven	Stone floor; backyard	1880s	ca. 1930	49	19
7-1	1033	Cooking Feature	Backyard wok stove?	1880s	ca. 1900	45	9
8-1	1036	Roasting Oven	Brick; south of temple; replaced Roasting Oven 1001	ca. 1930	By 1944	44	17
Other Features							
8-1	1003	Bldg Footing	Wong Nim Store and Temple	By 1890	1944	—	—
8-1	1005	Dog Burial	Backyard; near fence line	By 1942	—	1	—
Total						***14,687***	***5,692***

a - EA = excavation area (see Figure 4-2).
b - From Artifact Table 3a for each feature (see Chapter 5).

Spanish Cattle

While archaeologists were excavating on the east end of Chinatown, in what were once the sandy banks of Warm Creek, four deposits of cattle bones were uncovered: Pits 1047, 1048, 1049, and 1050. A minimum of three cattle skulls are represented along with a few associated longbones. The animals were approximately 5 years old and no butchering marks were visible. Were they associated with the Chinese? Were they purposefully buried? To answer these questions, faunal expert Sherri Gust examined the bones and immediately recognized them as a distinctive type typical of Hispanic California.

The vast herds of cattle that roamed early California under Spanish and Mexican rule were small and long horned (Burcham 1957). Their body weight was about half as much as a modern steer—only 600 pounds. Their skulls show special adaptations for the support of the long horns. As can be seen in Figure 6-1, the posterior of the skull exhibits a large boss (a bony projection in the center) that develops as the cattle mature. It develops partly in response to the increasing weight of the horns laterally and partly in response to the pull of neck muscles that attach on the back of the skull. Such cattle are common in Californio sites and are discussed in detail in the report on the Ontiveros Adobe (Gust 1982). The skulls and the longbones are much smaller than "improved" livestock of the late nineteenth and early twentieth centuries. The lack of butchering marks is typical of the Californio style of butchering where muscles are pulled away from the bone, rather than being cross-cut as in the Euro-American style.

Figure 6-1 Long-horned cattle skulls recovered in Pits 1047, 1048, 1049, and 1050.

As the excavation area is about 800 feet southeast and directly downslope from the site of the Lúgos' adobe homes, these bones are probably related to their occupation. The 4,000 head of cattle brought to the ranch by the Lúgos in 1839 established a thriving herd. Individual animals would have been butchered regularly to support the Lúgo household. It appears that the waste was thrown into the creek. Caught and buried in the sandy banks, these bones are the only remnant of San Bernardino's rancho past found in the project area.

August Starke and his first wife Frances were both born in Germany and migrated to California during the Gold Rush. August had operated a hotel in Petaluma, California, from 1851 to 1866 before migrating south to San Bernardino (Ingersoll 1904:867). He married his second wife, Catherine Clark, an Irish immigrant, in San Bernardino in May 1867, the same month the two took over the Pine's Hotel. In September, Catherine Starke petitioned in the First Judicial District Court in San Bernardino to become sole proprietor of the hotel. She swore in her affidavit that her application was made "in good faith for the purpose of enabling [her] to support myself and my children, and not with any view to defraud, delay or hinder any creditors or creditors of my husband, and that of the money so to be used in said business not more than five hundred dollars has come either directly or indirectly from my husband" (San Bernardino County 1867:10–11). Several months later, in November 1867, a nearly identical advertisement to the one cited above (but for a comment that the house had recently been "repainted and refurnished throughout") appeared in the *Guardian*, but this one was signed by Catherine Starke (Haenszel 1985b:21). Although the statement about defrauding creditors may have been a mere formality, August and Catherine Starke's later financial problems hint at the possibility that Catherine was, indeed, attempting to protect her investment from her husband's creditors, at least his future creditors. Catherine Starke signed the document with her mark. She would remain illiterate, unable to write even her name, until the end of her life nearly 40 years later.

The Starkes did not complete the purchase of the hotel until 23 January 1868. The price of the Block 15 property, plus several other lots in town, was $4,000 (SBCR 1868:138). Perhaps in order to capitalize on the reputation Dudley and Elizabeth Pine had built during their tenure, the Starkes opted to continue operating the establishment as Pine's Hotel until around the summer of 1869. On 14 August 1869, the *San Bernardino Guardian* noted some of the improvements that the Starkes were making to the hotel:

> Among the many improvements, we are pleased to notice the enlargement of Starke's (formerly Pine's) Hotel. This hotel will be entirely remodeled, and has been placed in the hands of skillful and competent workmen. An addition of 24 sleeping rooms, a dining room 20 x 45, ladies parlor, and kitchen are to be added to the present building. The new sleeping rooms and parlor will be on the second floor, with a veranda running around facing north, east, and south. Two large rooms will be reserved for families and furnished with new and handsome furniture, beds, and spring mattresses. The bar room will be changed and entirely separate from the office. The old dining room and parlor, with the kitchen, will be changed into a large hall to accommodate ball parties, entertainments, etc. [*Guardian* 1869:2].

By early 1870 the Starkes had completed the wood-frame addition as described above on the south side, parallel to C Street (Arrowhead Avenue) (Figure 6-2). Adjacent to the hotel was a corral and livery; this is probably the large structure that appeared on an 1871 bird's-eye view of San Bernardino by Augustus Koch (see Figure 2-6). In 1870, the first formal advertising for "Starke's Hotel" appeared (Haenszel 1985a:5; *Guardian* 1870:4).

The following year the Starkes added a bathhouse fed by an artesian well. The baths (showers also were offered) were open to paying guests of the hotel as well as to the general public. Catherine Starke gave notice "to the ladies, that they are specially invited, and whenever it suits their convenience, to call and take a bath free of charge" (*Guardian* 1871:3).

Figure 6-2 Stereographic view of Starke's Hotel circa 1870 (courtesy, San Bernardino County Museum, Redlands, California).

The only—albeit humorous and undoubtedly somewhat satirical—first-hand description of Starke's Hotel discovered during research was that of D. L. Phillips in a letter written from San Francisco on 1 January 1876. The "Starke House" had been recommended to Phillips as "the best hotel in the town" before he left Los Angeles by stage.

> In front of the house are a few of the most magnificent pepper trees I have ever seen in California. They are fifteen or eighteen inches in diameter, and their forms are more perfect, if possible, than those beautiful sugar maples that stand in the lot of land east of the residence of my friend Captain Reese, on the west side of Springfield; while their intensely green and delicate foliage is always a delight to the eye of the lover of natural beauty. The hotel is kept by a German whose name is borne by the house. The sitting room looked like some weird place of by-gone ages. In one corner was the office, where, in a register that might have been the first one used, we inscribed our names. In another corner was a bar which was doing a very lively business; in another was gathered a group of men busy over the card table; in the remaining corner was a stove of a primitive Tyrone pattern, around which was gathered a lot of as hard-looking specimens as one would wish to see. The landlord was roaring drunk and as good-natured as a bear cub; indeed, all seemed rough, generous and good-natured. Lighted by stearine candles, about two inches long, set in block tin candlesticks, we were shown our rooms. Our apartments were large enough for a single bed, a chair and a washstand. That was all. Col. Clark scented from afar the coming army of bed-bugs, but afterwards compromised on a few hundred fleas. Fleas are universal in this State. They are common as flies in Illinois in summertime. There are not many bed-bugs. Our supper was ordered by a man who must have been a drill-sergeant under Kaiser Wilhelm during the Franco-Prussian war. I have traveled much, and have been at many hotels, but such tones in ordering a meal I have never heard elsewhere. I was astounded and Col. Clark was convulsed. I, certainly, on

> that quiet night, could have heard that order half a mile. I asked afterwards if the cook was deaf, and was informed that his hearing was quite good, but that the steward had about as much control over his voice as a cannon has over its report when the match is applied. That supper I shall never forget. Mutton in California is of universal use. It is either roast mutton, broiled mutton, fried mutton, boiled mutton, mutton stew, mutton pie, or mutton hash, continually. In this instance it was mutton chops. I tried a chop with my knife; perhaps the knife was dull? No, it was rather sharp than otherwise. I tried it again; the chop would not be dissected. I called the man of thunder tones, and asked him if he knew the history of the sheep from which that chop was taken? He said he did not. I told him I thought it came with the Spanish friars from Mexico. He took the matter good-naturedly, and said the chops were bad and very tough, and if we would wait a little he would get us a good beef-steak, and he redeemed his promise. But, the coffee, bread and butter were execrable [Phillips 1877:104–106].

About 1878, Starke began selling off lots in Block 15 not directly associated with the hotel's operation; 1878–1879 city assessments for Starke report that he was taxed for only the property and improvements in Lot 5 (SB City 1877–1878:121 [the volume embossed with the 1877–1878 dates actually contains assessments for 1878 and 1879]). Ten years later, he was again in possession of Lot 4, while Daniel M. Bradford was assessed for Lots 6, 7, and 8, and Sarah C. Wilson for Lots 1, 2, and 3 (SB City 1889–1890:20–21, 93).

In 1880, the front adobe wing of the hotel was demolished and replaced by a two-story brick hotel with 50 rooms (Figure 6-3). Starke's Hotel continued to thrive into the early 1890s and was a noted gathering place not only for tourists and travelers but for townsfolk as well (Haenszel 1985a:5–6; *Sun* 1938:22). The 1887 Sanborn map gives a view of the hotel and grounds (see Figure 2-9). South of the hotel, an L-shaped structure contained a hog house, the hotel laundry, a storehouse, sleeping quarters for employees (labeled "Chinese Sleeping Rm." on the map), and a privy (W.C.). Two small outbuildings southeast of the hotel and just west of the division line between Lots 5 and 6 also may have been privies. A wooden storage shed appears directly west of the hotel's kitchen; a portion of the shed appears to jut into C Street. An artesian well also is adjacent to the kitchen facilities. An orchard shown south of the hotel in Lot 4 may have provided the hotel with fresh fruit.

In March 1889, the San Bernardino Artificial Stone and Improvement Company completed laying sewer lines on C Street, including a line in front of Starke's Hotel. By September the company was forced to take several defendants to court for nonpayment of the assessments meant to pay for the lines. Among the defendants was August Starke, whose assessed obligation was $291.41. The San Bernardino Superior Court found in favor of Starke and others of the defendants (Superior Court 1888d, 1889:388).

The new year of 1891 foretold of the serious financial (and legal) problems that were in store for August and Catherine Starke. On 2 January 1891, August and Catherine (with her mark) signed a promissory note to John G. Reinhold for $4,000, plus 10 percent interest per annum. The note was payable within 3 years on 2 January 1894. As security for the note, the Starkes mortgaged Lots 4 and 5 to Reinhold on the same day. It is not clear whether the mortgage applied only to the "real property" of the lots, or whether it included the real property plus the hotel and other improvements. While not specifically mentioned in the text of the mortgage (nor in ensuing documents), in a codicil the Starkes agreed "to keep the buildings on said premises insured for at least the sum of four thousand dollars loss . . ." (Superior Court 1896).

Figure 6-3 **Starke's Hotel circa 1880 (courtesy, San Bernardino Historical and Pioneer Society, San Bernardino, California).**

The new year of 1891 foretold of the serious financial (and legal) problems that were in store for August and Catherine Starke. On 2 January 1891, August and Catherine (with her mark) signed a promissory note to John G. Reinhold for $4,000, plus 10 percent interest per annum. The note was payable within 3 years on 2 January 1894. As security for the note, the Starkes mortgaged Lots 4 and 5 to Reinhold on the same day. It is not clear whether the mortgage applied only to the "real property" of the lots, or whether it included the real property plus the hotel and other improvements. While not specifically mentioned in the text of the mortgage (nor in ensuing documents), in a codicil the Starkes agreed "to keep the buildings on said premises insured for at least the sum of four thousand dollars loss . . ." (Superior Court 1896).

John Reinhold died in November 1892 before the promissory note came due. Henry Pappenhausen was named administrator of Reinhold's estate 3 months later and acted as such until 16 February 1895, at which time he was removed from the position by the court. John Taylor was appointed by the court as Pappenhausen's successor. A year later, in his capacity as administrator, Taylor brought suit in San Bernardino Superior Court against August and Catherine Starke; the San Bernardino, Arrowhead, and Waterman Railroad Company; and Henry Broker, an officer of the San Bernardino, Arrowhead, and Waterman Railroad Company. At the time the suit was brought, San Bernardino, Arrowhead, and Waterman Railroad Company was apparently claiming an interest in Lot 4 and/or Lot 5, which Taylor claimed was "subsequent to and subject to the lien of said mortgage of plaintiff. . . ." The railroad's specific interest was not detailed in court documents, but may have had to do with its rights-of-way across the lots. Taylor also claimed ownership of the lots, alleging that the Starkes had not paid the note, or any part of it, in either principal or interest. He asked the court for a judgment against the Starkes in the amount of $4,000, plus interest, plus $500 in attorneys' fees (Superior Court 1896).

Judge John Campbell ruled in favor of Taylor on 28 March 1896, fixing the amount owed to Taylor by the Starkes at $5,164.43. Campbell assessed Taylor's attorneys' fees at $250 as a reasonable amount. The judge also determined that the railroad was the owner of the right-of-way at the time of the signing of the promissory and that Taylor could take nothing from the San Bernardino, Arrowhead, and Waterman Railroad Company. To satisfy the Starkes' debt, Campbell ordered "the said mortgaged premises or so much thereof as may be necessary, be sold . . . and the proceeds of such sale applied to the payment of the expenses of sale, the plaintiff's costs herein and the sums due plaintiff on the said promissory note, and for attorney's fees herein." The judge also ordered the Starkes to pay Taylor $20.50 for his costs (Superior Court 1896).

Judge Campbell appointed H. L. Martin as court commissioner, arming him with an order of execution to sell Lots 4 and 5 at public auction. Martin returned the execution on 12 June 1896 stating he had not been able to satisfy the order owing to no one coming forward to place a bid. By February 1897, Taylor, still saddled with the property and anxious to clear the Reinhold estate, petitioned Judge Campbell to once again order a sale of the property. This time, Campbell appointed Benjamin F. Bledsoe as court commissioner. Bledsoe scheduled the sale for 9 March 1897 at 10:00 a.m., to take place at the east door of the county courthouse. At the appointed hour, Bledsoe sold Lots 4 and 5 to the San Bernardino National Bank for $1,250 in gold coin (Superior Court 1896).

At this point the story of the 1897 foreclosure and sale takes a rather confusing turn. Four days after the sale, the *Redlands Citrograph (Citrograph)* reported a decidedly different version than the one reflected in the court documents:

> Starke's Hotel, one of the old landmarks of the old town of San Bernardino, has been sold at sheriff's sale, only bringing $1250, together with a five acre block of land. Wong Nim, a wealthy Chinese merchant, purchased the place and it will be turned into a Chinese hotel. To such base uses do the old landmarks come! To those who sat at the overflowing board of the old Pines Hotel, or who enjoyed the hospitality of the place after it passed into the hands of the elder Starke, this will seem like [profanation], but times change and we must keep up with the procession [*Citrograph* 1897a:8].

Neither the *Citrograph* story nor Wong Nim's involvement in the matter could be verified in any of the existing records of the San Bernardino County Archives, including the court case file, recorder's deed books, tax assessor's records, or others. The story might be dismissed as erroneous and inflammatory reportage (the sale included only 2 acres, not 5) given the documentary record but for a subsequent *Citrograph* article that appeared 6 months later.

> Starke's hotel in San Bernardino, which was recently sold under foreclosure and bought in by Chinamen for $1250, has been redeemed by A. H. Starke for $1325 [*Citrograph* 1897b:7].

It seems unlikely that the *Citrograph* would intentionally report a misstatement about Chinese ownership of an "old landmark" more than once and separated by half a year. One wrong story might be forgotten with a little time. Why bring it up again 6 months later unless there was some element of truth to it? The question remains unresolved.

At this point the story becomes even more labyrinthine. Throughout the Taylor vs. Starkes et al. proceedings, the Starkes had apparently been living in and operating the hotel. Tax assessment values on the property, for which the Starkes remained liable, declined precipitously between 1895, when the value was assessed at $5,500 (land and improvements), and 1897, when it was assessed at $2,200 (although this may have been only an effect of the Panic of 1893, one of the worst economic depressions in American history) (San Bernardino County 1896; Schlesinger 1986:375, 376). In the tax year of 1895, already owing more than $4,000 to John Reinhold's estate, the Starkes did not pay the $145.75 assessed by the county and the state. County Tax Assessor Truman Reeves placed their names (along with others) on the Delinquent Tax List in the *Colton News* throughout the month of June 1896, along with the warning that the property would be sold to the State of California on 3 July 1896 if the taxes and penalties were not paid. When the Starkes failed to pay, the lots, hotel, and other improvements went to the state for $164.93 in unpaid taxes and penalties (San Bernardino County 1896:729). How the sale was able to occur in the midst of Judge Campbell's first (June 1896) and second (March 1897) orders of execution following the aftermath of Taylor vs. Starkes et al. is not understood. Nor, as it turns out, is Benjamin Bledsoe's sale on 9 March 1897 to the San Bernardino National Bank, which took place after the hotel and lots were sold to the state for taxes by Truman Reeves.

According to court documents in Starkes vs. Bradford and Twogood, the 9 March sale to the San Bernardino National Bank carried with it the Starkes' right to redeem the property from the bank. Apparently without the cash to effect such a redemption on their own, August and Catherine

Starke approached Louie M. Twogood to effect the redemption in their stead. The three entered into an agreement on 9 September 1897, which gave the Starkes a 2-year option (to expire on 9 September 1899) to purchase the property from Twogood. The cost to the Starkes would include the price of redemption plus interest, the costs of taxes, and any improvements Twogood might undertake. If the Starkes did not exercise their option within the 2 years stated, the option would be voided and Twogood would retain the property and the price of the option—one dollar. The final paragraph of the agreement was inserted, apparently at the insistence of one or both of the Starkes:

> Party of the first part [Twogood] is to retain possession of said premises until paid for by said parties of the second part [the Starkes] and time is of the essence of this contract. And the party of the first part in consideration of the premises hereby agrees not to let any of said premises to chinese [sic] [SBCR 1897a:210–212].

The last line may yet be another hint of the possibility of Wong Nim's earlier involvement as reported in March 1897 (*Citrograph* 1897a:8; SBCR 1897a:210–212; Superior Court 1899).

Twogood purchased the hotel and grounds from the San Bernardino National Bank on 10 September 1897 for $1,325 (Superior Court 1899). Curiously, this was the same amount given 8 days later by the *Citrograph* (1897b:7) as the price paid by Starke to redeem the hotel from "Chinamen."

A little over two weeks after redeeming the property, Louie Twogood mortgaged it to Daniel M. Bradford for $1,800 "which represented said sum of $1,325.50 redemption money paid to the San Bernardino National Bank, together with the further sums to pay taxes, insurance, and expenses for conveyance. . . ." This was apparently done with the knowledge and consent of the Starkes and was done "in performance of the original purpose of the parties, as the same was agreed at the time said redemption . . . was made" (SBCR 1897b:159; Superior Court 1899).

After mortgaging the property to Bradford, Twogood's connection with the hotel appears to have lapsed. Instead, Bradford moved himself and his family, including his daughter Emeline and son-in-law Charles H. Davis, into the hotel. By late 1897 he had changed the hotel's name to "Bradford House," or more simply, "The Bradford." The 1898 city directory gives the address of Bradford House as 293 Third Street (Bushnell 1898:110, 111). The Starkes' whereabouts at this time are not known.

BRADFORD HOUSE

Daniel M. Bradford had come to California about 1881 from Grinnell, Iowa (Roe 1932:162). He brought with him his wife Lucia and daughter Emeline, arriving first in Riverside, then settling in San Bernardino soon after. In 1882, daughter Emeline organized a Chinese Mission School in the basement of the First Congregational Church of San Bernardino. It was probably through her activities with the church, of which her father was a deacon, that she met and married Charles H. Davis about 1885. Davis was at one time a reverend of the church (Crafts 1906:90; U.S. Census Bureau 1900:n.p.).

Soon after moving into the hotel, Bradford, with Charles and Emeline Davis acting as the hotel's proprietors (Figure 6-4), began making repairs and improvements to the hotel and grounds

(Bushnell 1898:111). An itemized list produced as evidence in Starkes vs. Bradford and Twogood detailed the new hostelers' activities between October 1897 and September 1899:

October 1897	Repaired steps, doors, locks, transoms, windows, tin roof, annex roof; wallpapered eight rooms; cleaned and topped chimney, etc.
November 1897	Repaired chicken coop; painted tin roof; moved out buildings; whitewashed fences and out buildings; built fence along railroad; fenced "lot below R.R.;" graded and cleaned grounds.
January 1898	Built an arch in the laundry; built a correll [sic] fence; set fruit trees; repaired brick [in] kitchen; lengthened main sewer [line].
March 1898	Built lattice and wire fence at front of hotel; repaired[?] carriage shed.
May 1898	Repaired closets, wash bowls, and sewers; installed two screen doors and thresholds; and painted.
July 1898	Changed office.
September 1898	Changed the "song room" into two rooms.
October 1898	Built two chimneys; painted tin roof; shingled annex roof, etc.
November 1898	Installed or repaired an electric bell; built and hung gates; built stable roof.
January 1899	Built manger and stalls.
April 1899	Installed or repaired screen windows and doors.
August 1899	Changed discharge pipe; added a spring lock to room 24; noted "city water put in."
September 1899	Planted a lawn. [Superior Court 1899].

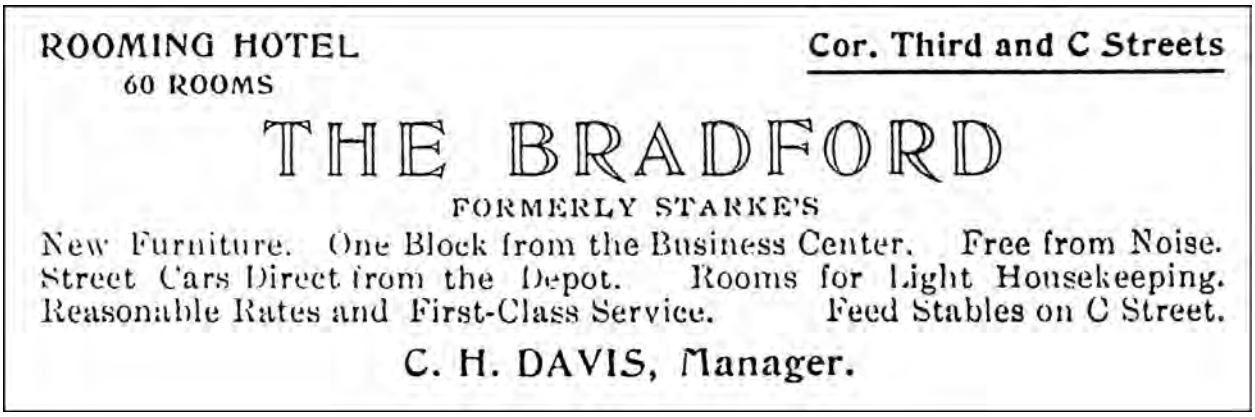


Figure 6-4 A 1901 advertisement for the Bradford House (Tigner 1901:n.p.).

For several months prior to the expiration of their option, the Starkes claimed to have sought an accounting from Bradford of his expenses for taxes, improvements, and other costs. Bradford refused (Superior Court 1899). Even without the accounting, the Starkes attempted to pay Bradford the sum of $2,500 on 9 September 1899, an amount they believed should cover Louie Twogood's payment to the San Bernardino National Bank for redemption, plus the expenses of taxes, improvements, and interest. Bradford claimed "that he had paid taxes and made improvements upon the premises and paid for the same the sum of $777.15. . . ." The Starkes disagreed, stating that "he had neither made nor paid for improvements and taxes upon the premises any greater sum than $150.00." They further claimed that any expenses beyond the $150.00 had not been paid by Bradford, but "constituted ordinary repairs made by the labor of the occupant of said property" (probably meaning Charles Davis). The Starkes finally got an accounting on 11 September 1899 and attempted to pay Bradford $2,600, but he refused and instead demanded $2,927.86, adding that he would not convey the property back to the Starkes until they had paid that sum. The Starkes then took the matter to the courts, agreeing to abide by any figure that the court deemed fair (Superior Court 1899).

The trial before Judge John Campbell lasted until 3 February 1900. Judge Campbell ordered Daniel Bradford to provide the Starkes with a deed of conveyance for the hotel and lots once the Starkes paid Louie Twogood "whatever sum of money may remain unpaid to her upon her mortgage upon said property executed by D. M. Bradford, not exceeding the said sum of [$2,794.50] and that the overplus . . . remaining after the payment of the said mortgage shall be paid to the said defendant D. M. Bradford; such payment to be made by plaintiffs as aforesaid, within twenty days from and after the entry of this decree." The judge further ordered that if Bradford failed or refused to provide the deed of conveyance upon payment of the $2,794.50, then L. A. Pfeiffer, as court-appointed commissioner, was empowered to execute a deed to the Starkes that would have the "same force and effect" as if signed by Bradford. Finally, the judge decreed that if the Starkes failed to make the payment within the 20 days allotted, they and "their heirs, executors and assigns [would] be forever barred and foreclosed of and from all equity of redemption and claim of, in and to said described premises, and every part and parcel thereof" (Superior Court 1899). Judge Campbell had apparently had enough of both Bradford and the Starkes.

Four days before the trial ended, the Starkes did something odd and seemingly out of character, considering their insistence on having the anti-Chinese clause placed in their agreement with Louie Twogood back in September 1897. On 31 January 1899 August and Catherine Starke, for the sum of one dollar, promised to deliver a deed to the hotel and lots to Wong See, a Chinese resident of Riverside. They would deliver the deed:

> at such time as the said Wong See, his agent or attorney shall demand of us such deed, and tender and pay to us such sums of money as by decree of the Superior Court of the County of San Bernardino, State of California, in that certain case now pending in said Court entitled A. Starke and Catherine Starke vs. D. M. Bradford and Louie M. Twogood, shall be required to be by us paid to the said D. M. Bradford or Louie M. Twogood, or either of them, said sum to be so applied [SBCR 1900a:90–92].

What the Starkes had in mind when making such an agreement cannot be known. In making the agreement with Wong See, they seem to have been confident that the court would find in their

favor and that they would be able to redeem their property. To them it was more a question of how much the court would require them to pay. And yet, under the agreement with Wong See, they could have lost the hotel again any time Wong See desired. There may have been a second agreement in place between Wong See and the Starkes, but such was not discovered during research. The Starkes had $2,600 in September 1899, which they offered to Bradford for redemption; perhaps they offered Wong See some or all of that amount, and the document merely represented a loan of sorts. Given the Starkes' financial woes, perhaps their credit was so damaged as to make it impossible for them to obtain a loan through the usual methods. A letter from Ray Starke, grandson of August and Catherine, to local historian Arda Haenszel in 1985 suggests that August also may have lost a lot of money about this time in a real estate deal gone bad (California Room, Norman Feldheym Central Public Library, Vertical File, "Starke Hotel").

Whatever the reasons for the agreement between the Starkes and Wong See, it apparently was never completed. It may have been voided when August Starke, age 76, died on 18 May 1900 (Pioneer Cemetery n.d.). And the absence of any records reconveying the hotel and lots to the Starkes suggests that they were unable to meet the requirements of the court to redeem them. Catherine Starke was 62 in 1900. She had been married to August for 39 years and had raised five children with him. In 1900, when the census taker questioned her about her education, she answered "yes" to queries about her ability to read and write, perhaps too embarrassed to tell the truth; only months before, she still had to make "her mark" with an "X" on the Wong See document. At the time of the census she was living alone in a rented apartment in the Bradford House (U.S. Census Bureau 1900:n.p.). Catherine Starke died in San Bernardino on 1 June 1903 (Pioneer Cemetery n.d.). The Bradford/Davis family continued on uninterrupted in their management and ownership of the hotel.

Daniel M. Bradford died in San Bernardino on 9 October 1903, a few months after Catherine Starke. He left his entire estate, including the hotel, to his daughter Emeline M. Davis; Charles Davis was named as executor. Apart from Lots 4 and 5, Bradford's estate included several other lots in the city of San Bernardino. Probate documents itemized Bradford's personal property, which appears to be an inventory of the hotel's stock:

8 Carpets, Tapestry	3 Dozen Curtains	50 Common Chairs
6 Mattings	18 Slop Jars	7 Heating Stoves
25 Matrasses [sic] and Springs	18 Washbowls and Pitchers	2 Gasoline Stoves
25 Cemfortables [sic]	1 Dozen Frying Pans	27 Lamps
40 Pillows	1/2 Dozen Stew Pans	100 Pillow Slips
20 Rockers	10 Carpets, Ing[illegible]	18 Stands
2 Settees	25 Bedsteads	11 Tables
8 Gas Stoves	6 Cots	6 Dozen Plates
1 Oil Heater	25 Blankets	2 Dozen Cups and Saucers
8 Dozen Towels	100 Sheets	1 Dozen Vegetable Dishes

[Superior Court 1903:76–78, 1906a:94–95].

Bradford House continued to function as a hotel until around 1911. City directories generally listed Charles Davis as the proprietor until 1906, the year of his death at age 60. His will and subsequent probate named wife Emeline as executrix. His real property consisted of a half interest in the Lot 4 and Lot 5 properties as well as several other lots in San Bernardino and a

single lot in Laguna Beach. Personal property was listed as a piano and cash valued at $6,576.51 (Superior Court 1906a:207–208, 1906b:151–152).

After the deaths of her father and husband, Emeline Davis operated the hotel on her own. Perhaps because of the changing tastes of the traveling public, or simply because of its age, the Bradford House seems to have declined. By 1910 the hotel was no longer to be found in city directories under the classified heading of "Hotels," but was instead relegated to the "Furnished Rooms" heading, suggesting that it had been reduced to a rooming house (SBDC 1910:62–63, 283). And, although she still owned the property, Emeline Davis' direct connection with the operations of the hotel/rooming house ended by 1913. Still listed in the city directory that year under "Furnished Rooms," the hotel was managed by a Frances Martinez (SBDC 1913:316). Martinez ran the rooming house until 1923 or 1924, when Emeline Davis sold the property to Ralph Swing (LADC 1924:513; SBCA 1918–1923:33).

Swing, who would soon be elected to the California Senate and in 1925 would co-author legislation creating southern California's Metropolitan Water District (Starr 1990:161), demolished what had once been San Bernardino's finest hotel soon after buying the property. County assessments for 1924 showed that while the Lot 5 parcel was valued at $2,000, it was now completely devoid of any improvements (SBCA 1924–1929:33).

The Backyard of Starke's Hotel

For 70 years—from the 1850s to the 1920s—Lot 5 of Block 15 was the site of hotels and lodging houses, with corresponding renovations through the years. A sewer line was installed down Arrowhead Avenue in 1889, and the hotel was certainly hooked up, although privies continued to serve the hotel staff. The outhouses were finally abandoned during a cleanup of the hotel yards in 1897, at the same time Pit 1022 was dug and filled (Figure 6-5).

Behind Starke's Hotel were facilities vital to running the establishment. In the laundry building (the north-south portion of the detached L-shaped building) with its boiling kettle, bed linens, table linens, and guests' clothing were cleaned. Drying lines likely were strung out to the south or east, away from the dusty road. The eastern portion of this small building was, at least until 1894, used as a shed and hog house. Adjacent to the east was the barn and livery, an important part of any nineteenth-century hostelry. Cordwood for the hotel stoves was delivered and stacked in sheds along Arrowhead Avenue, near the kitchen.

At the northern side of the laundry building between the hotel kitchen and barn, two small outbuildings connected by a shed awning are depicted on the 1885 Sanborn map (they are shown as detached buildings on subsequent Sanborn maps). The southernmost of these is Privy 1023, and the northern structure likely is the bathhouse. In these years, outhouses were toilets; washing, shaving, and bathing activities took place in a separate room. These backyard facilities were for staff, as hotel guests had interior bathing and toilet rooms—likely the small rooms visible on the Sanborn maps along the northern end of the southern wooden wing where it meets the northern brick structure. Between 1891 and 1894, Privy 1023 was abandoned, filled in with refuse, and replaced by Privy 1009 adjacent to the east. The bathhouse remained.

Detailed lists of improvements (Superior Court 1899) that occurred between 1897 and 1899 suggest that the backyard outbuildings were cleaned up: Privy 1009 was filled in and demolished

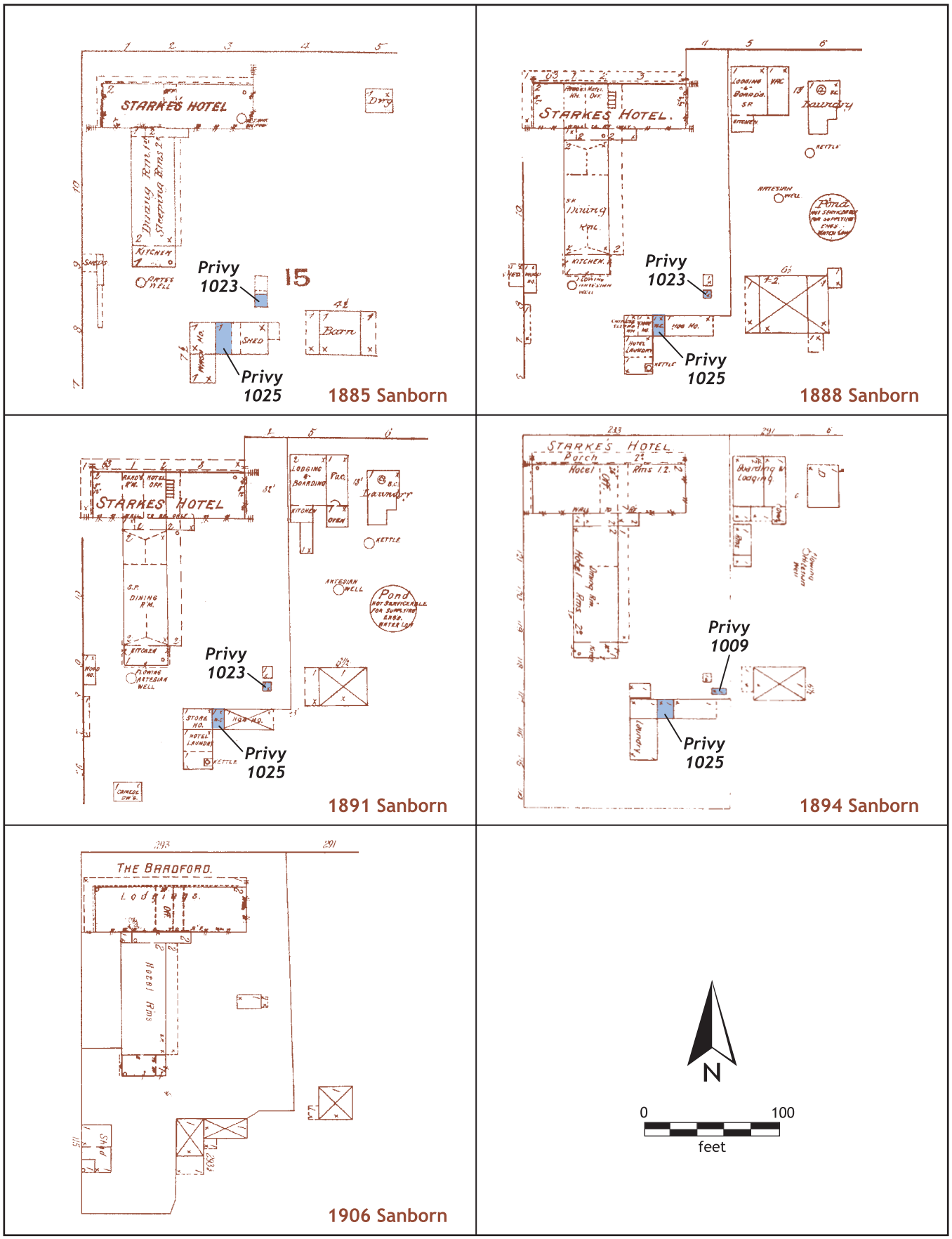


Figure 6-5 **Composite of 1885, 1888, 1891, 1894, and 1906 Sanborn maps showing Starke's Hotel/Bradford House with archaeological features identified. (Pit 1022 is not depicted on these maps).**

along with the adjacent bathhouse, and Privy 1025 was closed and abandoned. The "modern" Bradford Hotel would rely completely on the municipal sewer system. The 1897 cleanup also involved excavation of Pit 1022, which was filled with hotel garbage and rubbish.

Starke's Hotel Rubbish: Artifact Stories

There are two types of deposits in privies: primary and secondary. Primary deposits are the feces and urine and occasional objects deposited into a privy during its active life. As privies need to be mucked out or replaced once they are full, care is typically taken not to use them for general rubbish disposal. Once a privy is abandoned, however, the upper unfilled portions often are used as a handy repository for household trash and garbage. Advantage was taken of a handy hole in the backyard, especially in urban areas where refuse collection may have been costly. The information gleaned from primary and secondary deposits is, therefore, somewhat different. The secondary deposits of Privy 1023 were thrown away between 1891 and 1894; Privy 1009 and Pit 1022 were filled in 1897 as part of the cleanup of the property by Bradford. Privy 1025 is somewhat unusual: it was filled with layers of primary deposits that were interspersed with substantial numbers of artifacts.

Comparison of Artifact Table 3b in Chapter 5 for each of these features shows differences in the number of artifacts in each functional category. The high percentages of clothing and footwear items in Privies 1023 and 1025 are the result of large numbers of shell and porcelain buttons (Table 6-2). Fifteen buttons also were recovered from Privy 1009; Pit 1022 had no buttons at all. The high percentage of firearms in Privy 1023 comes from 59 lead bullets and metal cartridge cases, an interesting and unexplained collection. Once the abundance of buttons and bullets was noted, they were removed from the tables so that other artifact patterns are visible (Table 6-3).

Table 6-2
Artifacts Recovered from Hotel Features[a]

	Privy 1009	Pit 1022	Privy 1023	Privy 1025
Buttons (MNI)[b]	15	0	57	130
Firearms (MNI)[b]	0	0	59	1

a - These artifacts were removed from statistical comparison in Table 6-3.
b - MNI = minimum number of items.

A closer look at the food-related vessels shows slightly more serving dishes represented in Pit 1022 and more tablewares in Privy 1009 (Table 6-4). Overall, 71 percent and 90 percent of the respective collections in these two features are composed of serving dishes and tablewares. The comparable numbers in Privies 1023 and 1025 are 52 percent and 58 percent, reflecting the generally greater diversity of these collections. The ceramic types in the three features are nearly identical: virtually all the vessels are of sturdy, inexpensive, improved whitewares (Table 6-5). The commercial, utilitarian nature of these ceramics is reflected in their lack of decorations (Table 6-6). Again, Privy 1009 and Pit 1022 are most alike with 95 percent undecorated ceramics, while in Privies 1023 and 1025 only 67 percent of the ceramics are undecorated. The category of social drugs includes such items related to alcohol, tobacco, and opium. Representation here was similar among the three hotel features (Table 6-7), although Privy 1025 is distinguished with the highest overall percentage (see Table 6-3).

Table 6-3
Summary of Selected Artifacts by Category in Hotel Deposits

	Percent of Sample			
	Secondary Refuse			Primary Deposit
Category	Privy 1009 MNI = 218	Pit 1022 MNI = 60	Privy 1023 MNI = 192	Privy 1025 MNI = 276
Accouterments	0.0	0.0	3.0	4.0
Clothing Maintenance	0.0	0.0	3.0	<0.5
Clothing/Footwear (excluding buttons)	4.0	2.0	18.0	13.0
Collecting	0.0	0.0	0.0	<0.5
Commerce	<0.5	0.0	0.0	1.0
Communication	<0.5	2.0	2.0	2.0
Farming/Gardening	0.0	0.0	<0.5	0.0
Food Packing/Storage	<0.5	3.0	0.0	1.0
Food Preparation/Consumption	61.0	53.0	12.0	14.5
Games	0.0	0.0	2.0	3.0
Grooming	1.0	2.0	3.0	6.0
Health/Medicine	5.0	2.0	10.0	24.0
Household/Furnishing	2.0	5.0	3.0	1.0
Household/Maintenance	0.0	0.0	0.0	<0.5
Miscellaneous Bead	0.0	0.0	0.0	1.0
Miscellaneous Bottle, Jar, Can	12.0	10.0	8.0	2.5
Miscellaneous Closure	<0.5	5.0	1.0	2.5
Miscellaneous Metal Item	0.0	3.0	15.0	1.0
Social Drugs	11.0	13.0	15.0	19.0
Tools/Hardware	0.0	0.0	5.0	2.5
Toys	0.0	0.0	<0.5	1.0
Undifferentiated (selective)	0.0	0.0	0.0	1.0
Total[a]	***98.0***	***100.0***	***100.0***	***101.0***

a - Totals greater or less than 100.0 percent are due to rounding.

Table 6-4
Food Preparation and Consumption Vessels by Function in the Hotel Deposits

	Percent of Sample			
Category	Privy 1009 MNI = 123	Pit 1022 MNI = 32	Privy 1023 MNI = 23	Privy 1025 MNI = 40
Container	0	6	22	10
Cups and Mugs	0	0	0	3
Drinking Vessels (tumblers, stemware, etc.)	4	16	17	15
Kitchen (pot, baking pan, mixing bowl, etc.)	0	3	4	5
Serving (platter, covered dishes, etc.)	11	37	13	13
Tableware (plates, bowls, saucers, etc.)	40	25	26	30
Flatware (fork, knife, spoon, etc.)	2	3	4	10
Tableware/Serving	40	9	13	15
Total[a]	***100***	***99***	***99***	***101***

a - Totals greater or less than 100.0 percent are due to rounding.

Table 6-5
Ceramic Food Preparation and Consumption Vessels by Material in the Hotel Deposits

	Percent of Sample			
Category	**Privy 1009 MNI = 116**	**Pit 1022 MNI = 23**	**Privy 1023 MNI = 12**	**Privy 1025 MNI = 24**
Chinese Brown Glaze Stoneware	0	0	0	0
Chinese Porcelain	0	0	0	0
Porcelain	<1	4	0	8
Semi-Porcelain	<1	0	0	4
White Improved Earthenware	98	96	100	88
Total[a]	***98***	***100***	***100***	***100***

a - Totals less than 100.0 percent are due to rounding.

Table 6-6
Ceramic Food Preparation and Consumption Vessels by Decoration in the Hotel Deposits

	Percent of Sample			
Category	**Privy 1009 MNI = 116**	**Pit 1022 MNI = 22**	**Privy 1023 MNI = 12**	**Privy 1025 MNI = 24**
Undecorated	95	95	67	67
Decorated	5	5	33	33
Total	***100***	***100***	***100***	***100***

Table 6-7
Social Drugs in the Hotel Deposits

	Percent of Sample			
Category	**Privy 1009 MNI = 21**	**Pit 1022 MNI = 8**	**Privy 1023 MNI = 29**	**Privy 1025 MNI = 47**
Alcohol Related	86	100	93	77
Smoking and Tobacco	14	0	7	23
Total[a]	***98***	***100***	***100***	***100***

a - Totals less than 100.0 percent are due to rounding.

Studies of the pollen and seed remains from the features provided additional information on life at the hotel, particularly pointing up differences between food consumed at the hotel and in Chinatown (see detailed discussion below under "Chinatown Meals"). Diets at the hotel included a large quantity of fruit, especially blackberries. Fig, grape, and tomato are well represented, and plants in the legume family, such as peas and beans, may have been common fare. Corn, absent in the Chinatown deposits, was documented only in the hotel privy and only

in the pollen results. Although corn was probably locally grown and eaten at the hotel, the pollen occurrence was interpreted to represent volunteer sproutings of animal feed from the nearby barn and stable. Compared to Chinatown, the hotel diet was characterized by a smaller variety of plants, signaling less use of vegetables by those associated with the hotel than by the Chinese. The seed remains from Privy 1025 are also similar to the privy samples from CA-SBR-8695H, the Santa Fe Yards site (Lawlor 1997b): while the density of seeds is extremely high, the diversity is very low. Virtually all the remains are small fruit seeds, primarily blackberry, but also grape, fig, tomato, and elderberry. Both samples represent well-sealed privy deposits, with little addition of general plant refuse and accidental plant inclusion.

Mystery of Privy 1025

When Privy 1025 was excavated, its contents were identified as being different from the other two outhouses. The discussion of artifacts above highlighted similarities between Privy 1025 and Privy 1023. The major difference between these two features, however, is how they were filled. Privy 1023, like Privy 1009, had been filled with refuse in one short-term event: the bottom layer of primary deposits (human waste) were shallow and clearly overlain with the secondary refuse. Privy 1025, however, was filled with layers of primary deposits mixed with refuse that had built up over a matter of years, not weeks or months. Human waste was layered with artifacts and lenses of lime, the latter likely added to reduce smells by accelerating decomposition.

The puzzle was to determine who was using the privy and, therefore, who deposited the artifacts. Chinese workers ran the hotel laundry out of the L-shaped outbuilding from its construction in the 1870s. Privy 1025 was located within the L-shaped building and was certainly used by the resident Chinese, who, in those years of discrimination, likely would not have been allowed to use the same washroom and toilet as the rest of the staff. In 1891 the L-shaped building still contained the hotel laundry and hog house, although the sleeping rooms were converted into a storeroom and new quarters for the Chinese workers were built close by to the southwest. By 1894 the Chinese quarters were gone, and the workers likely were residing in adjacent Chinatown. The laundry is the only room in the building with a specified use, and the hog house appears to have been converted for human use. In 1906, the entire L-shaped building was being used for animals, and for the first time the privy is no longer distinguished as a separate structure.

Although Chinese workers certainly used the privy in its early years, virtually no Chinese artifacts were among the 380 items recovered from the feature. As overseas Chinese typically maintained a substantial number of traditional objects in their lives, this absence suggests that they were not associated with later episodes of fill (compare with subsequent articles on Chinatown in this chapter). The privy was likely cleaned out after the Chinese left in preparation for subsequent use.

By 1894 the Chinese were no longer living on hotel property. While the function of the northern rooms of the L-shaped building was not identified by the Sanborn recorders, the southern wing was still a laundry. Since these rooms are not coded for animal use or storage purposes, possibly they were converted to residences. It is unlikely that buildings that once served as laundries and hog pens subsequently would be used by the Starkes or their guests, but perhaps the rooms were

occupied by hotel staff. It is also possible that the buildings were used for storage or other nonresidence functions and that Privy 1025 continued to be used—in addition to Privy 1009—by the employees. By 1906 the L-shaped building was entirely devoted to animals and Privy 1025 apparently was abandoned.

The non-Chinese occupation or use of the laundry building between 1894 and 1897 is corroborated by the archaeological findings. The most recent artifact date from the Privy 1025 collection is 1895, indicating that the facility was still in use in that year. Examination of the tables of hotel deposits discussed above provides some parallels between Privy 1025 and Privy 1023 (i.e., low quantities of food preparation and consumption items and a wider variety of artifact types). Although ceramic MNI counts were low and, therefore, inferences are tentative, Privy 1025 was distinguished by having proportionally more porcelain vessels (a more expensive tableware). Privy 1025 also had slightly more artifacts related to tobacco smoking than the other features (Table 6-7).

The most dramatic distinction of the Privy 1025 deposit is the large numbers of items related to health and medicine: 24 percent compared to 10 percent, 5 percent, and 2 percent for the other features. This includes fragments of 60 medicine bottles, 6 embossed from San Bernardino druggists. Most remarkable are remains of six bottles of "Injection" liquids used primarily to prevent and cure venereal disease. Five of the bottles are a Parisian INJECTION BROU, while

Privy Soil Stains

The soils surrounding Privies 1009 and 1023 exhibited a distinctive green stain. Similar stains were observed alongside privies at the Santa Fe Yards site in San Bernardino, and investigators noted that "at least six privies at this site were found to retain wooden liners" and that "six privies were found to have been constructed with a sand buffer for percolation. That this mechanism functioned as intended is indicated by the greenish-yellow stains observed throughout the sand and in the surrounding soils" (Swope et. al 1997:159–160). This aspect of privy construction also was documented in the Redlands Chinatown, where "outside the wooden liner was a layer of sand which facilitated drainage, making these constructions conspicuously recognizable in the archaeological record" (Padon and Swope 1997:102). At both of these sites, stains extended up to 8 inches from the privy wall (Karen Swope, personal communication 2003), and the authors conclude that the sand buffer was introduced to encourage this leaching.

Layers of sand outside the privy lining are extremely common and have been referred to as "builders trench fill" by Costello (1999:22), Praetzellis (2001:43, 275), and others. Once a new privy vault was excavated and the wood lining inserted, the voids around the exterior of the lining were filled with soil. Sand was the preferred fill as it was free of inclusions and would not hang up in small spaces, producing voids. It is not known if this construction practice also addressed aspects of waste management. At the District 8 Headquarters Demolition Project site, Privies 1009 and 1023 did not have wood linings or associated leach fields. The stains around Privies 1009 and 1023 were limited to 2 inches beyond the cut of the feature, appearing to be a direct result of privy contents contacting native sediments. Exactly how these stains formed (i.e., what chemical reactions occurred), how long the formation process took (thickness of stain may indicate the length of time the privy was in use), and the possible use of sediments as an aid to drainage, may be more fully investigated in future studies.

one is NICHOLS' / INFALIBLE / INJECTION. This latter bottle features a groove down the side for the syringe as these medications were applied as a douche. Although this medication is commonly found associated with brothels (see Costello 1999:193), venereal disease was not confined to prostitutes.

The association of the Privy 1025 artifacts with women was apparent. The only two perfume bottles found in any of the Starke's Hotel deposits are in this collection, as are the only fragments of porcelain dolls; however, a hairpin and an ivory fan fragment were recovered from Privy 1023. Privy 1025 also had the largest number of items related to grooming. Layering primary deposits with lime were efforts aimed at household cleanliness and sanitation, activities which by the nineteenth century were typically associated with the sphere of women (Wall 1994:1–9). Using a privy for rubbish disposal at the same time it was an operating facility was unusual and suggests that refuse might have been thrown into the privy to hide it; the injection brous and other medications, in particular, might have been disposed in secret. Using a privy for rubbish disposal also suggests a short-term view of the facility such as by an employee or itinerant.

Of the four hotel artifact features, Privy 1009 and Pit 1022 were most alike: filled during the same 1897 cleanup event with similar items. Privies 1023 and 1025 were likely filled more gradually, but at virtually the same time period. Privy 1023 was used as a privy until about 1894, when the adjacent Privy 1009 was constructed, after which it became a receptacle for refuse by the hotel staff. Privy 1025, inside the building, continued to be used as a privy but also was used for personal refuse—it would have proved a secluded location in which to hide objects from the outside world.

HOTEL FOOD

Eating Meat, by Sherri M. Gust

There were four features associated with the Euro-American Starke's Hotel bordering Chinatown. Pit 1022 was excavated for the purpose of accumulating and then burying refuse. Privies 1009 and 1023 were filled with trash after they were abandoned for use as outhouses, and the refuse likely represents both hotel residents and employees. Trash, including food items, was thrown into Privy 1025 while it was an actively used outhouse—a rarity. All of the hotel features date to the 1890s.

Animal bones represented in the hotel features indicate a strong reliance on domestic meat sources and minimal use of wild game and fish (Table 6-8). Beef and chicken bones are numerically prominent. A tiny component of wild game is shown by the presence of jackrabbit, cottontail rabbit, and quail bones as well a single surf perch bone. Detailed tables of meat weight by economics for each feature can be found in Chapter 5 (Artifact Tables 2a-2).

The butchering style and marks present on the hotel mammal bones indicate standard commercial cuts. Steaks, roasts, and soup bones were all utilized. In Pit 1022, the nature of the beef bone is unusual. Fully adult cows and bulls are represented in the sample, rather than the typical subadult steers (Figure 6-6). The very large stewing/braising cuts of meat are in contrast to the other three hotel deposits.

The meat weights of the hotel deposits were calculated along with the percentages of high-, moderate, and low-priced cuts. Privy 1023 has less than 50 pounds of meat represented, and most of that consists of moderately priced cuts of beef. Privy 1009 has only 85 pounds of meat represented, mostly high-priced cuts. Almost 800 pounds of meat are represented in Pit 1022. The meats are primarily moderately to low priced. Privy 1025 has more than 300 pounds of meat represented. Distinctive half-inch-thick porterhouse steaks and lamb and pork chops were present. Most of the meats were from high-priced cuts.

Table 6-8
Animals Represented by NISP in Hotel Deposits

Common Name	Scientific Name	Privy 1009	Pit 1022	Privy 1023	Privy 1025
Mammals					
Major Meat Mammals					
Cow	*Bos Taurus*	82	243	24	253
Sheep	*Ovis aries*	52	81	0	108
Pig	*Sus scrofa*	38	52	19	55
Minor Meat Mammals					
Cottontail rabbit	*Sylvilagus* sp.	2	0	0	0
Jackrabbit	*Lepus californicus*	7	0	0	0
Incidental Mammals					
Cat	*Felis catus*	0	0	4	29
Rat	*Rattus rattus*	9	0	0	54
Ground squirrel	*Spermophilus beecheyi*	0	0	0	0
Pocket gopher	*Thomomys* sp.	0	0	1	16
Mole	*Scapanus latimanus*	1	0	0	0
Mammals Total		*191*	*376*	*48*	*515*
Birds					
Domestic Poultry					
Chicken	*Gallus gallus*	31	3	136	468
Turkey	*Meleagris gallopavo*	4	2	4	1
Pigeon	*Columba livia*	0	0	18	0
Duck	*Anas platyrhyncha*	4	0	5	10
Goose	*Anser anser*	0	0	1	0
Wild Game Birds					
Duck, type unknown	Anatidae	0	1	1	15
Quail	*Callipepla* sp.	0	0	6	17
Birds Total		*39*	*6*	*171*	*511*
Amphibians					
Red-spotted toad	*Bufo punctatus*	0	0	28	0
California Fish					
Bony fishes	Teleostei	0	1	0	0
Total		***230***	***383***	***247***	***1,026***

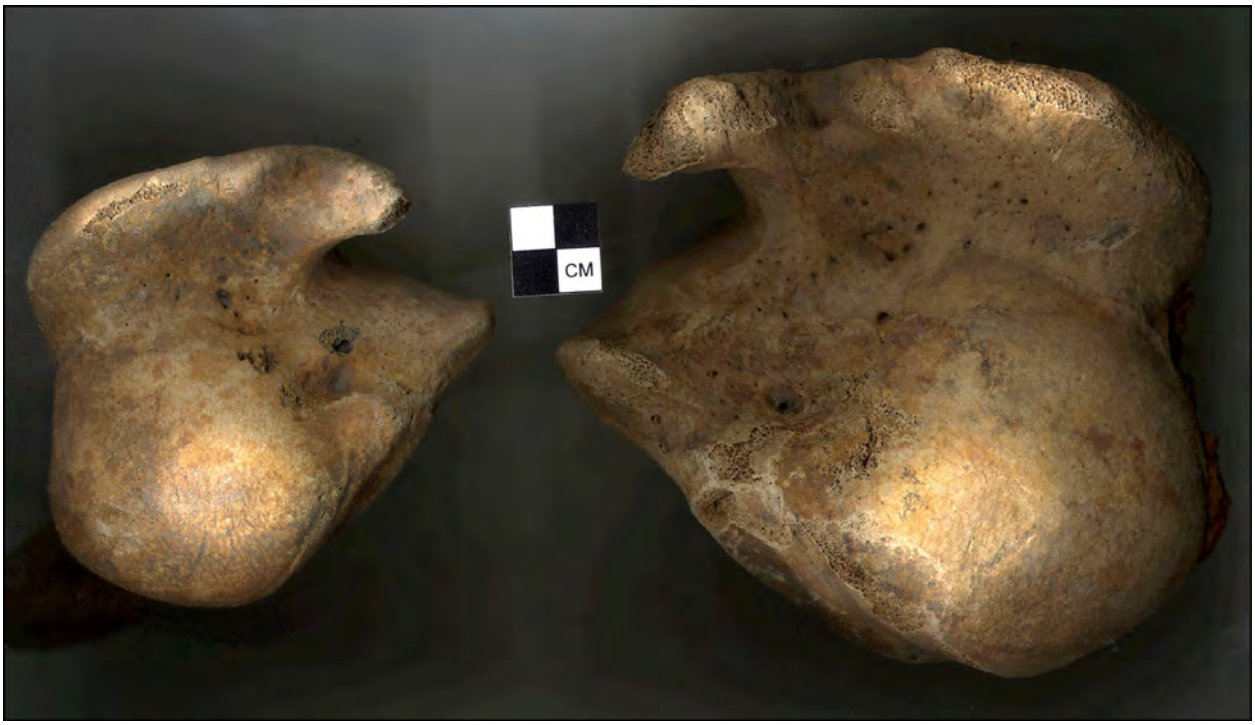
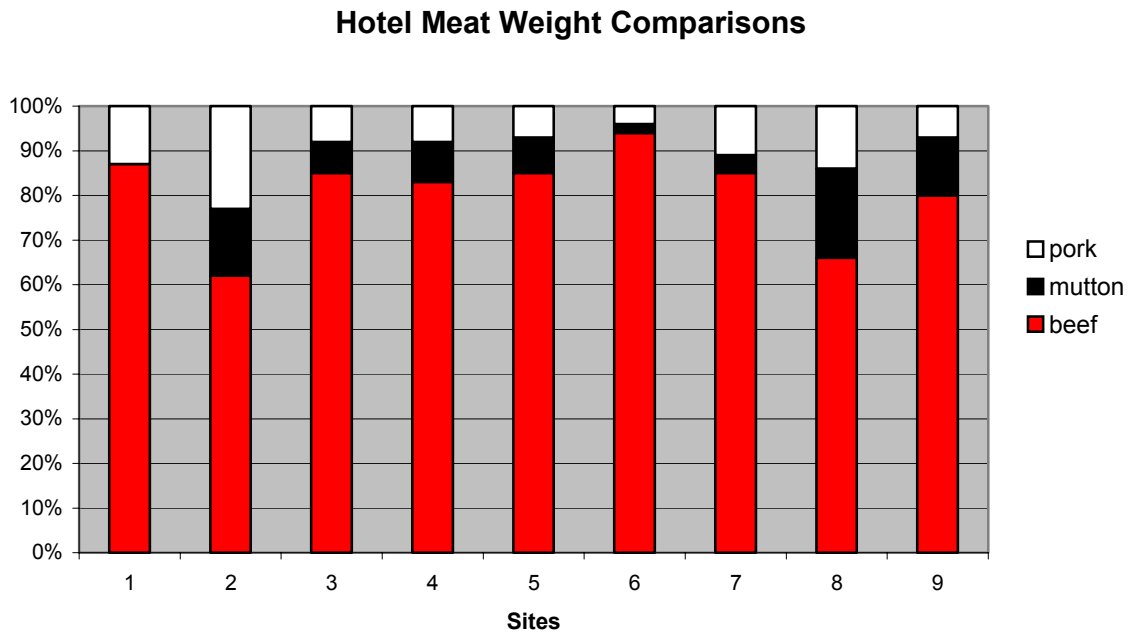


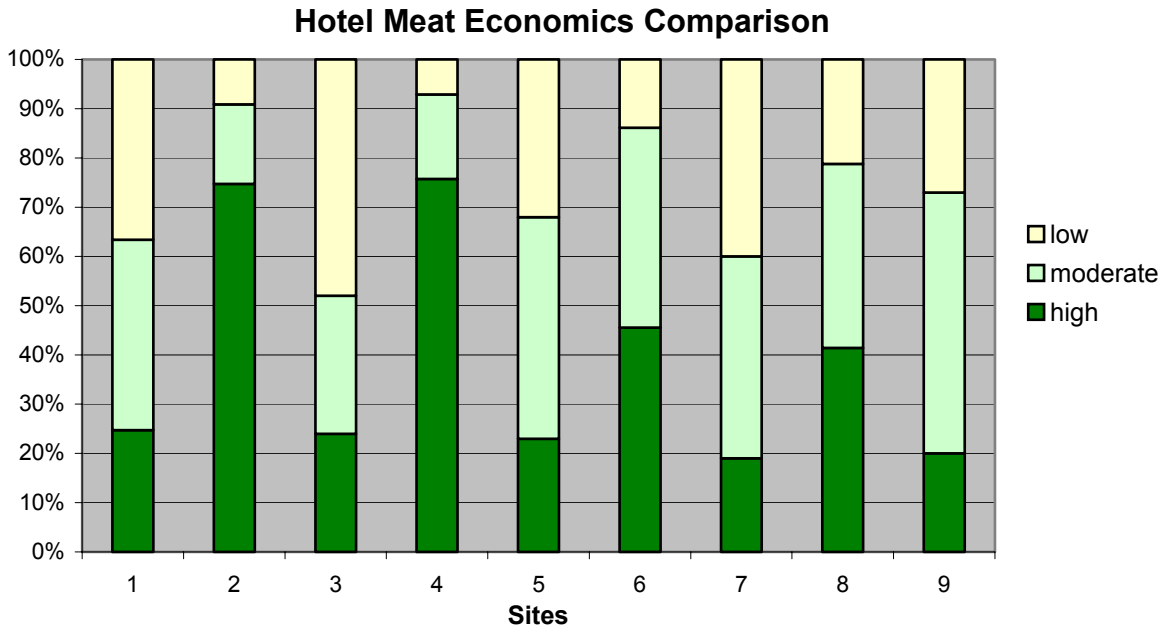
Figure 6-6 Shoulder joint of fully adult bull and cow showing size contrast and unusually mature state.

The meat weights from each of the hotel features were compared to meat weights for other Euro-American hotel, boardinghouse, and saloon deposits (Figure 6-7 [top]). The percentages of beef, pork, and mutton vary in each feature. Privy 1023 lacks mutton and has the highest percentage of beef. Pit 1022 and Privy 1025 have similar percentages. Privy 1009 has the lowest percentage of beef and the highest percentage of pork. Pit 1022 and Privies 1023 and 1025 are similar overall and compare well to the Patterson and Fallon Hotel deposits and the Hannon's Saloon deposit (see Appendix D). Privy 1009 is most similar to the Golden Eagle Hotel.

Using meat weight economics, the hotel features cluster into two groups of two (Figure 6-67[bottom]). Pit 1022 and Privy 1023 are unified by about 25 percent high-cost meats. These two deposits are most similar to deposits from the Patterson and Fallon hotels. Privies 1009 and 1025 each have about 75 percent high-cost meats. This is substantially higher than deposits from the Golden Eagle Hotel in Sacramento (the premier hotel of its day) or the Fallon Hotel in Columbia. The possibility that the economics of Privies 1009 and 1025 were overestimated due to the very small amount of low-priced cuts they contain was explored by calculating the ratio of high to moderately priced meats using pounds of meat represented (not percentages). Identical groupings and magnitudes were obtained.

Perhaps Privy 1009 represents meals for the hotel's owners. Privy 1025 contained copious amounts of expensive food refuse thrown into an active privy—possibly hidden to avoid discovery. Perhaps this deposit represents meals that a cook sneaked out of the kitchen, ate in private, and then dumped into the privy. We can only speculate.





KEY: 1 = Privy 1023, Starke's Hotel/Bradford House, San Bernardino (this report)
2 = Privy 1009, Starke's Hotel/Bradford House, San Bernardino (this report)
3 = Pit 1022, Starke's Hotel/Bradford House, San Bernardino (this report)
4 = Privy 1025, Starke's Hotel/Bradford House, San Bernardino (this report)
5 = Patterson Hotel (employees trash), Folsom (Gust n.d.)
6 = Fallon Hotel (hotel deposits), Columbia (Gust 1998)
7 = Fallon Hotel (boardinghouse deposits), Columbia (Gust 1998)
8 = Golden Eagle Hotel, Sacramento (Gust 1999; recalculated from original data [Gust 1980])
9 = Hannon's Saloon, Sacramento (Gust 1999)

Figure 6-7 Comparisons of meat weight (top) and meat economics (bottom) for four hotel features at the project site and for other hotel sites in California.

Plants as Food

The four soil samples analyzed for pollen and macrofloral remains from Privy 1025 produced some information on food consumed at the Euro-American hotel. The deposits in Privy 1025 were almost exclusively human waste; therefore, the food represented had passed through the digestive system. The hotel diet included a large quantity of fruit, especially blackberry (97% of the total seeds), while fig, grape, and tomato also are well represented. Plants in the legume family, such as peas and beans, may have been common fare. As Privy 1025 was not a general refuse disposal site, the weedy seeds and plant parts in that feature likely represent windblown contamination. Corn, present only in the hotel privy and not in adjacent Chinatown, was represented only in the pollen results. Although corn was probably locally grown and eaten at the hotel, the pollen occurrence was interpreted to reflect animal feed used at the hotel's nearby barn and stable.

6.2 THE CHINESE OF SAN BERNARDINO

RECORDED IN THE CENSUS

Since 1790, the United States has been enumerating its population every 10 years. Census takers used to walk their districts physically, knocking on each door and interviewing those who lived there. In the beginning, the information collected was used solely to determine taxes and the appropriation of seats in the House of Representatives. Over the decades, however, new categories of information were added, resulting in the complex questionnaire used today. These census documents contain valuable details about individuals as well as general information on groups of people obtained by studying their attributes as a whole.

In order to understand and interpret the archaeological remains in Chinatown, we need to know about the population it served and how this population changed over time. Three census years were selected for the study—1880, 1900, and 1920—evenly spaced to reflect patterns of demographic change. (Chinatown was not established until after the 1870 census, and records of the 1890 census were destroyed.) San Bernardino's Chinatown was not only defined by those who lived on Third Street but also by those who treated it as a cultural and commercial center. This study's geographic area was therefore defined as the San Bernardino town limits and also included the residents of "China Gardens," a representative community of vegetable growers on Waterman Avenue who frequented Chinatown on their days off.

Evaluating the Documents

The methods used to study the census reports are presented in Chapter 4. The first problem was obtaining readable copies of the original documents. Handwriting can be difficult to decipher, cryptic abbreviations are often used, and portions of documents are often obscured by damage to the original or by poor reproduction values (Figure 6-8). Several census sources were used to compile the final transcription, which is presented as Appendix A.2 of this report.

In general, the accuracy of census information is quite good. However, errors were found within the data during this study, particularly when known individuals were followed over the three enumerations (40 years). One example is found in data related to Wong Nim, a prominent

TWELFTH CENSUS OF THE UNITED STATES.

SCHEDULE No. 1.—POPULATION.

State: California
County: San Bernardino
Supervisor's District N
Enumeration District

Township or other division of county: San Bernardino Township
Name of Institution: X
Name of incorporated city, town, or village, within the above-named division: San Bernardino City
Enumerated by me on the 9 day of June, 1900, Thomas Phillips, Enumerator.

	Location (Street, House Number, Number of dwelling-house, Number of family)	Name	Relation	Color or race	Sex	Date of birth (Month, Year)	Age at last birthday	Single, married, widowed, or divorced	Number of years married	Mother of how many children	Number of these children living	Place of birth of this person	Place of birth of father	Place of birth of mother	Year of immigration to the United States	Number of years in the United States	Naturalization	Occupation	Months not
1	156	Tom Wong	Head	Ch	M	Jany 1855	45	S				China	China	China				Ty 0.0.0	
33	163	Margaret M	Daughter	W	F	Nov 1883	17	S				Penn	Penn	Penn					
34	156	Wo Ming	Head	Ch	M	Oct 1861	38	S				China	China	China	18	24		Laundry 0.0.0	
35		So Wo	Boarder	Ch	M	" 1860	39	S				China	China	China		19		Laundryman	
36		Bo John	Boarder	Ch	M	July 1858	41	S				China	China	China		22		Laundryman	
37	164	Chee Sah Kay	Boarder	Ch	M	Aug 1857	42	S				China	China	China		24		Laundryman	
38	157	Chow Wong	Head	Ch	M	Jany 1846	54	S				China	China	China		20		1-3 Priest 0.0.0	
39		Mak Chas		Ch	M	July 1849	50	S				China	China	China		26		4-1 Cook 0.0.0	
40		Foo Wong		Ch	M	Nov 1864	35	S				China	China	China		22		7-8 Housekeeper 0.0.0	
41		Fay Wong		Ch	M	May 1864	36	S				China	China	China		20		3-2 Cook 0.0.0	
42	165	Chun King Wong		Ch	M	June 1872	27	S				China	China	China		7		7-0 Salesman 0.0.0	
43		Kim Wong		Ch	M	Apl 1855	45	S				China	China	China		26		7-5 Merchant 0.0.0	
44		Li Wong		Ch	M	Oct 1867	32	S				China	China	China		20		4-7 Day Laborer 0.0.0	
45	173	Ti Wong	Boarder	Ch	M	Sept 1853	46	S				China	China	China				Day Laborer	
46		Hand Wong	Boarder	Ch	M	Aug 1863	36	S				China	China	China		21		Merchant	
47		Hing Wong	Boarder	Ch	M	Nov 1834	65	S				China	China	China		40		Day Laborer	
48	159	Chung Lee	Head	Ch	M	Feb 1854	46	M				China	China	China		6		7-5 Merchant 0.0.0	
49		Shung Wong	Boarder	Ch	M	May 1864	36	M				China	China	China		20		Day Laborer	
50		Bong Lee	Boarder	Ch	M	Nov 1867	32	S				China	China	China		25		Cook	
		Chow Wong	Boarder	Ch	M	Apl 1864	36	M				China	China	China		20		Cook	

Figure 6-8 Reproduction of partial page of 1900 census.

businessman of Chinatown. Both the 1880 and 1900 census reports recorded that he was born in China, yet it was known from other sources that he was born in Alameda County in 1852. The 1920 census report correctly identified him as American born. While the 1880 census described him as literate, the 1900 and 1920 documents stated that he could not read or write; the 1900 census recorded that he could speak English, while the 1920 census stated that he could not. California-born Wong Nim is known to have been both literate and proficient in English, skills demonstrated in his role as a labor agent and his active involvement with the non-Chinese business community. Inconsistencies in this regard may well reflect biased assumptions on the part of the census enumerator.

Discrepancies in the spelling of Chinese names likely reflect the culture gap between the enumerator and those being interviewed. The occasional omission of "given" (first) or family names, such as the use of "Ah" as a formal name prefix, reflected the census takers' apparent unfamiliarity with the Chinese custom of presenting the family name first and the given name second, as these were frequently reversed. For example, "Wong Nim" is of the Wong family; his given name is Nim.

There also were discrepancies in the recorded literacy of the Chinese population. It was not clear if the determining factor regarding reading and writing was based on knowledge of the English language or of Chinese, or if this distinction was up to individual enumerators. If an enumerator used English as the defining factor, then those who were able to read and write Chinese may have been recorded as illiterate. In some instances it was obvious that the enumerator approached the literacy questions without discrimination of language. The 1900 census included several persons recorded as able to read and write but unable to speak English, indicating that their native language was used as the basis for literacy.

Errors such as those noted above prompted questions as to the reliability of the data enumerated by the census takers. The census takers' names were added to the database and examined for consistencies in entry. It was found that while some of the enumerators were reliable as to the manner in which they entered the data and the terminology used, in other instances data appeared to be questionable or incorrect. None of the censuses studied provided complete data for all individuals. The 1900 census was the most complete and also the most consistent in use of terminology regarding relationships to the heads of households and professions. Two census takers enumerated 90 percent of this census, while the remaining 10 percent of the census was taken by four other enumerators. However, the errors discussed above regarding Wong Nim were enumerated by one of the two individuals who dominated the enumeration. The accuracy of the data, therefore, must be considered somewhat suspect.

All census information was entered into a software database so that different categories could be sorted and tables produced for analysis. In addition to data on the original form, each entry also was coded by location and census taker's name. Data for each year was sorted using selected criteria to analyze relationships (Tables 6-9 and 6-10): sex, location, occupation, age by 10-year groups, the ability to speak English (not present in 1880), and the ability to read and write. Information on occupations was organized into categories, often determined by studying the households or neighbors of a particular entry (Tables 6-11, 6-12, and 6-13). Identification of where individuals and groups of individuals were physically located was gleaned from several sources. Enumeration district numbers listed on the census sheets referred to particular parts of

town. However, the key to the 1880 census could not be located, and discrepancies were found in the 1900 enumeration. Enumeration district locations were therefore cross-checked with locations noted on the census itself, sometimes as headings to vicinities and sometimes as addresses written in the margins. Locations of known businesses or residences also guided geographic identifications.

Table 6-9
Ages of Chinese Population in San Bernardino and Nearby China Gardens

	1880				1900				1920	
	City (n = 38)		China Gardens (n = 19)		City (n = 56)		China Gardens (n = 43)		City (n = 22)	
Age Group	**Ct.**	**%**	**Ct.**	**%**	**Ct.**	**%**	**Ct.**	**%**	**Ct.**	**%**
Under 20	4	11	7	37	0	0	0	0	3	14
20–29	23	61	10	53	4	7	0	0	0	0
30–39	7	18	1	5	25	45	14	33	2	9
40–49	3	8	0	0	18	32	16	37	5	23
50–59	1	3	0	0	7	12	12	28	9	40
60–69	0	0	1	5	2	4	1	2	2	9
70+	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	1	5
Mean Age	26		23		41		44		43	

Table 6-10
Sex, Marital Status, Language, and Literacy Attributes of Chinese Population in San Bernardino

	1880				1900				1920	
	City (n = 38)		China Gardens (n = 19)		City (n = 56)		China Gardens (n = 43)		City (n = 22)	
Topic	**Ct.**	**%**	**Ct.**	**%**	**Ct.**	**%**	**Ct.**	**%**	**Ct.**	**%**
Sex										
Male	37	97	19	100	54	96	43	100	20	91
Female	1	3	0	0	2	4	0	0	2	9
Marital Status										
Married	11	29	1	5	16	29	28	65	16	73
Language										
Speak English	—	—	—	—	39	70	12	28	15	68
No English	—	—	—	—	14	25	31	72	7	32
No Data	38	100	19	100	3	5	0	0	0	0
Literacy										
Can Read/Write	22	31	14	74	14	25	34	79	13	59
Cannot Read/Write	16	69	5	26	39	70	9	21	9	41
No Data	—	—	—	—	3	5	0	0	0	0

Table 6-11
Occupations of Chinese Population Enumerated on 1880 Census within San Bernardino City Limits

Occupation/Nature of Business	Count (n = 38)	Percent of Population
Laundry		
Boarding House/Hotel	8	21.1
Chinatown	7	18.4
Total	*15*	*39.5*
Cooks		
Chinatown	4	10.5
Domestic	3	7.9
Boarding House/Hotel	2	5.3
Total	*9*	*23.7*
Farming/Gardening		
Gardener	4	10.5
Boarding House/Hotel	1	2.6
Total	*5*	*13.1*
Servants (domestic)	3	7.9
Agent	1	2.6
Barber	1	2.6
Housekeeper (in own home)	1	2.6
Laborer (unknown)	1	7.9
Merchant (retail)	1	7.9
Not Stated (unknown)	1	2.6

Table 6-12
Occupations of Chinese Population Enumerated on 1900 Census within San Bernardino City Limits

Occupation/Nature of Business	Count (n = 56)	Percent of Population
Laundry		
Employees	20	35.7
Laundry Owners	2	3.6
Total	*22*	*39.3*
Cooks		
Chinatown	4	7.1
Boarding House/Hotel	4	7.1
Unemployed	1	1.8
Total	*9*	*16.0*
Merchants (retail)	*9*	*16.1*
Laborers (day labor)	*8*	*14.3*
Not Stated (unknown)	*3*	*5.4*
Butcher (retail)	*1*	*1.8*
Doctor (medicine)	*1*	*1.8*
Priest (religion)	*1*	*1.8*
Salesman (retail)	*1*	*1.8*
Servant (domestic)	*1*	*1.8*

Table 6-13
Occupations of Chinese Population Enumerated on 1920 Census within San Bernardino City Limits

Occupation/Nature of Business	Count (n = 22)	Percent of Population
Merchants		
Retail	10	45.5
Vegetable peddlers	5	22.7
Total	*15*	*68.2*
Restaurant Workers		
Cooks	3	13.6
Dishwasher	1	4.5
Manager	1	4.5
Waiter	1	4.5
Total	*6*	*27.1*
Laundryman (owner of laundry service)	*1*	*4.5*

The Changing Population

Perhaps the most important question about the census reports was: Who was living in Chinatown? Determining the location of each entry, as described above, those Chinese living on Third Street between "C" (Arrowhead) and "B" (Mountain View) were distinguished from those living in other parts of San Bernardino. The results show a steady consolidation of residents from 53 percent (n = 20) in 1880, to 63 percent (n = 35) in 1900, to 82 percent (n = 18) in 1920. In 1880, Yee Kee was the only merchant identified as living with his wife (the only female Chinese enumerated) and two boarders. The other residents of Chinatown were single male boarders, employed primarily in the laundry business or as cooks or gardeners. Wong Nim, age 25, was listed as a labor agent. In 1900 there were 35 individuals in about 14 different households.

There were at least two laundry businesses, five stores, a priest, a butcher, a doctor, four cooks, and several day laborers. The 1920 census was the only one where the residents on the north side of Third Street were differentiated from those on the south as part of the enumeration. On the south were two general merchandise stores, one owned by Wong Nim and the other by a partnership of Wong Heng(?), Wong Sam, and Wong Tong. The owners all lived in their stores. Sing Hee also ran and resided in his laundry. On the north side of the street was a retail ivory store run and occupied by Wong Hing John and Wong Moi, and two general merchandise stores that were run and occupied by Lee Yaw and Wong Moy. Two restaurant cooks also lived there, although it is not clear where their restaurant was located. Boarders were primarily vegetable peddlers.

The youthful Chinese population of 1880 was reflected in a mean age of 26; in China Gardens it was only 23. Of the 38 individuals in San Bernardino, only one was a woman, the wife of merchant Yee Kee mentioned above. The residents of China Gardens were all male. For the years studied, the Chinese population within San Bernardino was highest in 1900, with 56 Chinese counted. The mean age rose to 41 and the number of women to two, both wives of

merchants. It is likely that women were undercounted by the census takers—prostitutes were mentioned in early newspapers and at least one bride in later years. By all reports, however, the number of women was very small. By 1920, only 22 Chinese still lived in San Bernardino—all older men (age 30–69), except for two California-born sisters, Yee Carrie and Lee Francis, who ran a restaurant outside of Chinatown. Living with the two women were two teen-aged boys who, although born in China, had fathers born in California. The other individuals identified as California-born were Wong Nim (age 64, who was mistakenly said to have been born in China on the earlier documents), and vegetable wagon peddler Wong Joe (age 34).

Marital status reflected the practice of many Chinese men, who maintained a wife and family at home while they pursued jobs in California. In both 1880 and 1900, the percentage of San Bernardino Chinese residents who were married remained at 29 percent, while that of China Gardens jumped from 5 percent to 65 percent. This drastic change may reflect favorably on the earning power of this occupation. In 1920, 84 percent of the Chinese population more than 20 years of age was married.

As discussed above, census questions concerning English proficiency and literacy were inconsistent. Within the city in 1900, those persons who could not speak English also were enumerated as being unable to read and write, so English must have been the criterion for literacy. Of the 39 Chinese residents who spoke English, 25 could not read or write English. It is noteworthy that 14 Chinatown residents could therefore speak, read, and write English. In China Gardens in 1900, however, the respondent's native language was used to define literacy; of the 31 men who did not speak English, 23 were identified as being able to read and write.

The workers at China Gardens reflected the evolution of vegetable growing as an important Chinese industry. By the 1870s, Chinese in southern California had cornered the market on raising and distributing vegetables to urban dwellers. Communities of vegetable gardeners lived on the outskirts of towns, and produce was distributed daily door-to-door by peddlers using baskets on yokes or horse-drawn wagons (Costello 1999:218–235). In 1880, China Gardens supported such an industry, located about 0.5 mile east of Chinatown on Waterman Avenue. This industry apparently allowed new immigrants to find employment when they arrived, as the group of 23 men was largely made up of young, unmarried workers who spoke little English. The workers lived in three "households." One consisted of six workers who appeared to be Wong relatives, while the other two groups had seven and eight men, respectively. By 1900, the average age of the vegetable gardeners had jumped to 43 and the marriage rate to 65 percent, although English speakers were still far fewer than in town. The 43 vegetable gardeners lived in four households of 8–11 members. The head of each group rented the land, was literate, and (with one exception) spoke English. By 1920, the vegetable gardens were run by new Japanese and other Asian immigrants, although five Chinese vegetable peddlers (age 38–54) lived in Chinatown and apparently retained control over distribution. All spoke English, a necessity for interaction with the non-Chinese population and likely reflecting these merchants' long residence in the community.

Occupations

In general, the occupations of the Chinese residents in San Bernardino shifted over the 40 years of this study from laundry businesses to mercantiles and restaurants (Tables 6-11, 6-12, and

6-13). In both 1880 and 1900, the most important areas of employment were in laundry businesses (39% in both years) and as cooks (24% and 16%, respectively). By 1880, all of the laundries had been relocated to Chinatown (see above discussion), where they employed three "ironers," three "laundrymen," and nine "washermen." Eight of the men were employed at Starke's Hotel, and the remaining seven appear to be associated with two laundry businesses. In 1900, there appear to have been four Chinese laundries in San Bernardino employing a total of 22 men, two in Chinatown and two outside. The businesses were run by Wo Ming, Wong Foy, Wong Sam, and Wong Hang and Wong See (partners in the Sing Lee Laundry). By 1920, only one laundry owner was identified.

Of the nine cooks identified in 1880, four lived in Chinatown and likely worked for restaurants or lodging houses, while two were cooks at the neighboring Starke's Hotel. Three other cooks were living and working in non-Chinese homes and boarding houses in other parts of town. In 1900, cooks were employed in a similar distribution at restaurants, hotels, and boarding houses. In 1920, cooking was still an important occupation, with three cooks recorded working in Chinatown restaurants. The restaurant business itself employed 27 percent of the population, most working for California-born entrepreneur Yee Carrie, who employed her sister and two teenaged boys as dishwasher, cook, and waiter in her establishment outside Chinatown.

Other notable changes over time included the decline of domestic work and increase in the number of merchants. The number of Chinese working as domestic servants dropped from a high of 8 percent in 1880, to 2 percent in 1900, to none in 1920. In 1880, four Chinese were employed as resident gardeners in Anglo homes, while two worked at Starke's Hotel. In this same year, Yee Kee was the only merchant in town. By 1900, no Chinese gardeners were identified (outside of the commercial China Gardens), while nine merchants constituted 16 percent of the work force. By 1920, merchants (including the vegetable peddlers with their wagons) made up nearly 70 percent of the Chinese population.

WONG NIM: THE MAYOR OF CHINATOWN

When he died in 1941, Wong Nim was one of Chinatown's last residents and may have lived there longer than anyone. Surely, he was Chinatown's most revered and respected citizen. Born in Alameda County, California, in April 1852, he went to China with his parents at age four, but returned to California 14 years later. He came to San Bernardino in 1876, and by the late 1880s was influential enough to be known as the unofficial "Mayor of Chinatown" (Anderson and Lawton 1987:41; Lawton 1987a:164–165).

After arriving in San Bernardino, young Wong Nim worked at first as a laborer, then as a laundryman. By 1880, he was establishing himself (eventually under the name of Quong Nim and Company) as a labor contractor, or "agent," supplying Chinese laborers to local farmers, ranchers, and others. He may have been the first such contractor in the San Bernardino Valley (Anderson and Lawton 1987:41, 44; Lawton 1987a:151,164; U.S. Census Bureau 1880:n.p.; Wormser 1987:180, 183). In about 1880, with 4 years of accumulated earnings, he opened his Wey Yuen Company retail grocery and general mercantile (Anderson and Lawton 1987:41) (Figure 6-9).

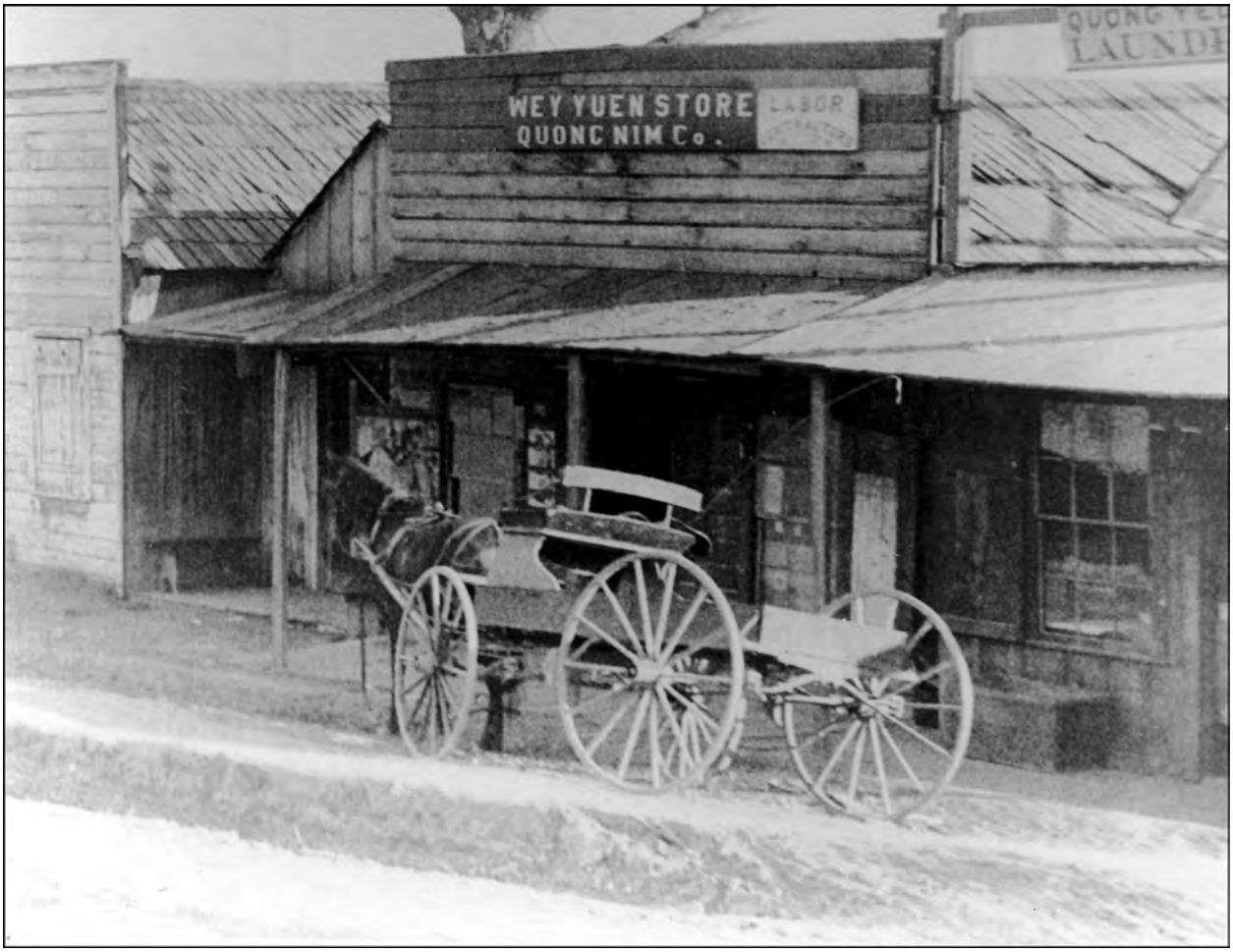


Figure 6-9 Detail of south side of Chinatown in the late 1800s showing Wong Nim's Wey Yuen Store (courtesy, Special Collections Library, University of California, Riverside).

Among the belongings that Wong Nim brought with him to San Bernardino in 1876 was a statue of Kuan Yin, the Chinese Goddess of Mercy (Anderson and Lawton 1897:41; Holland 1944:13). At some point he established a temple on the north side of Third Street on the Wozencraft property in Block 18. In December 1890, Wong moved the temple to a small addition at the back of his structure at the southwest corner of Third and B streets (*Daily Courier* 1890:3) (see further discussion of the temple in Section 6.3). It seems likely that Wong moved his home and business enterprises to the new location at the same time, although this may have happened later, possibly as late as 1910.

In addition to his business dealings in San Bernardino, Wong Nim also played a pivotal role in the development of nearby Riverside's Chinatown in the 1880s. In 1885, partnering with two of that town's influential Chinese, Chen Duey and Wong Gee, he became part-owner and co-founder of Riverside's Chinatown (Anderson and Lawton 1987:41; Holland 1944:13; Lawton 1987a:164). As was the case in San Bernardino, a laundry ordinance in 1885 succeeded in evicting Riverside's Chinese from the Mile Square center of town. The partners—Wong Nim, Chen Duey, and Wong Gee—selected and purchased a site in the Tequesquite Arroyo near Evergreen Cemetery under the Quong Nim and Company banner in 1887 (SBCR 1887:311–

313). At the time, state and federal laws forbade ownership of real property by native Chinese and other Asians, while at the same time encouraging, and even underwriting, such ownership by European emigrants (i.e., the Homestead Act of 1862). Wong Gee and Chen Duey both had been born in Gom-Benn and would have been prohibited from owning land on their own. But Wong Nim was a native-born Californian and American citizen and, thus, was able to partake in the right and privilege of land ownership in the United States.

Although unsupported by official county documents, Wong Nim may have been the first person of Chinese descent to own real property in San Bernardino. In March 1897, the *Citrograph* reported Wong Nim's purchase of Starke's Hotel at a sheriff's sale for $1,250 and stated that Wong's intention was to turn it into a "Chinese hotel." The *Citrograph*, owned and edited by the ardently anti-Chinese Scipio Craig, waxed melancholy about to what "such base uses do the old landmarks come," but that "we must keep up with the procession" (*Citrograph* 1897a:8). Six months later, the *Citrograph* reported that, "Starke's hotel in San Bernardino which was recently sold under foreclosure and bought by a Chinaman for $1250, has been redeemed by A. H. Starke for $1325" (*Citrograph* 1897b:7). Although the Starkes were, indeed, experiencing severe financial difficulties at this time—difficulties that ultimately did end in the foreclosure and sale of the hotel (Superior Court 1896) , the records of the San Bernardino County Archives failed to confirm Wong Nim's purchase or any other participation by him in the matter.

Just 3 years later, Wong Nim did become the principal landowner in San Bernardino's Chinatown. On 2 April 1900, a Chinese named Wong Sue (spelling per County Recorder) purchased from D. M. Bradford for $1,000 a portion of Block 15 described as:

> beginning at the Northeast corner of said Block, thence west along Third Street two hundred and eighteen feet and five inches to the Northwest corner of brick building, thence South one hundred feet, thence East two hundred and eighteen feet and five inches to "B" Street, thence North to the place of beginning . . . together with the right to receive through the water pipes upon said premises, water necessary for the use thereon as the same is now piped thereon from the supply appurtenant to said place. . . . Said place D. M. Bradford hereby reserves the right to connect with and have the support of the west wall of the said brick building upon the premises hereby conveyed as a party wall [SBCR 1900b:121].

One day later, for only $1.00, Wong Nim purchased the same property from Wong Sue (SBCR 1900a:382). The relationship between Wong Nim and Wong Sue is not known, nor are Wong Nim's reasons for not dealing directly with Bradford himself. Perhaps Wong Nim simply preferred to negotiate the purchase through an agent, in this case Wong Sue, rather than with Bradford.

In 1903, another Chinese, Wong Sing, purchased a narrow section of Wong Nim's Lot 7 property; however, by 1905 the property was back in the hands of Wong Nim (SBCA 1900–1904:22, 1905–1909:24).

Wong Nim's obituary noted that he had made several trips to China prior to "hostilities in that country," possibly referring to the invasion by the Japanese military prior to the beginning of World War II. Evidence in the 1930 U.S. Census suggests that he made one of these trips around 1888, probably with the intention of marrying. The 1930 census states that Wong was first

A Note on Street Addresses

Throughout the research process, the consistently irregular address numbering in Chinatown, as evidenced in city directories, on Sanborn maps, and by the U.S. Census Bureau enumerators, has frustrated efforts to associate specific individuals and businesses with street numbers, rendering the making of such associations difficult and, in most cases, impossible. San Bernardino city directories (a complete collection of which apparently does not exist) did not begin to show street numbers of businesses and residents in Chinatown regularly until around 1906; and, although Sanborn maps consistently identify street numbers throughout the period under investigation, in most years single-, double-, and even triple-digits (both even and odd) co-mingle haphazardly along the south side of the Third Street frontage; on several of the U.S. Census rolls, enumerators either inconsistently noted or failed completely to note the addresses of interviewees in Chinatown. Adding to the frustration, prior to about 1910, street addresses ran numerically higher from west to east (in some cases), then abruptly changed direction, running numerically higher from east to west.

Wong Nim and his companies provide an example of the confusion and the challenge that these sources have presented. Taken at face value, they suggest that Wong and his Wey Yuen/Quong Nim Company changed locations several times over the years, although this is by no means a given. The sources variously, and sometimes simultaneously, place Wong and/or his enterprises at 28, 201, 215, and 228 Third Street between 1894 and 1913.

The earliest evidence for the location of Wong's business enterprises comes from a circa 1885 photograph (see Figure 6-9) fixing the location of the Wey Yuen and Quong Nim companies near the center of Chinatown on the south side of Third Street. In 1906, when the Wey Yuen Company made its first belated appearance in city directories, the address was listed as 215 Third Street (Lawton 1987a:164, citing *San Bernardino City Directory* 1906). The common civic practice of adding digits to existing addresses as cities grow suggests such a manipulation may have occurred between circa 1885 and 1906. By removing the "2" from 215, it is possible to at least suggest that Wong Nim's Wey Yuen/Quong Nim Company, as photographed around 1885, are at 15 Third Street. This address appears (albeit, as a dwelling) on the south side of Third Street at about midblock on Sanborn maps from 1894 through 1906 (Figure 6-10). (Currently, the 200 block of Third Street still occupies the area between Arrowhead Avenue [C Street] and Mountain View Avenue [projected—B Street]. The 100 block lies immediately east between Mountain View and Sierra Way [A Street]; the 300 block immediately west between Arrowhead Avenue and D Street. East of Sierra Way, streets are designated as "East Third," "East Fourth," etc., adhering to the city's original town limits.)

In 1890, newspaper accounts reported the move of Wong's Kuan Yin Temple from the north side of Third Street to the southwest corner of Third and B streets (*Daily Courier* 1890:3). This location, labeled "Joss Ho.," was first depicted on Sanborn maps in 1894 as 28 Third Street (Figure 6-10). The 1910 census reported that Wong Nim was residing then at 228 Third Street (U.S. Census Bureau 1910:n.p.). By adding a "2" to the 1906 Sanborn map's 28, creating 228 (per the 1910 census), the suggestion is that the two addresses may actually refer to the same building. But, at the same time the 1910 census was reporting Wong Nim at 228 Third Street, the *San Bernardino City Directory* (SBDC 1910:214, 274) indicated that the "Wong Nim Co., gen. mdse" (a.k.a., Wey Yuen Company) was still at 215 Third Street. It is possible that Wong Nim could have maintained a residence (and temple) separate from his business enterprises.

Wong Nim eventually moved his Wey Yuen Company store to 201 Third Street, but not until 1913 does the address begin to be consistently reported as such. It remained so until after Wong's death in 1941 and the demolition of the building in 1944, at which time the number was retired (SBDC 1913:316, 1944:588).

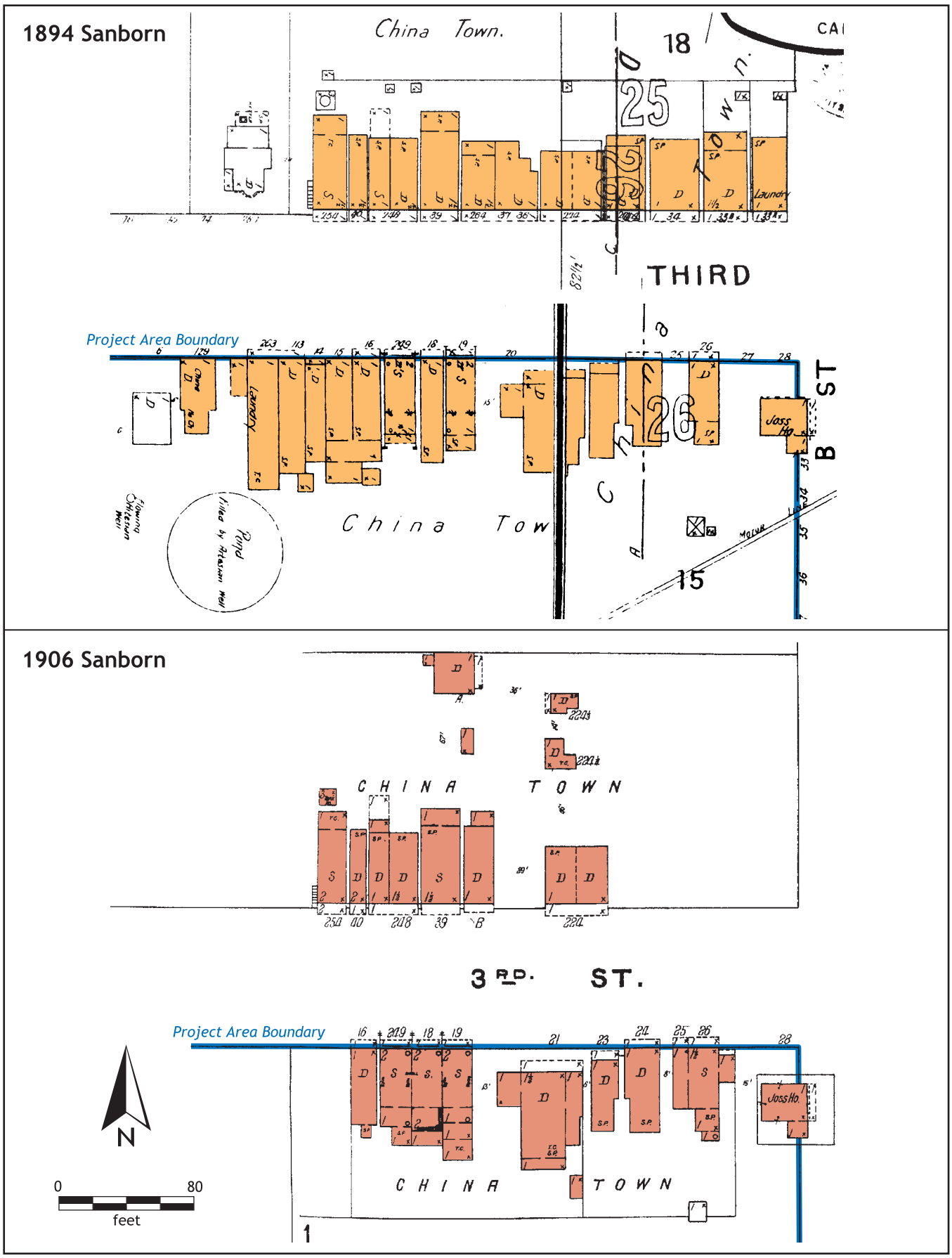


Figure 6-10 Depictions of Chinatown on the 1894 and 1906 Sanborn maps.

married at age 36, which would have been in 1888. The date of his return is not known. Regardless, during the course of one or several visits to China he fathered three children—two sons and a daughter (U.S. Census Bureau 1930:n.p.; *Sun* 1941:n.p.; Superior Court 1931).

On the occasion of his eighty-eighth birthday in April 1940, Wong Nim (called "Grandpa" by his friends) was still living on the property he bought in San Bernardino's Chinatown in 1900 (Unprovenienced newsclipping, "Wong Nim is 88 and Still Going Good" [ca. April 1940]). Within a year, his health failing, he was moved from his 201 Third Street home to a rest home on Fourth Street. He died there on 10 December 1941 at age 89. His widow Pung Shee, sons Chun Hee and Chung Hong, and daughter Ah Coke, mourned his death from their home in China. He left the entirety of his estate, valued at more than $16,000, to his grandson, Wong Lim Dawg, then living at 203 Third Street. His children were specifically omitted in his last will and testament, although he placed his reliance in Lim Dawg to provide for them "as in his judgment seems best"; his wife was mentioned in neither his will nor subsequent probate documents (Superior Court 1931, 1943a, 1943b) and may have preceded him in death. Wong Nim, the Mayor of Chinatown, is buried in San Bernardino's Mountain View Cemetery (*Sun* 1941:n.p.)

After his death, Wong Nim's portions of Lots 7 and 8 were bought from his estate by the State of California in December 1943 for $10,800 for use by the California Division of Highways. The last of the southside Chinatown buildings there were demolished soon after. Wong was still the owner of Riverside's Chinatown when he died; that property was auctioned to Wong Ho Leun (a.k.a., George Wong) in November 1943 for $6,200 (SBCR 1943:81–82; *Sun* 1944a:11, 1944b:n.p.; Superior Court 1943a).

WONG SAM: A CHINESE MERCHANT'S ENCOUNTER WITH THE GEARY ACT

Wong Chun Yee (Figure 6-11) was just a teenager when he arrived in California about 1879. In later years he would be called Wong Sam. In leaving the village of Gom-Benn (where he was born about 1863) and coming to California, he was following in the footsteps of his older brother, Wong To Sai, who is regarded as the first Gom-Benn native son to settle in the San Bernardino Valley (Lawton 1987a:164). A third brother, Wong Tung Din (Figure 6-12) also came to California at around the same time as Wong Sam; possibly they traveled together.

Wong Sam made his way to San Bernardino in 1890. He joined his brothers in 1892 as a partner in the Gee Chung Company (Lawton 1987c:291, 292). The business, one of the longest-lived Chinese businesses in San Bernardino, remained a family operation until about 1942, mainly, if not exclusively, at 245 Third Street (SBDC 1942:516). The location at 245 Third Street may be the same as 19 Third Street on the 1906 Sanborn map (see Figure 6-10). The building was removed during the demolition of Chinatown's remaining south side structures in 1944.

Wong Sam, for reasons unknown, chose to return to China for a visit in 1897. Fearing the U.S. Immigration Service would enforce the restrictions of the Geary Act and make his re-entry into the country difficult, Wong Sam made what preparations he could. On 12 May 1896, he appeared before notary public George B. Cole. Cole notarized the following affidavit:

> Wong Sam being duly sworn deposes and says: That he is a resident of the City of San Bernardino, County of San Bernardino, State of California: that he has been a resident of

Figure 6-11 **Portrait of Wong Chun Yee as a young man (courtesy, Special Collections Library, University of California, Riverside).**

Figure 6-12 **Portrait of Wong Tung Din, father of Bing Wong (courtesy, Special Collections Library, University of California, Riverside).**

> said state for seventeen years and of said county for six years; that he is a member of the mercantile firm of Gee Chung Company and has been a member of said company for a period of four years. That said firm is a mercantile firm and is doing business as such in the city of San Bernardino aforesaid, and has been for more than four years last past. The deponent for said four years last past has owned a Five Hundred Dollar interest in said store and owns said interest now. That he is thirty years of age, five feet six inches in height in his stocking feet. That his picture is hereto attached which is a fair likeness of him. That he has one scar on his right temple and a short scar over the left eye, neither of which scars appear in the picture hereto attached. Owing to deponent being a merchant he never registered pursuant to the Geary Act.
>
> That deponent is contemplating temporarily leaving the said City of San Bernardino and has made this affidavit and caused the annexed affidavits to be made for the purpose of identification and to avoid trouble and to prove that he is a merchant.
>
> Subscribed and sworn before me this 12th day of May 1896 (Signed) Wong Sam
>
> (Signed) George B. Cole, Notary Public
>
> [Lawton 1987c:291, 293.]

The "annexed affidavits" were offered as insurance by H. L. Martin and James D. Faris, acquaintances, at least, of Wong Sam's. But for minor differences, both documents are essentially identical, although only Martin's is cited. Both men, again, appearing before George Cole, attested:

> That he is a citizen of the United States over the age of twenty-one years and that he knows said Wong Sam, whose photograph is attached to his affidavit and that he has known him for 4 or 5 years last past; that said Wong Sam is a mercahnt [sic] doing a general mercantile business in the city of San Bernardino, County of San Bernardino, State of California, and is a member of the Gee Chung Company. That he is informed said Wong Sam contemplates temporarily leaving said San Bernardino and has made this affidavit at his request as a means of identification to prove and show that said Wong Sam is a mercahnt [sic] [Lawton 1987c:293].

The affidavits of Faris and Martin apparently had their intended effect. Wong Sam did return to San Bernardino and the Gee Chung Company. U.S. Department of Commerce and Labor documents and other evidence (namely the births of two sons who later immigrated to California) suggest that Wong Sam also may have returned to China around 1906 and again around 1915 (Figure 6-13).

About 1920, Wong Sam's son, Wong Gian Poy, arrived from China and shortly thereafter became a partner in the Sing Lee Cafe in San Bernardino. Wong Poy was followed in 1937 by another son, Wong Gin Voy, who later owned and operated the Chungking Restaurant in Riverside from 1941 to 1974 (Lawton 1989:70, 71). The Gee Chung Company had prospered for decades as a mercantile specializing in Asian goods, even to the point of being able to open a second store in Riverside's Chinatown in the 1920s (Lawton 1987a:163). However, on his arrival in 1937, Wong Voy found the shop in San Bernardino was little more than a "front" for a lottery operation (Wong 1987:209). Wong Sam died the following year in 1938, the last of the three brothers of the Gee Chung Company (Lawton 1989:67; Wong 1987:209–210).

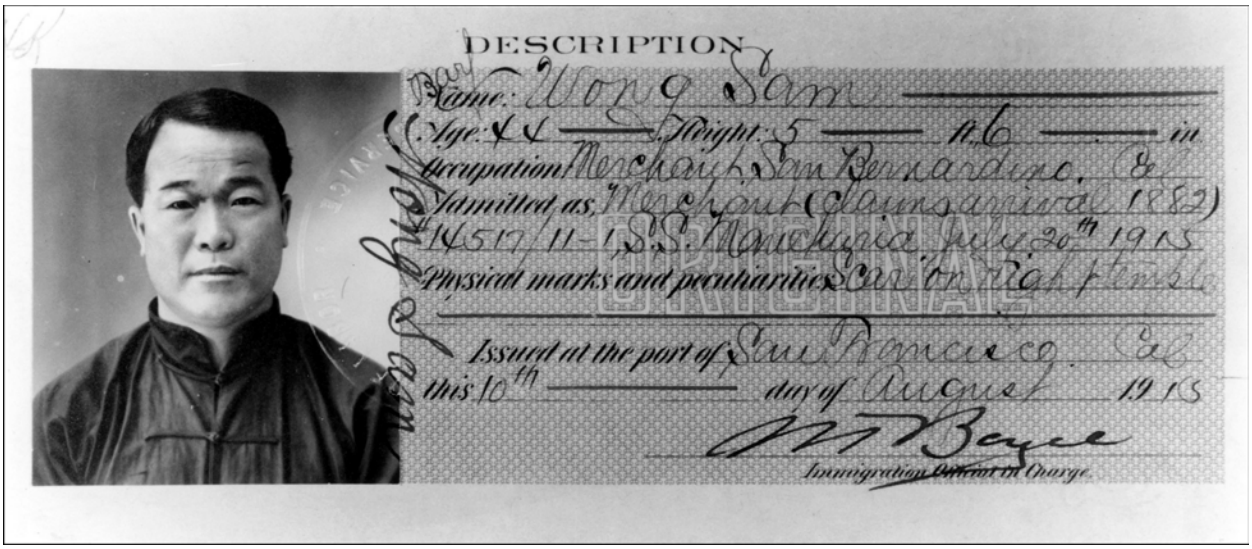


Figure 6-13 Wong Sam's 1915 immigration document (courtesy, Special Collections Library, University of California, Riverside).

6.3 CHINATOWN LIFE

This section discusses the archaeological remains in Chinatown, the development of the Third Street community, the urban infrastructure, pets, and the Kuan Yin Temple. The remainder of Chapter 6 discusses aspects of Chinatown brought to light by the archaeological findings. The important archaeological features were presented in Table 6-1 and also are depicted on the 1894 Sanborn map (Figure 6-14).

BACKYARD ACTIVITIES

It is evident that most of the activities documented in this report took place in the backyards of the buildings facing Third Street. This is because archaeologists are generally looking for artifacts from historical communities, and these artifacts tend to accumulate in backyards. Remains of buildings, while sometimes containing interesting architectural information or confirmation of a structure's location, do not hold the wealth of information available from people's garbage.

Among the Chinatown features are three privies (1032, 1035, and 1056), and a pit (1032), all filled with rubbish. Discarded items, broken objects, remains from meals, and waste from cooking fires also accumulated in the backyard, forming a spreading sheet refuse (1057) that eventually filled in abandoned wastewater ditches (Drains 1002, 1031, and 1060). In succeeding discussions, the artifacts recovered from the ditches and sheet refuse have been combined, as they represent the same type and time period of deposition. Three cooking features also were discovered: two pig roasting ovens (1001 and 1036) and a small stove-like brick structure (1033). A dog burial (1005) was found along the rear fence line behind Wong Nim's store and temple (1003). The Rancho Period cattle remains, predating Chinatown, are discussed in a sidebar earlier in this chapter. For convenience, a summary of selected artifact categories from Chapter 5 is presented in Table 6-14.

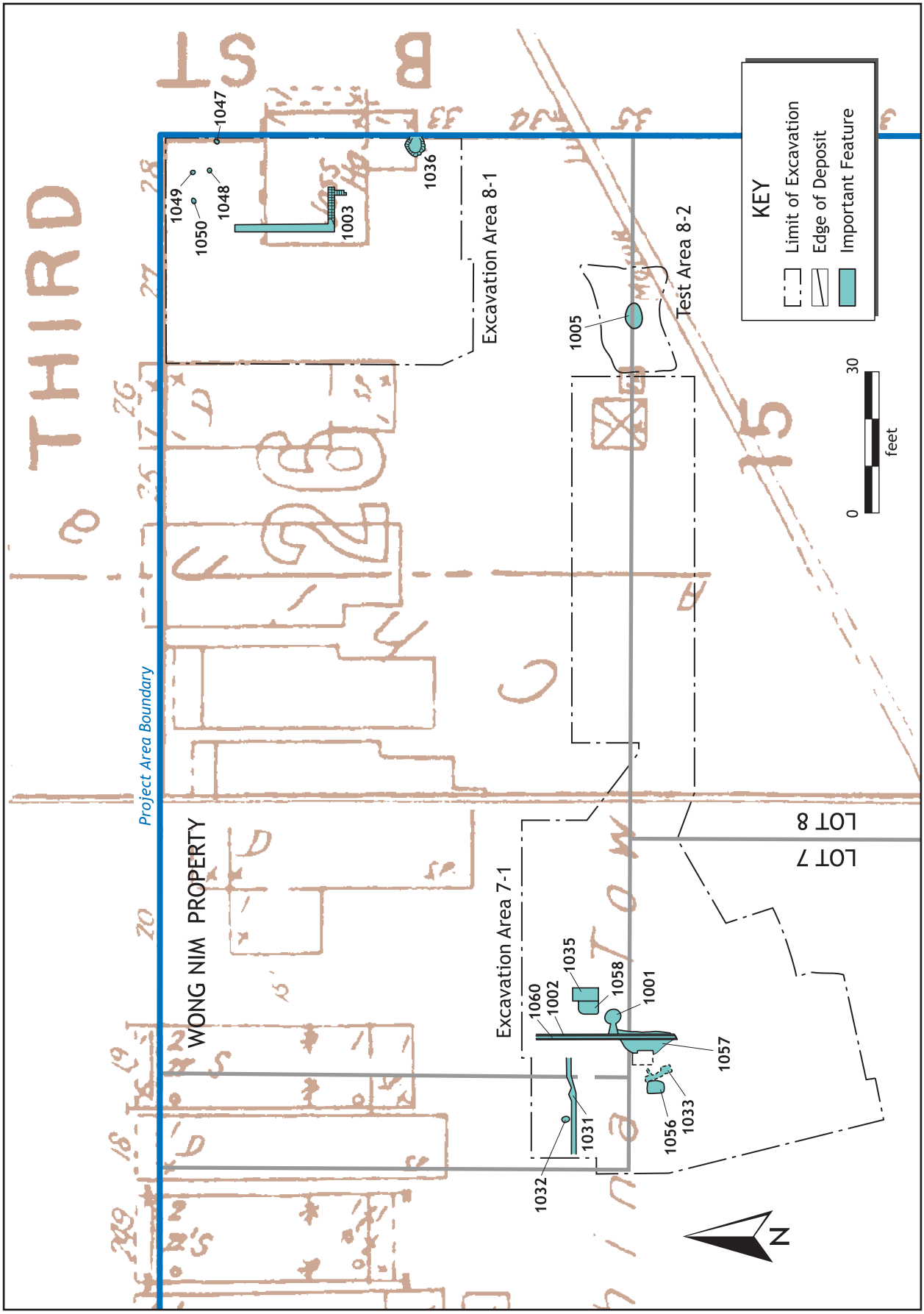


Figure 6-14 Selected Chinatown features shown with 1894 Sanborn fire insurance map.

Table 6-14
Summary of Selected Artifacts by Category in Chinatown Deposits

	Percent of Sample by Feature (MNI in parentheses)						
Category	**Drain 1002/1057 (79)**	**Drain 1031 (65)**	**Pit 1032 (78)**	**Privy 1035 (3,933)**	**Privy 1056 (129)**	**Privy 1058 (162)**	**Drain 1060 (7)**
Accouterments	1	0	0	<0.5	2	1	0
Clothing Maintenance	0	0	0	<0.5	0	0	14
Clothing/Footwear	4	5	12	15	5	6	0
Collecting	0	0	0	<0.5	0	0	0
Commerce	0	2	1	<0.5	0	0	0
Communication	<0.5	0	1	2	0	0	0
Farming/Gardening	0	0	0	<0.5	0	0	0
Firearms	2	2	0	<0.5	2	1	0
Food Packing/Storage	22	20	10	2	19	15	29
Food Preparation/Consumption	32	17	9	3	19	21	43
Games	5	23	4	71	22	11	0
Grooming	1	0	0	<0.5	0	1	0
Health/Medicine	3	0	0	1	2	3	0
Household/Furnishing	1	0	0	<0.5	2	4	0
Household/Maintenance	1	0	1	<0.5	0	0	0
Industrial	0	0	0	<0.5	0	0	0
Machinery	0	0	0	<0.5	0	0	0
Miscellaneous Bottle, Jar, Can	4	9	1	2	8	14	0
Miscellaneous Closure	0	0	0	<0.5	0	0	0
Miscellaneous Metal Item	1	5	1	1	2	3	0
Social Drugs	21	15	60	2	19	20	14
Tools/Hardware	<0.5	0	0	<0.5	0	1	0
Toys	<0.5	0	0	0	0	0	0
Undifferentiated (selective)	0	3	0	<0.5	1	0	0
Total[a]	***98***	***101***	***101***	***99***	***103***	***101***	***100***

a - Percentage totals greater or less than 100 are due to rounding.

DISCRIMINATION AND LAUNDRY WARS

For more than a decade after their arrival in San Bernardino, Chinese residents did not settle into any area that might be called "Chinatown." They were fairly dispersed throughout the city, operating laundries and vegetable wagons or working as restaurant cooks or household domestics. There were so few Chinese (fewer than 150 in the entire county in 1880) that there probably seemed to be no need for a segregated Chinese community.

Chinatowns in the American West evolved when Chinese were rejected from established communities. When rejection occurred—as with other immigrant outcasts like Mexicans, Irish, and Italians—Chinese formed their own isolated communities. These communities provided some semblance of home in a foreign land and offered opportunities for housing, employment,

education, commerce, social camaraderie, and respite from homesickness (Barth 1998:210; Phillips 1996a:299, 301). "Chinatowns were both havens of safety for the Chinese and zones of isolation from the mainstream culture that rejected them" (Phillips 1996a:301).

For San Bernardino's Chinese, concerted displays of overt rejection by the town's Euro-American population did not begin until the mid-1870s. Almost from the time of their arrival in 1867, the San Bernardino press had published anti-Chinese stories on a regular basis, but there was no organized movement aimed at removing them. They did, after all, provide much-needed services—usually at substantially lower prices or for lower wages than Euro-American workers were willing to accept. Then, in 1875, California entered an economic depression that threw multitudes of Euro-American workers into unemployment (Bean and Rawls 1983:177–178; Thompson 1978:5). Chinese throughout California were transformed into scapegoats. As the depression dragged on, Euro-American anti-Chinese sentiment grew more and more vicious.

By the spring of 1876, tensions in San Bernardino were mounting. On 1 April, a crew of several Chinese were hired to dig a trench down Third Street for a new gas main. They were met by a gang of rowdies hanging about Third Street, the location of several of San Bernardino's saloons.

> As there are numbers of white men idle in town, the employment of the Chinese created some turmoil and it was considered prudent to dismiss them which was done at noon, and white men are now busy, and in a short time San Bernardino will luxuriate in gas [*Weekly Times* 1876a:3].

Then, on 12 April 1876, saloon owner Al Rodgers advertised on page 2 of the *San Bernardino Daily Times* (*Daily Times* 1876b) that an anti-Chinese meeting would take place in his saloon that night. An invitation was extended to all interested parties. Attorney—and apostate Mormon—Quartus Sparks was elected to head the committee. In its resolution drafted that night, the committee "view[ed] with alarm the steady and rapid influx of large numbers of Chinese" and urged the federal government to revoke the Burlingame Treaty which, besides recognizing China as a most-favored nation, also recognized the right of voluntary Chinese immigration to the United States. According to the *Weekly Times*, in a seeming afterthought the committee "deprecat[ed] any acts of violence and wrong to the Chinese residing in our State" (Thompson 1978:6).

A second meeting called for 22 April featured special musical guests—the San Bernardino Cornet Band—who, readers were assured, would play their "most bully anti-Chinese music" (*Daily Times* 1876c:3). State Senator John Satterwhite was in attendance at the meeting and offered his solution for getting rid of the Chinese: outlaw the wearing of hair longer than a certain length—a suggestion aimed specifically at the traditional Chinese queue—in the belief that Chinese would rather go back to China than cut their hair. One "rabid anti-Chinese man in town" shared his own method, which was to hire a "Chinese cook, let him work without pay until he [got] tired, and when he will stand it no longer get another, in this way he avails himself of Chinese cheap labor and keeps all his money . . . " (*Weekly Times* 1876b:3). More rational and ethical minds suggested that a simpler method might be to simply stop hiring Chinese labor and quit patronizing Chinese businesses.

By early May the anti-Chinese climate and rhetoric had heated up; although no specific incidents of violence were reported, the potential for violence was apparent when phrases like "cure the

Chinese ulcer with knife or pistol" appeared in the *Weekly Times* on 6 May (Thompson 1978:8). On 10 May, the *Daily Times* issued a plea to the citizenry to refrain from violence in their dealings with the Chinese (*Daily Times* 1876d:2). Stumbling into this atmosphere came an unwitting group of Chinese miners walking in from the high-desert mining town of Ivanpah, near the Nevada border. Only days before, they had left similar circumstances in Ivanpah under clouds of thinly disguised threats, no doubt hoping to find relief in San Bernardino. The miners had been forced to leave Ivanpah by the camp's anti-Chinese committee, which had passed a set of resolutions on 1 May barring any Chinese from locating there. Ivanpah employers of Chinese were ordered to dismiss them from their jobs and the Chinese themselves were ordered to leave the camp by 10:00 the following morning or be paid a visit by the committee: "[W]e do hereby pledge ourselves to gain our ends—peaceably if we can, forcibly if we must. By order of the Committee" (*Daily Times* 1876d:3).

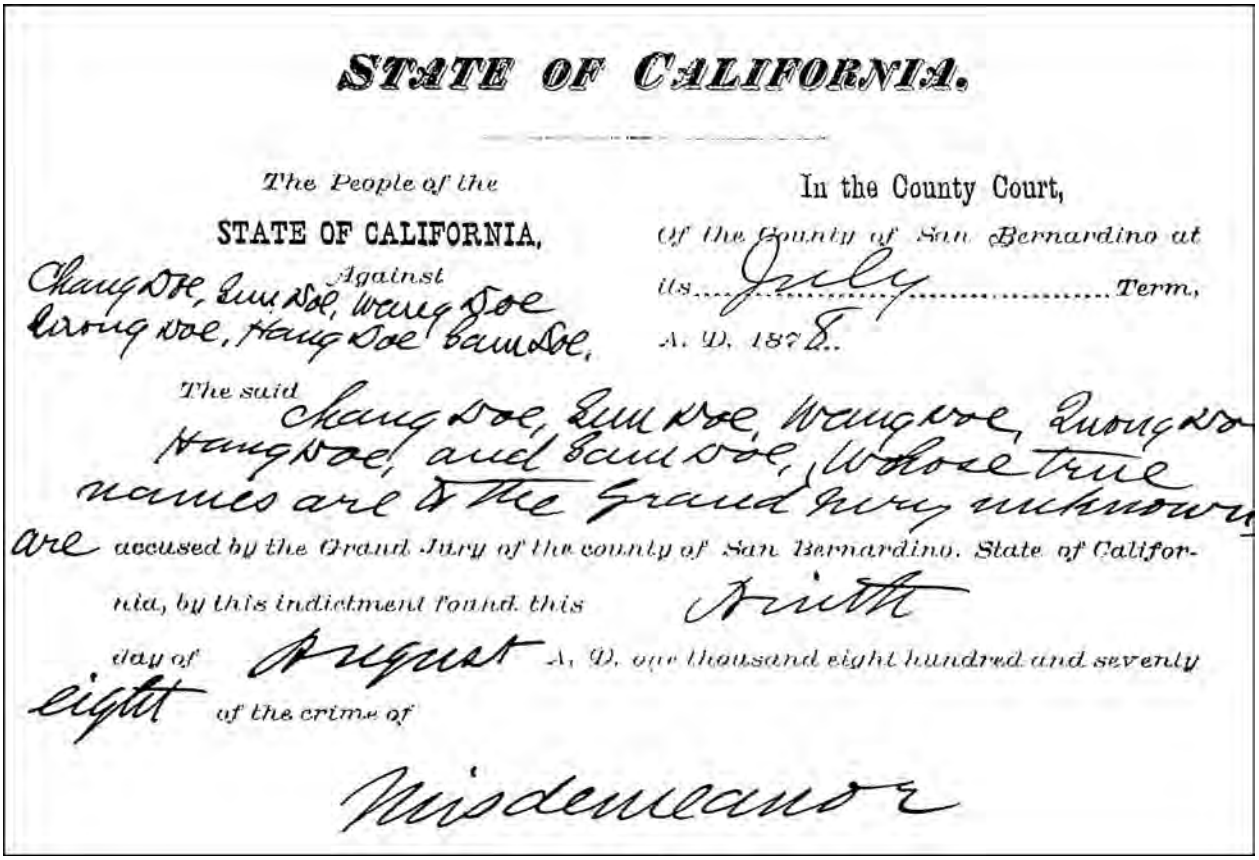
By mid-May, the newspapers, perhaps sensing some of their own culpability and the possible repercussions of their inflammatory rhetoric, began reporting an easing of tensions and the threats, both implied and overt, aimed at the Chinese population. Besides, a new plan of action for removing the Chinese, if not from the state then at least from the town's central business district, was being formulated. Back in April, the city's Board of Trustees had been pressed to pass a city ordinance barring laundries from the corporate limits of the city. Since the Chinese held a virtual monopoly on the laundry business in town, the intent of the proposed ordinance was obvious. The complaints against the laundries were that "their sickening odors" and their "fever breeding gutters and cesspools" created a public nuisance and health hazard (*Daily Times* 1876a:3; *Weekly Times* 1876c:3). In June, the board passed City Ordinance 35 prohibiting laundries from conducting business within the town limits—except where the Board of Trustees saw fit to grant a waiver (*Daily Times* 1876e:1). The waiver clause was obviously the board's way of giving themselves permission to issue permits to any white laundries that might wish to operate within the city limits (Thompson 1978:9–10).

Periodic attempts to establish white laundries had generally failed. The *Daily Courier* offered a succinct observation when the manager of a recently closed white laundry complained that the reason his business had failed was that he could not compete with Chinese labor: "Of course it is, when the prices asked by the white laundries are so exorbitant that people cannot afford to patronize them" (*Daily Courier* 1887b:4).

The Chinese laundrymen took exception to Ordinance 35 and fought legal battles for nearly 2 years to have it rescinded (Thompson 1978:10). They lost. In September 1878, laundrymen Quong Tung Hang and Hop Sing were both fined $25 for maintaining public nuisances (i.e., wash houses). This was an astounding 500 percent increase over the previous fine structure and amounted to nearly a month's income (Thompson 1978:12). The specific charges against Quong Tung Hang (originally identified as "Chang Doe" in the indictment [Figure 6-15]) stated, in laborious language and tones reminiscent of the Old Testament, that in the course of operating a business of washing clothes for hire, Quong:

> knowingly, willfully, unlawfully, and injuriously did empty, cause and procure to be emptied on said Lot [2, Block 20], large quantities of dirty, filthy, and unwholesome water, which water so emptied, caused and procured to be emptied as aforesaid did flow sluggishly through and across Blocks thirteen and four and a part of Block three of the Town of San Bernardino and became stagnant all along the course thereof, by reason of

which said premises, divers, noisome, offensive and unwholesome vapors, gases, smells and stenches, during the time aforesaid were from thence emitted and issued, so that the air then and there was and yet is greatly filled and impregnated with the said vapors, gases, smells and stenches, and was and is rendered and become corrupted and offensive, uncomfortable and unwholesome[ly] injurious to the health, offensive to the senses, so as to interfere with the comfortable enjoyment of life and property of a considerable number of persons then and there residing" [Superior Court 1878].



STATE OF CALIFORNIA.

The People of the STATE OF CALIFORNIA, Against Chang Doe, Sum Doe, Wang Doe Quong Doe, Hang Doe Sam Doe,

In the County Court, Of the County of San Bernardino at its July Term, A. D. 1878.

The said Chang Doe, Sum Doe, Wang Doe, Quong Doe Hang Doe, and Sam Doe, whose true names are to the Grand Jury unknown, are accused by the Grand Jury of the county of San Bernardino, State of California, by this indictment found, this Ninth day of August A. D. one thousand eight hundred and seventy eight of the crime of

Misdemeanor

Figure 6-15 Detail from first page of the people's complaint against "Chang Doe" and his laundry. Chang Doe was subsequently identified in court documents as Quong Tung Hang. Others named in the complaint worked in Quong's wash house (courtesy, San Bernardino County Archives).

On 12 October, the *Weekly Times* (1878b:3) reported that Quong Tung Hang, Hop Sing, and other Chinese laundrymen were moving out of the town limits rather than face public nuisance indictments. Within a week "the Chinese washmen . . . erected shanties just below Starke's [Hotel] where they maintain a nuisance to their hearts content" (*Weekly Times* 1878c:3). Structures shown east (right) of Starke's Hotel on the circa 1880 W. H. Symes bird's-eye view of San Bernardino (see Figure 2-7) may be the first pictorial image of the city's Chinatown district as indicated on period maps.

It was not just the laundries that prompted the Board of Trustees to take action. Complaints of Chinese prostitutes plying their trade in public view, although not as widely reported in the papers, nevertheless warranted some space in the press. In July 1876, the *Weekly Times* had observed that "the number of Chinese females in our city is largely on the increase. Whether this

will have any influence on the morals of our youth remains to be seen" (*Weekly Times* 1876d:3). Then, in early 1878, the board passed an ordinance "compelling Chinese prostitutes to move out of town after due proof that they were nuisances. The efficient Marshall made numerous arrests, and under the ordinance the persons convicted were forced to leave the town limits" (*Weekly Times* 1878a:1). Further enforcement of the ordinance may have been lax. A letter to the editor of the *Weekly Times* the following July called attention to "those Chinese women near the corner of Third and C streets, one of our most public localities, still stand at the sidewalk every evening and ply their nefarious trade" (Thompson 1978:11).

When laundrymen Quong Tung Hang, Hop Sing, and others moved into the area east of Starke's Hotel (Figure 6-16), more Chinese soon followed, although by no means did all of the Chinese businesses relocate. Enforcement of the laundry ordinance must have slackened because several Chinese laundries and other businesses continued to operate in other parts of town. However, Chinese businesses and residents were concentrated in the Chinatown area along Third Street between Starke's Hotel and B Street (Mountain View Avenue) on the south side, and frontage along Lot 1, Block 18 as far as B Street on the north side (see Figures 2-18 and 2-19).

Figure 6-16 View of Third Street between D and E streets (west of the project area) in 1878 showing Quong Tung Hang's laundry in the left foreground (courtesy, California Room, Norman Feldheym Central Public Library, San Bernardino).

Chinese Laundry Artifacts

Documentary evidence describes laundries operating within the Third Street Chinatown. What artifacts would provide evidence that Chinese laundries were present on the District 8 Headquarters Demolition Project site? To answer this, five previous excavations of Chinese laundries were reviewed for comparative material. All of these sites were identified as laundries in historical documents and yielded substantial deposits associated with the Chinese workers. Artifacts evidencing these establishments, however, is variable.

The first excavation of a Chinese laundry was in Ventura and yielded a satisfactory collection of artifacts including 344 buttons, the wringer mechanism from a wringer washer, and an enameled sign reading Swift's Pride Washing Powder (Bente 1976:461, 477). The author suggests that the buttons may have been kept on hand as replacements on customer clothing items, an idea supported later by other archaeologists (Padon and Swope 1997:74) .

The oldest laundry excavated was in Woodland, California, dating from 1870–1880. Laundry-related artifacts were meager, however, and here archaeologists bemoaned that:

> **Common buttons (which might, from disparaging contemporary comments about loss of these items during laundering, be expected to occur frequently on laundry sites) are also disappointing in [numbers]: Features 6, 8, 9, located on the washhouse site, yielded no more buttons per volume of deposit than did Feature 10, associated with the harness shop [Felton et al. 1984:72].**

More productive were excavations at the San Fong Chong Laundry, which operated at 814 I Street in Sacramento about 1900. This site yielded 106 buttons, studs, pins, and fasteners (Praetzellis and Praetzellis 1990:28).

A laundry in Oakland, operating sometime between 1889 and 1912, provided a unique abundance of 272 blueing balls. Blueing was a pigment that was applied to soiled clothing to take away the yellow of age and stains. Commonly used at home in liquid form, the dry balls (which had to be melted) were more typical of commercial establishments. In addition, 65 buttons and 12 collar studs were recovered (Yang 1999:59–60, 61).

The most definitive collection comes from Santa Barbara—artifacts from the High Lung laundry thrown out in about 1906. The archaeologist provides a satisfying description of perhaps the most diagnostic Chinese laundry deposit yet excavated:

> **The sheer quantity of buttons, studs, cuff links, and pins would suggest the presence of a laundry, even without the documentary and photographic evidence of the enterprise, and the observation of lumps of blueing in every level. There were 492 buttons, 120 collar buttons, studs, and cuff links, as well as numerous other clothing fasteners such a snaps, rivets, and a minimum of 61 straight pins and 315 safety pins [Greenwood 1998:15].**

The collection from Third Street Chinatown falls somewhere in the middle of this range of sites. An impressive 607 buttons were recovered, along with one blueing ball, although absent were the collar studs and pins found in other assemblages. Nevertheless, the Chinese laundrymen of San Bernardino appear to have left their identifying mark on the archaeological record—unless (as is discussed later) the buttons were instead used as tokens in gambling.

How the Chinese were able to settle this stretch of Third Street is not clear. County Recorder's deed and lease books do not indicate that any Chinese bought or rented property in Blocks 15 and 18 from the owners of those lots. However, some indirect evidence for these informal (and thus, undocumented) rents being paid to landowners exists in the 1888 court cases of People vs. D. M. Bradford and People vs. Mrs. Oliver M. Wozencraft. In both instances, Bradford and Wozencraft were charged and fined for permitting Chinese laundries to operate on their properties: Bradford on the south side of Third Street (between B and C streets), and Wozencraft on the north side of Third Street (also between B and C streets) (Superior Court 1888a, 1888b). It seems likely, then, that property owners like Bradford, Wozencraft, and Alley and Cochrane (who maintained a livery and stable operation on seven of the eight lots on Block 15 from 1878 to about 1887), leased or rented the plots to Chinese without officially recording the transactions with local government. Nonetheless, by 1887–1888, a distinctly Chinese district was recognized as occupying the eastern half of Third Street between B and C streets (see Figure 2-9).

Not until 1900 was there a real estate sale recorded to a person of Chinese descent in the Chinatown section. This is the previously mentioned transaction on 2 April 1900 when Bradford sold most of Chinatown on the south side of Third Street (Block 15) to Wong Sue for $1,000, and the following day Wong Sue sold the same property to Wong Nim for $1 (SBCR 1900a:382, 1900b:121). From 1900 until his death in 1941, Wong Nim probably rented the structures on Lots 7 and 8 to fellow Chinese, although documentation for these arrangements also has proved elusive.

Even segregated from the Euro-American population, San Bernardino's Chinese still faced ongoing attempts to expel them from town. In 1887, the Board of Trustees attempted to push the Chinatown residents east beyond Warm Creek by revising the 1876 laundry ordinance:

> Of all the nuisances in this city, tramps, thieves, chronic drunks, etc., Chinatown is the worst and Chinamen are the worst. It was supposed that they would be obliged to move out of their present quarters at the foot of Third street, across the creek, on last Monday, but it seems the ordinance passed by the City Trustees requiring them to do so was declared unconstitutional by the upper courts and they are still there, an abominable nuisance to all residents in the neighborhood [*Daily Courier* 1887c:4].

The previous May, Judge Sawyer of the U.S. Ninth Circuit Court had voided a laundry ordinance in Napa City similar to San Bernardino's that prohibited public laundries within certain city limits. Sawyer found the ordinance unconstitutional and that the laundry in question was only a public nuisance "by the arbitrary declaration of the ordinance" (*Daily Courier* 1887a:4). Following this decision, San Bernardino dropped the matter.

When ordinances did not work, some citizens took independent action. In 1888, a white youth was caught in the act of dousing the buildings of Chinatown with coal oil. He had to be rescued by police after he was caught and surrounded by 50 angry Chinese (*Daily Courier* 1888d:5). Another attempt to burn down Chinatown resulted in a 5-year prison sentence for William Traw (or Trau) in 1894 (*Citrograph* 1894:6). Chinese did not passively stand for such threats to their community and safety. After two attempts at arson in the autumn of 1892, the *Daily Courier* published an advertisement from two Chinese merchants:

> A WARNING—Quong You and Gie Chung, Chinese merchants in Chinatown, having had consultation with other Chinamen, wish to notify people not to be prowling around of nights in Chinatown, as they are liable to meet with a warm reception. There has [sic] been two attempts made recently to burn out Chinatown, hence the Chinese are taking precautions. Bogs and Bums had better keep clear of there at night time [*Daily Courier* 1892:1].

The worldwide economic depression initiated by the Panic of 1893 contributed to the eruption of mob activities aimed at the Chinese community in neighboring Redlands in the summer of 1893. These then spilled over into San Bernardino in the days that followed. In late August, 400 anti-Chinese demonstrators rallied in downtown Redlands insisting that employers fire their Chinese help and hire "needy Americans." The mob then marched on Redlands' Chinatown district intending to coerce the Chinese to leave town within 24 hours. Local authorities called in the National Guard. Company E from San Bernardino responded, and grateful Chinese fed them lunch and passed out cigars (Lawton 1987b:104; Padon and Swope 1997:15). In the wake of the near riot, the local sheriff encouraged residents to turn in Chinese who were not registered under the stipulations of the Geary Act for arrest, incarceration, and eventual deportation back to China. Those Chinese not arrested began to desert Redlands; in 2 weeks, fewer than 50 Chinese remained of what had been a population of approximately 200. By 1896, only 24 Chinese (three of which were laborers) remained in the city (Padon and Swope 1997:15). Less than a week after inciting the riot, the leader of the anti-Chinese demonstrators, Clarence Livermore, was arrested for vagrancy. The *Daily Courier* (1893c:3) reported, "This man Livermore is a worthless fellow and a hanger-on around the dives and saloons. He wouldn't work if every Chinaman in the United States was deported."

Echoes of the Redlands riot were quickly heard in San Bernardino. On the first night of the Redlands incident, anti-Chinese demonstrations in San Bernardino prompted residents of Chinatown to board up their doors and windows. The following day, news of a mob descending on Chinatown from Redlands was reported. Later in the day, telephone and electricity lines were cut and gunfire was reported near Third and Waterman. Company E, just returned from Redlands, was called in and stationed as guards around Chinatown (*Daily Courier* 1893b:3; Lawton 1987b:140).

San Bernardino's Chinatown did not again experience such incidents as those of the summer of 1893, nor was there an immediate exodus out of the city as occurred in Redlands. Rather, just as occurred in many small Chinatowns in the West, San Bernardino's Chinese population gradually diminished. Older members died, some returned to their homeland, and others migrated to larger Chinatowns in bigger cities such as Los Angeles and San Francisco. When organized anti-Chinese sentiment subsided in the early decades of the twentieth century, Chinese residents slowly migrated out of Chinatown to integrate into the larger community.

One impetus for San Bernardino's Chinatown abandonment was the 1926–1927 construction of the county courthouse on Arrowhead Avenue along the west side of Block 18. The location is immediately proximate (to the northwest) to the north side Third Street location of many former sites of Chinatown structures. Arda Haenszel noted that at the time of the building of the courthouse, some Chinese began moving to other locations around the corner and north on Mountain View. Laundries, still a principal business enterprise, moved south on Arrowhead,

presumably to continue taking advantage of the Warm Creek drainage (Haenszel 1986:n.p.). By 1941, only a few Chinese remained in Chinatown. Wong Nim, who died that year, was still listed in the 1942 city directory at 201 Third Street where the temple also was located. The only other Chinese still listed as living and doing business along Third Street were the Mun Lee Company, the Chinese Freemasons' Hall, Jim Wo Company, Gee Chung & Company, J. W. Wing, You Lee, Roy Wong, and the New China Company. All but Gee Chung & Company (at 245 1/2 Third Street) were on the north side of the street (SBDC 1942:516).

With the death of Wong Nim in 1941, state and county agencies moved forward with their consolidation of land holdings in the Block 15 and Block 18 properties. The state purchased Wong Nim's Block 15 parcels from his estate in December 1943 (Superior Court 1943a). The Chinese residents of Block 18 were gone by May 1942, their shops and homes leased by the owner to the county for offices (*Sun* 1942:9, 15). By 1951 the state owned and had built on the majority of acreage in Block 15, exclusive of the western portion (mainly Lots 4 and 5), which had been occupied since the 1920s by several commercial properties such as car dealerships, a liquor wholesaler, and junk and scrap yards—activities that would continue into the late 1950s and early 1960s (Haenszel 1985a:7; Sanborn Map Company 1951:44, 51).

URBAN AMENITIES

Direct evidence from the various public utilities regarding urban amenities was not obtained during the course of research. However, inferences may be drawn from several other sources that offer approximate, and in some cases fairly specific, dates for the inclusion of such amenities as city water systems, sewage disposal, and electricity into the Block 15 environment.

Water

For decades, residents of Block 15 relied mainly on two sources for their water: artesian wells, which can be seen dotting the landscape on several Sanborn maps from the 1880s and 1890s, and nearby Warm Creek, which bisects the southeastern corner of the block. The potability of the Warm Creek waters was no doubt adequate for human consumption. In historic times, Native Americans periodically gathered in the area known as Squaw Flat (directly across the creek from the project area in what is now Meadowbrook Park), and the creek had probably been an incentive to the Lúgos in their selection of a homesite in the late 1830s directly north of the project area (now occupied by the county courthouse). After being evicted from the central city area in 1879, San Bernardino's Chinese laundrymen settled near the banks of Warm Creek, at least partly to take advantage of its thermal qualities.

The City of San Bernardino apparently piped water into Block 15 beginning in August 1899. On 3 August, Daniel Bradford, then-owner of Starke's Hotel/Bradford House, noted that "city water put in—[$]10.51" (Superior Court 1899). Bradford also was the landlord for several structures in Block 15, including a second hotel in Lot 6 and the south side of Chinatown in Lots 6, 7, and 8. Whether water pipes were installed in the rest of the block in August 1899 is not known, although it appears likely. Less than a year later, when Bradford sold the northeast corner of the block (in Lots 7 and 8) to Wong Sue in April 1900, Wong Sue obtained the "right to receive through the water pipes upon said premises water necessary for use thereon" (SBCR 1900b:121).

Sewers

During most of the nineteenth century, urban storm water and sewage were carried off in the same systems. Despite the post–Civil War crusade of Colonel George E. Waring, Jr., a "persuasive sanitary salesman," who lectured across the United States on the importance of (among other things) installing independent facilities for sewage, cities were slow to respond. By 1890, few urban centers had responded; San Jose did not separate its sewage until after World War I (Allen et al. 2002:87–88). The large amount of wastewater produced in the Chinese laundries at first was dumped into streets and backyards. Complaints by the populace were one of the reasons these Chinese businesses removed to the Third Street area adjacent to Warm Creek. The wooden drains found in the backyards of Chinatown (Drains 1002, 1031, and 1060) undoubtedly carried laundry water runoff as well as other effluent into the creek drainage. Individual privies served to contain human waste throughout the city.

Installation of sewer pipes first occurred on C Street (Arrowhead Avenue) along the Starke's Hotel frontage in late 1888. The contractors, the San Bernardino Artificial Stone and Improvement Company, completed construction by March 1889. Starke's Hotel may have been connected to the main sewer line under C Street at this time. August Starke and several others were sued in 1889–1890 by San Bernardino Artificial Stone and Improvement Company for refusing to pay assessments for the laying of the pipe (Superior Court 1888d).

An indication that the hotel was not hooked into the main sewer line until possibly as late as 1898 is provided in another notation by Daniel Bradford on 10 January 1898 regarding "Lengthening Main Sewer—[$]15.00" (Superior Court 1899).

Gas and Electricity

Natural gas mains were installed on Third Street in the spring of 1876. Chinese workmen hired to dig the trenches were dismissed before noon of the first day after being harassed (*Weekly Times* 1876a:3). How far in either direction the mains were installed is not known. Historic photographs of Chinatown circa 1890 (see Figure 2-18) and Starke's Hotel circa 1880 (see Figure 6-3) do not show any gas lamp street lighting fixtures. Electricity came to Chinatown by mid-1893. A newspaper story in July of that year stated that "Chinatown sports electric lights" (*Daily Courier* 1893a:3). Again, the historic photographs of Chinatown and Starke's Hotel fail to show either electric street lighting or overhead power lines.

KUAN YIN TEMPLE

The Chinese who arrived in Golden Mountain were generally Buddhists, with historical underpinnings of Confucianism and Taoism. The intellectual and moral pragmatism of Confucian teachings welcomed the new religion from India, which was embraced by Eastern Asia by about 100 A.D. Buddhism provided guidance for living a life of compassion and love, provided hope for an afterlife, and linked ethics in this world with heavenly bliss in the next. The school that spread to China, and eventually to Korea and Japan, was the Mahayana ("Greater Vehicle"), which was tolerant of non-Buddhist ideas and eventually incorporated many established Taoist beliefs into a pantheon of deities. The Indian Buddha Avalokitesvara was transformed into the Chinese Kuan Yin, perhaps the most popular deity of all time. Depicted as

Chinatown Pets

Research turned up two pieces of evidence regarding pets in the San Bernardino Chinatown. During test excavations, the grave of a small dog (Dog Burial 1005) was encountered at about 18 inches below the historic ground surface. The pet had been buried with her collar buckled on, coiled into a sleeping position, and covered with a protective piece of metal sheeting (see Figure 5-19. She was just past being a puppy, about 6–9 months old, and stood about 12 inches high at her shoulder—about the size of a terrier. The grave was located at 201 Third Street along the rear fence line of Wong Nim's store and temple. The second dog was found in a historic photograph, shown poised in the center of Third Street, just in front of Wong Nim's store (Figure 6-17). It was tempting, of course, to imagine that this was the very dog in the grave. However, Sherri Gust, the project faunal expert, estimated that this was a younger puppy of a larger breed. If the dog in the photo was not Wong Nim's, it certainly was someone's pet as it appeared to be quite at home on the streets of Chinatown.

Figure 6-17 **A medium-sized dog is featured in this circa 1906 view of the south side of Chinatown; Wong Nim's store and temple are to the left surrounded by a fence (courtesy of San Bernardino County Museum).**

a man until the early twelfth century, she was known in the West as the Goddess of Mercy and is often mistaken as a Madonna figure. Dedicated to saving all souls, she is particularly appealing to those suffering from misfortune or who are lost or in pain; she is also the purveyor of fertility (Chinn 1969:75; Li 1965:156–159; Williams 1976:44, 241).

As previously noted, Wong Nim reportedly brought with him to San Bernardino in 1876 a statue of Kuan Yin. Prior to 1890, Wong maintained a temple to Kuan Yin on the north side of Third Street on property leased from the Wozencrafts. The temple was not distinguished on early Sanborn maps and its precise location is unknown. In December 1890, Wong Nim moved the temple to a small addition at the back of a building on the southwest corner of Third and B streets that he constructed for that purpose (*Daily Courier* 1890:3) (see Figure 6-10). After about 1911, this would also be the location of Wong's Wey Yuen Company general mercantile as well as his home.

Although monks (both men and women) and monastic life are a major aspect of Buddhism, a priesthood is not required to mediate between people and gods. Buddhism is a very individual religion and does not involve the frequent group gatherings that characterize the worship of Jews, Christians, and Muslims. Buddhists approach the altar of a particular deity, pay homage with incense and offerings, and address their prayers and requests directly. Temples, therefore, do not require large rooms. Small temples are usually dedicated to a particular entity, while larger temples commonly have a primary god at the main altar and several side altars for other deities. Small altars abound in the Buddhist world in kitchens, homes, businesses, factories, fields, and along travel routes, providing ample opportunity for communicating with gods and ancestors.

Wong Nim's Kuan Yin Temple occupied an approximately 18 by 20 foot addition accessed from both an exterior door and through the main building. The main building was a one-story frame structure measuring about 35 by 45 feet with a front porch facing B Street. Wong Nim was living in this building by 1910, and his Wey Yuen Company store operated from here by 1913. In 1906, a fence snugly surrounded the small complex (in 1911 this was described as a 3-foot-high picket fence). Chinese temples on the West Coast varied from large, elaborate buildings—such as in Weaverville and Oroville—to mere lean-tos or sheds. It was common for temples to be incorporated into larger buildings, frequently on the second floor (Chinn 1969:73–76). Nearby Riverside's Kuan Kung Temple was housed on the upper story of the Chee Kung Tong building, a frame building constructed in 1900 (Great Basin Foundation 1987[2]:33–35). Like the temple in San Bernardino, the Riverside Sanborn map recorders mistakenly identified the entire building as the "Joss House." This also occurred in 1891 at San Jose's Woolen Mills Chinatown, where altars at the entrance to a theatre inspired the Sanborn recorders to label the entire building a "Joss House" (Allen et al. 2002:73). Stockton's temple, a two-story brick building constructed in 1882, also was dedicated to Kuan Kung, with other deities on side altars. Although the entire building is referred to as "the temple," the altar and sanctuary were on the second floor along with sleeping rooms for lodgers, while the bottom floor housed an herb shop and a doctor's office in the front and a garment factory in the rear (Minnick 1988:41–42). Kuan Kung, one of the most popular gods, was a ruddy-complexioned fighter for justice who was very popular with Chinese merchants (Chinn 1969:75).

Operating a temple necessitated some responsibilities as the facility was both "a sacred and theatrical enterprise" (Great Basin Foundation 1987[2]:35). The temple sponsor served as vestryman and custodian, organizing rites and processions, keeping the temple clean, stocking supplies of incense and other offerings, and providing access to visitors. Some financial support came from worshippers and local merchants, but it was likely not a profitable enterprise (Great Basin Foundation 1987[2]:35). Wong Nim was certainly the owner and operator of the temple.

However, by 1910 he employed a caretaker to live in a small, narrow lean-to room constructed along the south side of the temple. The facility is documented in the account of a well-publicized Chinatown murder in 1911, which is discussed in the following section. Wong Nim's popular Kuan Yin Temple reportedly attracted Chinese pilgrims from as far away as Los Angeles and San Diego (Anderson and Lawton 1987:38).

Figure 6-18 Interior of the Kuan Yin Temple with William Berg, who purchased the furnishings before its demolition in 1944 (courtesy, Special Collections Library, University of California, Riverside).

Local temples were locations for annual celebrations, notably Chinese New Year (the second new moon after winter solstice) and the Harvest Moon Festival (the fifteenth day of the eighth moon). At these times, Chinese from the surrounding area would gather for joyous festivities. There would be a parade, firecrackers, and food; a priest might come from a nearby city for a blessing, and a stage or dance troupe also might perform. Particularly at the New Year, non-Chinese were drawn into the events by infectious hospitality and token gift-giving. Temples also could provide a venue for periodic market days in small towns, when workers would come to Chinatown on their day off and merchants, tradesmen, and farmers would set up booths to sell their wares (Suellen Cheng, Board Member, Chinese American Museum, and Curator, El Pueblo de Los Angeles Historical Monument, personal communication 2002). These events often took place near the town temple, where visitors could make their offerings. The role of Wong Nim's Kuan Yin Temple as a point of pilgrimage for Chinese throughout Southern California (Holland 1944, in Great Basin Foundation 1987[2]:38–42) likely coincided with both annual and local gatherings. A pig roasting oven, built adjacent to the temple in circa 1930, likely provided food for such events (see Section 6.4).

A photograph of the interior of the temple was taken in 1944, just prior to the building's demolition (see Figure 6-18). The figure of Kuan Yin is centered on the altar, with numerous cups and small plates for offerings scattered along its surface. Prominent in the photograph is William Berg, a city health inspector and antique collector who purchased the temple's contents prior to demolition. The statue of Kuan Yin, however, went to Wong Nim's grandson, Lim Dawg, who gave it to San Bernardino restaurateur Bing S. Wong (Bing's father is depicted in Figure 6-12). Dressed in new robes, the statue was displayed in Bing's Cathay Inn Restaurant until the 1980s, when it was given to the City of San Bernardino Historical and Pioneer Society, where it is now on display. Under the cloth covering is the serenely poised, gold-painted wooden figure brought to San Bernardino by Wong Nim more than 125 years ago (Figure 6-19). Her face is darkened from the soot of incense and offerings, a reminder of the multitudes who came to her with prayers and thanks.

Figure 6-19 Kuan Yin statue from Wong Nim's temple curated at City of San Bernardino Historical and Pioneer Society (photograph by Julia Costello).

MURDER IN THE TEMPLE

> Legend has it that a murder was committed there long ago. The story goes that a gang of tough young American kids who called themselves the "Vino Gang" used to gather in "Squaw Flat," where Meadowbrook Park is now, to drink "vino." One night when the wine went to their heads, they went over to Chinatown, killed the keeper of the joss house, and made away with the coins from the collection boxes [Holland 1944:13].

Although she got few of the details right, Holland (1944) was correct in one regard: there was indeed a murder—a particularly brutal murder—in the temple in February 1911. What follows is gathered mainly from materials found in the San Bernardino County Superior Court case file in the prosecution of Ike Wines for the murder of Mah Wing (sometimes Mar Wing), the elderly Chinese chair-mender and temple caretaker. (Perhaps "Wines" is the source for Holland's identification of the "Vino" gang as the perpetrators, although no evidence was found that Wines acted in concert with others.) Transcripts of Wines' two trials are missing from the court file housed at the San Bernardino County Archives and have not been found to date. Therefore, this account relies on County Coroner's inquest testimony, jury instructions, attorney motions, and other documents included in the file.

Just minutes before 11:00 a.m. on 12 February 1911, Wong Tong, a partner in Wong Tong and Yee Yick Company, general merchandisers, made his way across Third Street to the temple. This was the last day of Chinese New Year and he wished to make an offering to Kuan Yin. On approaching the temple at the back of Wong Nim's Wey Yuen Company store at 201 Third Street, it struck him as a little odd that the door to caretaker Mah Wing's quarters was closed. Mah Wing resided in a small lean-to structure adjacent to the temple and with a separate entrance. When he wasn't taking care of the temple, Mah Wing employed himself repairing chairs. Wong Tong thought it unlikely Mah Wing would have gone out at this time of day, especially on the last day of the New Year celebrations. He tried the door, found it unlocked, and opened it. Lying just inside the door was the body of Mah Wing, a potato sack covering his head, his blood spread over the floor. Wong turned and ran to Third Street, yelling that Mah Wing had been murdered. He then found a telephone and called the police (SBDC 1906:236; Superior Court 1911b).

Officer Ed Poppett, knowing only that there was some kind of trouble in Chinatown, was the first to arrive at the scene. Poppett immediately called Chief of Police Walter Shay who, like Poppett, rode to the scene on a bicycle, arriving about 11:00 a.m. Without moving the body, Shay made a brief inspection. Mah Wing was lying face down "about two-thirds over on his stomach." A knife with blood on it was on the floor about 3 feet from the victim's head. Mah Wing's left hip pocket was turned inside-out. The sack that had covered his head had been removed by other Chinese, who had come in before the police arrived to see if Mah Wing might still be alive. Wong Tong testified before the coroner the following day that when the potato sack had been lifted, he saw the knife lying on Mah Wing's head. By the time Shay arrived, several sacks were under Mah Wing's head (Superior Court 1911b).

Coroner E. P. Fuller convened an inquest on 13 February in the undertaking parlors of Stephens and Sons Mortuary, where the body had been taken and where it lay during the testimony. Dr. J. W. Aldridge, who had performed the autopsy the day before, testified that he had found six

knife wounds. The most deadly of these had severed the arch of the aorta. This wound alone, Aldridge testified, would likely have killed Mah Wing within a few seconds. But Aldridge had also found a massive, crushing fracture to the base of the skull from a blow strong enough "to have killed a horse. He never would have known what hit him." Aldridge could not say which was the fatal wound, but said that either would have been sufficient. He speculated the murder had taken place on the morning of 12 February (Superior Court 1911b).

Justice of the Peace G. M. Pittman and Chief Shay both testified that they had known Mah Wing in life and that he was generally a "quiet and inoffensive" old man of about 60 years of age, not known to be "quarrelsome." Pittman even recalled a puckish side to Mah Wing's personality when he told of his once having been arrested for sliding down a fire house pole (Superior Court 1911b).

By the time the Coroner's Jury had been convened, Chief Shay already had a suspect in custody. Shay had discovered heel marks near the picket fence that surrounded the temple and Wey Yuen Company. Matching marks were found in a field southwest of the temple. Together with County Sheriff George Hewins and W. A. Brazie, the Chinese inspector for the U.S. Immigration Service, Shay had followed the tracks to a house off Arrowhead Avenue near the city's gas plant. At some point in the course of the investigation on 12 February, Shay had come up with a pair of shoes that he said matched the heel marks found by the fence and the tracks leading to the house off Arrowhead. The shoes purportedly were stained with blood. They belonged, according to Shay, to a black man named Ike Wines (Superior Court 1911b).

Isaac "Ike" Wines, who described himself as a "common laborer" who did odd jobs, was 51 years old at the time of arrest. He was born in Kansas in 1860 or 1861. Census information states that his mother was born in Missouri and his father was Portuguese (Superior Court 1911a; U.S. Census Bureau 1910:n.p.).

The trial of Ike Wines for the murder of Mah Wing commenced with jury selection on 17 April 1911. Little is known about the trial itself because transcripts are unavailable and only hints as to what witness testimony contained can be gleaned from documents contained in the case file (Superior Court 1911a, 1911c:299, 302). Among the witnesses called by District Attorney R. F. Goodcell were several Chinatown residents. Wong Tong, who had found the body, was called of course, as was Wong Nim, owner of the temple. On 17 May, Wong Nim was requested to bring in Mah Wing's keys and the keys to the temple; they were entered into evidence. Wong Sing testified that he had seen Wines jump over the fence outside the temple on the morning of the murder. The trial ended on 3 June 1911 with a hung jury. Judge Benjamin Bledsoe set a retrial date for 17 October 1911 (Superior Court 1911b, 1911c:299, 302).

With 17 pages of instructions from Judge Bledsoe, the second jury found Wines guilty of second-degree murder on 28 October (Superior Court 1911c:299). Sentencing was scheduled for 30 October and then continued when Wines' attorneys, Daley and Byrne, filed a motion for a new trial based on the jury having received testimony out of court; on the court having "misdirected the jury in matters of law" . . . and "erred in its decisions of questions of law arising during the course of the trial"; and that the verdict was contrary to the law and to the evidence

introduced. Bledsoe denied the motion and set sentencing for 10 November 1911 (Superior Court 1911b).

On 10 November, prior to sentencing, Judge Bledsoe asked Wines if he could offer any reason why sentence should not be pronounced. Wines responded:

> Well, I could give a good many reasons why it should not be pronounced, but I don't know as it would do any good to state them. The disposition toward me in this case has been anything but fair and just. I dare say that if a similar case occurred in China, that the Chinese would not send me to the penitentiary. . . . Take this case in China; I feel sure that the Chinese would not send a man to the penitentiary on the evidence as brought against me. I have often wondered in this case how far back I was in China. I thought I was in America, in a white man's country. I will tell you that these hands never shed Mar [sic] Wing's blood; and it will be found out some day; lots sooner than you think [Superior Court 1911b].

Judge Bledsoe then sentenced Ike Wines to 25 years in the state prison at San Quentin, stating that because of the jury's decision to convict him of second-degree murder instead of first-degree murder, he was disinclined to sentence him to the maximum term of life imprisonment. "Neither," Bledsoe added, "do I feel that the minimum punishment, ten years imprisonment, should be passed upon the defendant; because I think the crime of which he stands convicted and of which I am persuaded he is guilty requires a more serious penalty than that." Before the sentencing procedure was complete, Ike Wines' attorney, W. E. Byrne, notified the court of his intent to file for an appeal (Superior Court 1911b).

Wong Nim's keys were returned to him on 15 November (Superior Court 1911c:302), suggesting that the temple must have been closed throughout the term of the two trials.

Research suggests that Wines' appeal of the guilty verdict never went any farther than attorney Byrnes' notice of intent. Indeed, Byrnes may simply have been executing a pro forma exercise for his client's sake. Regardless, 4 days after sentencing, on 14 November 1911, Ike Wines was delivered into the hands of the warden at San Quentin State Prison to serve out his 25-year sentence for the murder of Mah Wing. His vital statistics, taken at the time of delivery to San Quentin, recorded Wines as a 51-year-old, 5-foot 6 3/8-inch male with a "black" complexion, maroon-colored eyes, and black hair. His occupation was listed as "Gardner" [sic]. Wines was registered as prisoner No. 25267 (California State Prisons 1911:61).

On his arrival, three photographs were taken of Wines. The first (Figure 6-20 [left]) shows a mustachioed man dressed in a tweed jacket, a collarless, light-colored shirt, and a bowler hat looking directly at the camera, perhaps with an expression of resignation or some defiance. The second (not shown) is a profile view without the hat. The third (Figure 6-20 [right]) pictures Wines, his head shaved, his moustache shorn, wearing the classic "striped pajamas" prison garb made of coarse denim. His gaze is not directly into the lens of the camera. A penciled notation above the first photograph tells that Ike Wines died in San Quentin on 12 August 1918.

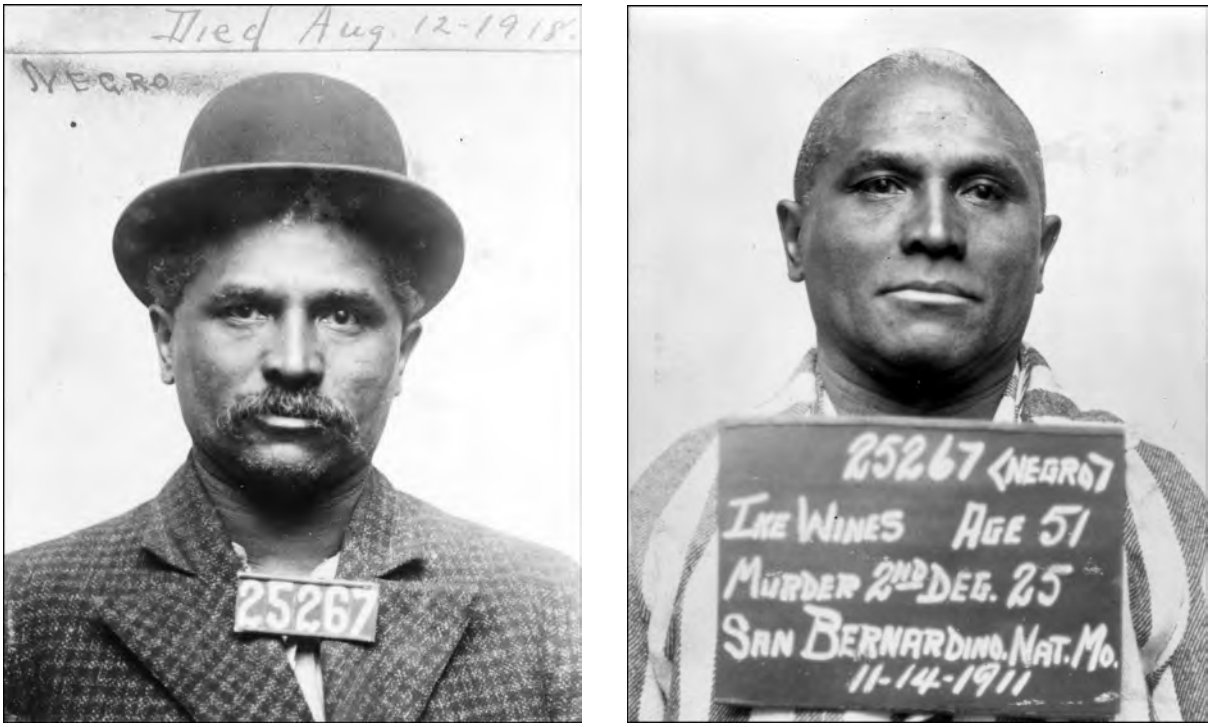


Figure 6-20 Isaac "Ike" Wines, convicted of the murder of Mah Wing: (left) shortly after his arrival at San Quentin State Prison to begin his 25-year sentence (notice of his death in August 1918 is penciled at top); (right) after the prison barber shaved his head and moustache and he was issued the traditional prisoner's uniform (courtesy, California State Archives).

6.4 CHINATOWN MEALS

Food has always been important in the Chinese culture. When living abroad, Chinese made efforts to prepare and serve traditional foods in a traditional manner. A trans-Pacific network of merchants ensured that imported cooking utensils and tablewares, preserved foods, and other delicacies were available in even the smallest Chinese community. Vegetables were grown by Chinese gardeners, and pork, fish, and other meat came from local suppliers. Aspects of traditional foodways can be measured archaeologically through table ceramics, commercial food vessels, and in the remains of meals (bones and flora). Many food items leave few traces in the ground, and information on their use and importance must be gleaned from documentary and oral history sources.

CERAMIC FOOD VESSELS

The following discussion addresses artifacts related to the category of food preparation and consumption. This includes remains of items such as plates, bowls, cups, tumblers, goblets, teapots, platters, salt shakers, knives, forks, spoons, pots, pans, and ladles. The collections of artifacts from the three Chinatown privies (1035, 1056, and 1058) and from the backyard drains and sheet refuse are discussed and compared. For the latter assemblage, several features (Drains 1002, 1031, and 1060; Sheet Refuse 1057) have been combined as they all represent the same type of secondary deposit accumulating over many years. Pit 1032 has not been included as it yielded only four items in this category. Comprehensive inventories of the artifact categories discussed below can be found in Artifact Table 1 for each feature (see Chapter 5).

The types of vessels and implements used in preparing and serving the food are informative. As is common in archaeological collections from Chinatowns, most of the artifacts from the San Bernardino features represented tablewares associated with eating and serving food (Table 6-15). Of these, bowls are by far the most prevalent, representing 50 percent of the ceramic vessels overall (Table 6-16). The medium bowl's size and shape was developed to complement traditional foods eaten with chopsticks while hand-holding the vessel (types of ceramic bowls are discussed further below). Under the category flatware, all of the utensils represented are Chinese ceramic spoons, except for one table knife from Privy 1035 and one fork from the backyard refuse deposits (Drain 1002/Sheet Refuse 1057).

Table 6-15
Food Preparation and Consumption Vessels by Function in San Bernardino Chinatown Deposits

	Percentage by Feature			
Category	**Drains/Sheet Refuse[a] (MNI = 89)**	**Privy 1035 (MNI = 112)**	**Privy 1056 (MNI = 24)**	**Privy 1058 (MNI = 34)**
Container	1	20	0	0
Cups and Mugs	0	5	0	9
Drinking Vessel (tumblers, stemware, etc.)	0	10	4	6
Kitchen (pot, baking pan, mixing bowl, etc.)	0	13	4	0
Serving (platter, covered dishes, etc.)	11	10	0	0
Tableware (plates, bowls, saucers, etc.)	69	31	75	50
Flatware (fork, knife, spoon, etc.)	8	8	17	18
Tableware/Serving	11	4	0	18
Total[b]	***100***	***101***	***100***	***101***

a - Drains 1002, 1031, and 1060; Sheet Refuse 1057.
b - Percentage totals greater than 100 are due to rounding.

Table 6-16
Ceramic Food Preparation and Consumption Vessels by Form in San Bernardino Chinatown Deposits

	MNI by Feature					
Category	**Drains/Sheet Refuse[a]**	**Privy 1035**	**Privy 1056**	**Privy 1058**	**Total**	**Percent**
Medium/Unknown Bowl	44	27	13	16	100	51
Large Bowl	1	1	0	0	2	1
Dish	11	7	1	2	21	11
Serving Dish	5	1	0	0	6	3
Plate	4	3	3	0	10	5
Spoon	6	7	4	6	23	12
Teapot/Lid	0	6	0	0	6	3
Cup	0	5	0	0	5	3
Tiny Cup	1	2	0	3	6	3
Other/Hollow	8	3	1	5	17	9
Total[b]	***80***	***62***	***22***	***32***	***196***	***101***

a - Drains 1002, 1031, and 1060; Sheet Refuse 1057.
b - Percentage total greater or less than 100 is due to rounding.

When examining drinking vessels represented on Chinese sites, ceramic cups generally indicate traditional tea drinking, while glass vessels suggest other beverages; "tiny" ceramic cups are for Chinese alcohol. Within the deposits from the conservative vegetable sellers' community in Los Angeles there were more than twice as many cups as glasses (Costello 1999:216). Artifact deposits from the Woolen Mills Chinatown in San Jose (1887–1902) have slightly more glasses than cups (Allen et al. 2002:137–140). In these San Bernardino Chinatown privies, however, only Privy 1058 shows a dominance of cups. Privy 1035 yielded fragments of 11 glass drinking vessels (nine tumblers, a goblet, and a cordial glass), two tiny cups, and only five teacups (fragments of three teapots also were recovered). The low indicators for tea drinking in Privy 1035 may reflect the gaming nature of that collection.

Privy 1035 also is distinguished by having the widest variety of cooking items. It appears as though a kitchen shelf were cleared out wholesale and dumped into the privy. Items represented include an enamelware kettle, pot, and large and small saucepan; a can opener; a frying pan; a sauce pot; a tube pan; six serving dishes; a kitchen fork; and a ladle. The only other feature that contained any kitchen items at all was Privy 1056, which contained a fragment of a Chinese brown glazed stoneware "pan." Many of the items in Privy 1035 were whole, indicating a rapid filling event and then closure of the feature.

Chinese Porcelains

Chinese porcelains (and porcelaneous stonewares) dominate the ceramic tablewares from San Bernardino's Chinatown (Figure 6-21). Although some European and American wares were used, they constitute only about 20 percent of the entire collection (Table 6-17). The Chinese began developing superior pottery nearly 2,000 years ago, and by the ninth century had invented the beautiful and durable white-translucent ceramic known as porcelain. Porcelain wares were sought by foreign traders and, by the fourteenth century, were influencing the development of the

Figure 6-21 Examples of major types of Asian porcelains: (a) Hand-painted (Double Happiness); (b) Bamboo; (c) Celadon; and (d) Four Flowers (from the collection of Julia Costello; photograph by Alice Olmstead).

European ceramic industry (it is no coincidence that the English word for fine tablewares is "China"). Although Europeans succeeded in producing a porcelain in the 1800s, the Chinese always preferred their traditional vessels. They were made in shapes and styles developed to match their cuisine and bore traditional glazes and hand painting that were part of their food culture. A measure of the Chinese regard for English ceramics is seen in an inventory of the Kwong Tai Wo store in Marysville (1871–1883), where five "barbarian plates" are listed (Sando and Felton 1993:156, 163).

Table 6-17
Ceramic Food Preparation and Consumption Vessels by Ware in San Bernardino Chinatown Deposits

	MNI by Feature					
Category	**Drains/Sheet Refuse[a]**	**Privy 1035**	**Privy 1056**	**Privy 1058**	**Total**	**Percent**
Chinese Wares						
Chinese Brown Glazed Stoneware	1	0	1	0	2	1
Asian Porcelain	67	48	20	26	161	79
Total	*68*	*48*	*21*	*26*	*163*	*80*
Euro-American Wares						
Porcelain	8	0	1	0	9	4
Semi-Porcelain	0	3	1	2	6	3
White Improved Earthenware	10	13	0	4	27	13
Total	*18*	*16*	*2*	*6*	*42*	*20*
Total	***86***	***64***	***23***	***32***	***205***	***100***

a - Drains 1002, 1031, and 1060; Sheet Refuse 1057.

The Chinese were pragmatic, however, and non-Chinese vessels were used when necessary. Comparison of ceramic origins from other Chinese sites (Table 6-18) shows that the proportion of Asian versus Euro-American vessels from the San Bernardino Chinatown is similar to that of the Los Angeles vegetable sellers. The San JoseWoolen Mills Chinatown had a significantly higher number of Euro-American wares; perhaps this is related to its "company town" nature. The relatively high proportion of Euro-American wares in the early Sacramento Chinatown is seen by the authors as evidence that early Chinese communities were not as segregated from Euro-American culture as were their later counterparts (Layton 2002:202–204; Praetzellis and Praetzellis 1997).

The most popular decorative styles for the Asian ceramics from San Bernardino Chinatown are Four Flowers (also called Four Seasons) and Celadon, representing 38 and 33 percent of the deposit, respectively (Table 6-19). The Four Flowers pattern consists of four flowers painted in overglaze polychrome enamel around the outside of bowls and the inside of plates, small dishes, and spoons. The four floral motifs are cherry for winter, water lily or lotus for summer, chrysanthemum for autumn, and peony for spring, with a peach for longevity in the center of the interior. Typically the Four Flowers vessels include a red base stamp, either a knot of longevity or a square, stylized reign mark. Celadon wares commonly have a thick wintergreen-color glaze

Table 6-18
Comparison of Ceramic Food Preparation and Consumption Vessels by Origin in California Chinatowns

Collection	Dates of Deposit	MNI	Origin of Ceramics (%) China	Europe or U.S.	Japan	Asian, Undiff.
San Bernardino Chinatown (this report)	1876–1920	205	80	20	—	—
Los Angeles Vegetable Sellers (Costello et al. 1998)	1899–1919	255	74	20	3	3
Woolen Mills Chinatown[a] (Allen et al. 2002)	1887–1902	63	52	48	—	—
Sacramento Chinatown (HI56) (Praetzellis and Praetzellis 1997)[b]	1855–1860	130	47	53	—	—

a - Feature 501, archaeologically excavated.
b - Features 903, 953, 979, 702, 719.

Table 6-19
Asian Porcelain by Decoration in San Bernardino Chinatown Deposits

Category	MNI by Feature Drains/Sheet Refuse[a]	Privy 1035	Privy 1056	Privy 1058	Total	Percent
Bamboo	9	2	4	6	21	13
Celadon	24	15	7	8	54	33
Celadon, Hand Painted	0	1	0	0	1	1
Four Flowers	28	22	8	3	61	38
Hand Painted	3	3	0	8	14	9
Undecorated	3	5	1	1	10	6
Total	***67***	***48***	***20***	***26***	***161***	***100***

a - Drains 1002, 1031, and 1060; Sheet Refuse 1057.

with blue character marks on the base. The few Celadon vessels with overglaze hand painting are most likely Japanese wares. The Bamboo pattern (once also referred to as Three-Circles-and-Dragonfly, Swatow, and Longevity) is on a cruder gray porcelaineous stoneware body and consists of a handpainted underglaze design in blue, mainly floral elements. Characteristically, Bamboo vessels have a blue line where the foot joins the body, another at the rim, and a third on the interior with a comma-like mark in the center of the interior. One type of porcelaineous stoneware bowl used as a lid for large storage jars is discussed below under "Food and Storage Jars."

Economic Indicators

The Marysville Kwong Tai Wo store inventory mentioned above included prices for various wares, allowing for a ranking of the types by cost (Sando and Felton 1993). Bamboo and pre-1860 Double Happiness bowls were the least expensive, while Celadon and Four Seasons bowls cost the most. This has led researchers to address the relative economic status of a population by

the proportion of expensive to less expensive wares. To standardize the comparison, one vessel type standard to most of the decorative styles—the medium bowl—is used. The Four Flowers design is not as useful for this comparison because it is infrequently found in a medium-bowl form; it is more usually seen as large serving bowls or plates. When broken into fragments, it is often very difficult to distinguish these types, making archaeological identifications somewhat unreliable.

Ruth Ann Sando and Larry Felton observed that the cheaper Bamboo bowls (and, pre-1870, the cheaper Double Happiness bowls) constitute up to 80 percent of the Chinese tableware at railroad camps and other rural construction and mining sites, while the wintergreen (Celadon) vessels are more common at many post-1870 village and urban sites. They attributed this to the rural camps being composed of low-paid workers and the towns having a more affluent population (Sando and Felton 1993:165). In addition to economic variables, variation in the types of wares present on any one site is also influenced by availability, "discount" or secondhand items, and consumer choice.

In Table 6-20, the medium-bowl types for eight collections from California Chinatowns is presented. Although other important excavations of Chinatowns have occurred, those selected for this comparison employed similar excavation techniques and data presentations or addressed similar/comparable deposits and, therefore, are more easily comparable to the San Bernardino excavations. The collections are ordered from top to bottom according to the relative presence of Bamboo and Double Happiness bowls (added together) as compared to Celadon bowls.

Table 6-20
Comparison of Types of Medium-Sized Asian Bowls from California Chinatown Excavations

			Ceramic Types (%)					
Collection	**Dates of Deposit**	**MNI**	**Bamboo**	**Double Happiness**	**Celadon**	**Hand Painted**	**Undec./ Other**	**Total**
Sacramento Chinatown (HI56) (Praetzellis and Praetzellis 1997)[a]	1855–1860	62	5	13	31	29	22	100
Los Angeles Vegetable Seller (Costello et al. 1998)	1899–1919	67	22	—	64	6	9	101
Redlands Chinatown (Padon and Swope 1997)[b]	1887–1935	39	31	—	64	—	5	100
San Bernardino Chinatown (this report)	1876–1920	63	33	—	56	9	2	100
Los Angeles Chinatown, Metrorail (in Costello et al. 1998: 249)	1880s–1935	717	45	—	44	7	4	100
Ventura Chinatown (in Costello et al. 1998:249)	1880s–1907	25	48	—	36	16	0	100
Folsom Chinatown (in Allen et al. 2002:146)	1860–1900	40	53	13	33	0	0	99
Woolen Mills Chinatown, San Jose (Allen et al. 2002)[c]	1887–1902	19	68	—	32	0	0	100

a - Features 903, 953, 979, 702, 719.
b - Feature 6.
c - Feature 501, archaeologically excavated.

The Bamboo/Double Happiness and Celadon types appear to have an inverse relationship, with the numbers of Bamboo/Double Happiness examples rising as the Celadon type declines. The San Bernardino Chinatown ranks toward the upper end of the economic scaling provided by these bowls, exceeded only by the community of vegetable sellers in Los Angeles' Chinatown, the Redlands Chinatown collection, and the early companies of Sacramento. Commenting on the barracks-like compounds of the vegetable sellers, the authors of that report noted:

> The vegetable sellers, however, were not poor. Although living in spare communal circumstances, they occupied the upper ranks of the major economic industry of Los Angeles Chinatown. While their simple lifestyles may have precluded elaborate residences, they apparently did not sacrifice the enjoyment of dining on fine china [Costello 1999:245].

The 8 percent of "other" ceramics for the Los Angeles vegetable sellers largely consists of Japanese wares, reflecting the growth of adjacent "Japan Town" after the 1890s. Folsom Chinatown also yielded a large number of Double Happiness bowls, reflecting the collection's wide time spread from the 1860s to 1900 (Maniery, in Allen et al. 2002). The combined Bamboo/Double Happiness count totals 68 percent of the assemblage. The Sacramento Chinatown is more difficult to compare because of its very early date range. The high number of "other" decorative types reflects the much wider variety of ceramic types that are typically present in these early sites, a diversity that is thought to have disappeared by the 1860s with the standardized and efficient import monopoly achieved by Chinese merchants (Layton 2002:204–205). With a proportion of nearly twice as many Celadon bowls as Bamboo and Double Happiness bowls, however, the Sacramento collection appears to rank fairly high in comparison to the other sites. The lowest ranking Chinatown is Woolen Mills. Somewhat of a "company town" that competed with other Chinatowns in San Jose for residents, it never fulfilled the visions of its developers and was in existence for only 15 years (Allen et al. 2002).

Food and Storage Jars

Preserved and prepared foods were imported from China in massive amounts. Many of the shipping vessels were made from coarse ceramic stoneware covered (often incompletely) with a brown glaze (Figure 6-22). The vessels came in a wide variety of sizes and held an array of foods (Yang and Hellman 1998).

> Small jars with a spout on one side were used to hold food items such as soy sauce, black vinegar, peanut oil, and liquor. Small bulbous bottles with a flaring rim held both distilled and fermented alcoholic beverages. Wide-mouth jars came in various sizes and were used for preserved foodstuffs such as tofu, beans, and bean paste, pickled turnips, cabbage, and shrimp paste. Large, globular, small-mouthed jars were usually used for liquids, hard liquor, soy, and oils and were commonly reused for water storage or sometimes as pickling crocks. The smaller sized jars with straight sides were for household use and contained herbs, preserved tofu, and other cooking substances. They could also be used to steam food. Barrel jars are very large and straight-sided. They were used for shipping and storage of large quantities of foodstuffs, such as rice, grains, soybeans, sheet sugar, and sticky rice powder. These large jars were also used to ship the bones of the dead back to China [Hellman, in Costello 1999:252].

Figure 6-22 Chinese food-jar vessel forms: (a) liquor bottle; (b) large storage jar, barrel jar; (c) spouted jar; (d) straight-sided jar; (e) large storage jar, globular jar; and (f) wide-mouthed jars (from the collection of Julia Costello; photograph by Alice Olmstead).

The occurrences of food jars in the San Bernardino Chinatown deposits are presented in Table 6-21. Fragments of medium jars are dominant in all the collections, with Privy 1035 and the drains and sheet refuse showing the greatest variety. Overall, medium jars constitute nearly half the San Bernardino collection, with small jars second in quantity at 17 percent and large storage jars at 11 percent. Pieces of a large globular jar from Privy 1035 have characters written in glaze in a reserved fan-shaped area above the shoulder identifying "100 Thousand Pearls/Treasures" from Jiujiang; Jian Xi Province (Figure 6-23).

Another nearly complete large storage jar with a square-cut rim (cf. Great Basin Foundation 1987[2]:243, Figure 22) was found in Privy 1056 with its stoneware bowl/lid still in place (Figures 6-24 and 6-25). The bowl rests neatly into the jar mouth and was sealed in place for shipment with thickly applied plaster. The shallow stoneware bowl is covered with a gray slip and decorated around the exterior with a block-printed motif repeated five times (the plaster was not removed so the interior characteristics are not known). It is similar to the plates from Malaysia discussed by Willetts and Poh (1981:87–94) with their interior block-print designs. Although more common in southeast Asia than North America, similar bowls used as jar lids also were found during the excavation of Riverside's Chinatown (Great Basin Foundation 1987[2]:289, Figure 14).

Collections have more meaning when compared with other excavated Chinatown sites (Table 6-22). Terminology sometimes differs between analysts, and efforts were made to correlate some categories. "Large storage jar" includes barrel jars, globular jars, recessed-rim jars, and "shipping" jars; "medium storage jar" includes wide-mouth jars, lug-handled jars, and

shouldered jars. Lids were excluded from the tables as their presence is represented in the total vessel count. The Woolen Mills material was omitted from this comparison as its categories were too general.

Table 6-21
Asian Stoneware by Form in San Bernardino Chinatown Deposits

	MNI by Feature						
Category	**Drains/Sheet Refuse[a]**	**Privy 1032**	**Privy 1035**	**Privy 1056**	**Privy 1058**	**Total**	**Percent**
Brown Glazed, Small Storage Jar	8	1	14	3	3	29	17
Brown Glazed, Medium Storage Jar	31	4	26	9	9	79	48
Brown Glazed, Large Storage Jar	6	0	4	6	3	19	11
Brown Glazed, Soy Sauce Jar	6	1	5	2	0	14	8
Brown Glazed, Straight Sided Jar	1	0	4	0	2	8	5
Brown Glazed, Liquor Bottle	4	4	7	0	2	16	9
Green Glazed, Ginger Jar	3	0	1	0	0	4	2
Total[b]	***58***	***10***	***61***	***21***	***19***	***169***	***99***

a - Drains 1002, 1031, and 1060; Sheet Refuse 1057.
b - Percentage total less than 100 is due to rounding.

Figure 6-23 A globular jar from Privy 1035 with characters reading "100 Thousand Pearls (or Treasures), Jiang Xi, Jiujiang" (photograph by Keith Warren).

Figure 6-24 **The exterior of the shallow bowl from Privy 1056 used as a jar lid (photograph by Julia Costello).**

Figure 6-25 **The bowl lid in place with a remnant of its plaster sealant (photograph by Julia Costello).**

Table 6-22
Asian Stoneware by Form in California Chinatown Excavations

Category	Percentage by Collection[a]			
	San Bernardino (MNI = 169)	L.A. Vegetable Sellers (MNI = 31)	L.A. Chinatown (MNI = 1,049)	Sacramento (HI56) (MNI = 79)
Brown Glazed, Small Storage Jar	17	16	6	7
Brown Glazed, Medium Storage Jar	48	16	15	20
Brown Glazed, Large Storage Jar	11	26	9	44
Brown Glazed, Soy Sauce Jar	8	6	22	8
Brown Glazed, Straight-Sided Jar	5	16	10	5
Brown Glazed, Liquor Bottle	9	19	38	15
Green Glazed, Ginger Jar	2	0	0	1
Total[b]	***100***	***99***	***100***	***100***

a - See Table 6-20 for references.
b - Percentages less than 100 are due to rounding.

The Los Angeles Chinatown collection is by far the largest, representing recovery from numerous features encountered during construction of the Metrorail (Greenwood 1996). Although individual deposits could not be correlated with specific households, overall the distribution of types is likely representative of the community as a whole. The small number of large storage jars indicates a population of largely individual households who did not purchase food in bulk, likely having access to retail suppliers. This collection also shows the highest number of liquor bottles and soy sauce jars. The enormous collection from Riverside (Great Basin Foundation 1987) would have provided important comparative information, but the relative occurrences of different types of stoneware were not quantified.

The Los Angeles vegetable sellers were a small community of men who distributed vegetables throughout the city, first on foot and then from wagons (Costello 1999). As they conducted commerce with non-Chinese residents, they all spoke English and all had been in the country for many years. The vegetable-selling industry was the primary occupation in the Los Angeles Chinatown by the turn of the century, and these men were at the forefront of this profession. Although residing in town, they lived communally, as is seen in the bulk purchases represented by greater numbers of large storage jars and smaller numbers of individual soy sauce jars.

The Sacramento Chinatown (HI56) collection represents merchants and boardinghouses dating to the mid-1850s (Praetzellis and Praetzellis 1997). The unique dominance of large storage jars from this site appears to identify bulk purchases made by these commercial enterprises.

San Bernardino has the highest percentage of medium storage jars of all the collections, and correspondingly small percentages of straight-sided jars and liquor bottles. This seems to suggest that food was prepared on a household level, or at least that the deposits that were recovered did not include refuse from a store. The small number of liquor bottles seems incongruous in light of the clear evidence for a gambling hall found in Privy 1035. The gamblers may have preferred less expensive American whiskey to imported Chinese varieties.

ROASTING OVENS

In the backyards of San Bernardino's Chinatown, two outdoor roasting ovens were discovered. Built of brick, these cylindrical structures were both 3.5 feet in diameter and had a fire mouth at the bottom that allowed for building the fire and keeping the coals hot. Both ovens likely once stood about 5 feet high with an opening at the top for lowering in a whole pig. Roasting Oven 1001, behind 19 Third Street (see Figure 6-14) had only the bottom course of brick remaining, revealing its circular shape and the outline of the fire mouth to the west. Its bottom was covered with closely placed cobbles that were encrusted with charcoal and ash. Surrounding the oven mouth, a spread of fire clean-out debris was mixed with artifacts to form a rich layer of refuse (Sheet Refuse 1057). Roasting Oven 1036 was better preserved. Constructed adjacent to the Kuan Yin Temple, it was preserved to a height of 2.5 feet. The bricks were loosely laid and clearly recycled. The fire mouth was formed from large pieces of firebrick kiln lining that were stamped with the name of a company in St. Louis. The firebrick dated to 1927; therefore, this oven must have been built after that date. The third cooking feature (1033) represented by a remnant brick wall, was poorly preserved and likely contemporary with Roasting Oven 1001.

Telling the story of these ovens requires more than their physical description. What was roasted in these ovens, and who did the cooking? Several types of outdoor cooking features have been discovered and identified at Chinese sites during the last 20 years. Anmarie Medin (2002) and Mary Maniery (2001) summarized those associated with Chinatowns, identifying types from Australia, China, and North America. The two most prominent types are wok stoves and roasting ovens. Wok stoves are still preserved at Fiddletown's Chew Kee Store in the central Sierra Nevada foothills and at Locke in the Delta south of Sacramento. There is also a good presentation of these cooking features used in China in the 1920s (Hommel 1937:147–149). A particularly large wok stove composed of a rectangular brick structure 15 feet long and 5 feet wide with three key-shaped openings, each 2.5 feet in diameter, was excavated in Los Angeles Chinatown (Costello et al. 1998).

Roasting ovens (also called "cylindrical cookers" and "smokers") were identified by archaeologists in Chinatowns in Folsom (Maniery 1993) and San Jose (Allen et al. 2002). A nearly complete example still stands in Fiddletown (Figure 6-26). Medin (2002) provided an excellent discussion of how these roasting ovens were used, quoting an account from 1975 China that is filled with details. She also discovered a photograph at the Chinese Center in Cambria, California, of two men removing a pig from a roasting oven for a New Year's feast (Figure 6-27) (Hamilton 1999). An earlier edition of this publication (Hamilton 1974) contains another photograph showing the same two men holding the cooked pig on a tray (Figure 6-28).

Current President of the Chinese Historical Society of Southern California Irvin R. Lai, who lived in the Delta Chinese community of Locke from 1927 until 1942, also provided detailed information about the ovens during an interview conducted for the current project.

> **Roast Pig Oven 烤猪炉 (Siu Gee Lu)**
>
> These are called barbecues. They were cylinders about 6–8 feet in diameter, some 10 feet tall, with a hole in the bottom (3 by 4 feet) to feed the fire. They were dug into the ground. The wood consisted of branches from pruning the nearby fields and orchards, or bundles of rice straw. It would take 2–3 hours to heat up the oven. Then the

ashes were pulled out and the pig was hung from the top. It was securely fastened with several hooks attached to chains, like cross pieces, all embedded in the carcass. A cover was placed loosely over the top. The coals could be pushed back in or pulled out to regulate the heat.

Slaughtered pigs weighed about 100 lbs. The butcher would distract it with feed, and then hit it on the nose with a hammer, killing it. The blood would be drained and saved for cooking. Preparation of the pig included cutting away all of the thick portions of meat (forequarter; ham, etc.) to leave about two inches of meat over the bones. The hanging meat was beaten with a homemade paddle with nails sticking through, which encouraged the juices to run out. The meat would then be scored and the interior filled with herbs. It could be seasoned with soy or brown bean sauce and marinated for ten hours or so. During cooking, a wok or pan was placed in the bottom of the oven to catch the drippings. Sometimes hot water was used to scald the outside to make it crispy.

After the meat was cooked, it would be carried inside. In a small town a barbecued pig would be made every weekend. There were two stores in Locke and both barbecued a pig. The cooked meat was sometimes ordered ahead of time by farmers or families (2–3 lbs) while small folded papers filled with meat were purchased individually. Meat cost about 25 cents a pound.

Figure 6-26 The roasting oven in Fiddletown's Chinatown in Amador County (photographed by Julia Costello).

Figure 6-27 **Two men removing a cooked pig prepared for New Year's celebration from the top of a roasting oven at the Chinese Center near Cambria (Hamilton 1999:110).**

Figure 6-28 **The two young men in Figure 6-26 holding the roasted pig on a tray (Hamilton 1974:94).**

> For a big event, with 60–80 guests, a family might order a whole pig barbecued for the event, or a suckling pig (30–40 lbs). Today a suckling pig costs about $150. Barbecued pork is still the most popular dish at a festival or family event, but they are ordered from San Francisco [Costello 2002].

Connie King, of Locke, confirmed that today all the old roasting ovens have been destroyed.

What was the relationship between the two roasting ovens in San Bernardino's Chinatown? And indeed, there may have been more, as excavations for the District 8 Headquarters Demolition Project only examined a portion of the south side of Third Street. Careful scrutiny of the history of this site seems to provide an explanation. Roasting Oven 1001 was likely the first built in this vicinity, probably by 1880. It may have been used by one or more stores facing Third Street to cook meat for weekend visitors, private parties, and annual celebrations. Analysis of the wood charcoal showed that it was fueled by local wild plants, chosen for their high-heat coals. By the 1920s, its use had likely declined but not ceased. When the interior of Wong Nim's property was leveled in the mid-1920s, the roasting oven was relocated and rebuilt, likely with bricks from the original structure. When the buildings were destroyed—except for 19 Third Street, the gambling hall—the displaced residents moved into dwellings adjacent to Wong Nim's store, domicile, and temple. This was now the heart of town. A new roasting oven, apparently still important for festival events, was built south of Wong Nim's building, adjacent to the Kuan Yin Temple. This was where people would gather for celebrations and where a pig would be cooked, offered at the altar, and then consumed. Although San Bernardino's Chinatown was in its final years, important traditions were still maintained.

BONES FROM CHINATOWN MEALS by Sherri M. Gust and Peter D. Schulz

Six features associated with San Bernardino Chinatown had faunal sample sizes sufficient for analysis. Three are privies that were filled with trash after they were abandoned as outhouses. Privy 1056 was filled with trash around the turn of the century and Privy 1058 was filled about 10 years later. The final privy (1035) postdates the other two and was filled with trash in the 1940s. Sheet Refuse 1057 consists of material strewn across the backyards of Chinatown properties. There were several drains in those areas, including Drains 1002 and 1031, into which refuse fell or was blown by wind. Since the drains were inadvertently, not purposely, filled with trash, their contents are grouped with those of the sheet refuse and the entirety referred to as the "Backyard Refuse." Artifacts indicate that the Backyard Refuse dates from the 1910s to the 1930s. The detailed tables of meat weight by economics for these features are found in Chapter 5 (see Artifact Table 2a-2 for each feature).

Animal bones represented in each feature, plus totals for all the privies and for the Backyard Refuse, indicate a diet of both domestic and imported food animals (Table 6-23). Pork, chicken, and other domestic meat sources are numerically dominant. There was a component of wild game represented by deer, jackrabbit, rabbit, turtle, and a variety of marine fishes. In addition, foods imported from China were represented by Chinese fishes and softshell turtle. As residents also undoubtedly consumed portions of animals that leave no trace archaeologically (such as tongue, brain, and organs), the data are not comprehensive but reflect common elements found on all sites.

Table 6-23
Animals Represented by NISP in San Bernardino Chinatown

Common Name	Scientific Name	Privies 1035	Privies 1056	Privies 1058	Backyard Refuse[a]
Mammals					
Major Meat Mammals					
Cow	*Bos taurus*	75	17	29	81
Sheep	*Ovis aries*	6	0	1	6
Pig	*Sus scrofa*	290	88	117	534
Minor Meat Mammals					
Deer	*Odocoileus hemionus*	5	0	2	0
Cottontail rabbit	*Sylvilagus* sp.	1	0	0	2
Jackrabbit	*Lepus californicus*	0	0	0	1
Incidental Mammals					
Cat	*Felis catus*	0	2	4	8
Rat	*Rattus rattus*	57	8	2	1
Ground squirrel	*Spermophilus beecheyi*	0	1	0	0
Pocket gopher	*Thomomys* sp.	0	1	0	0
Mole	*Scapanus latimanus*	1	0	0	1
Mammals Total		*435*	*117*	*155*	*634*
Birds					
Domestic Poultry					
Chicken	*Gallus gallus*	605	0	0	211
Turkey	*Meleagris gallopavo*	61	0	0	6
Pigeon	*Columba livia*	1	0	0	1
Duck	*Anas platyrhyncha*	32	0	0	23
Goose	*Anser anser*	2	0	0	0
Duck, type unknown	Anatidae	2	0	0	3
Birds Total		*703*	*0*	*0*	*244*
Amphibians/Reptiles					
Amphibians					
Red-spotted Toad	*Bufo punctatus*	3	9	0	0
Reptiles					
Rattlesnake	*Crotalus atrox*	1	0	0	0
Western pond turtle	*Clemmys marmorata*	6	1	2	6
Softshell turtle	*Trionyx* sp.	0	1	0	0
Eastern box turtle	*Emydoidea* sp.	0	0	1	0
Amphibians/Reptiles Total		*10*	*11*	*3*	*6*
Fish					
California Fishes					
Yellowtail	*Seriola lalandi*	1	0	0	0
Rockfish	*Sebastes* sp.	2	0	0	1
Seabasses	Serranidae	0	0	0	11
Sandbass	*Paralabrax* sp.	0	0	0	1
Wrasse	Labridae	2	0	0	29

Table 6-23 (continued)
Animals Represented by NISP in San Bernardino Chinatown

Common Name	Scientific Name	Privies 1035	Privies 1056	Privies 1058	Backyard Refuse[a]
California Fishes (continued)					
White seabass	*Atractoscion nobilis*	2	0	0	0
White croaker	*Genyonemus lineatus*	1	0	0	0
Ocean whitefish	*Caulolatilus princeps*	1	0	0	1
California barracuda	*Sphyraena argentea*	0	0	0	3
Petrale sole	*Eopsetta jordani*	1	0	0	0
Starry flounder	*Platichthys stellatus*	0	0	0	1
Flatfishes	Pleuronectiformes	2	0	0	4
Chinese Fishes (imported)					
White herring	*Ilisha elongata*	0	0	0	2
Snapper	*Lutjanus* sp.	1	0	0	0
Threadfin bream	*Nemipterus* sp.	0	0	1	3
Yellow croaker	*Larimichthys crocea*	0	0	1	1
Puffers	Tetraodontidae	6	0	0	7
Indeterminate Fishes					
Croaker, type unknown	Sciaenidae	4	0	3	5
Bony fishes	Teleostei	64	0	6	89
Scales	Teleostei	41	0	0	100
Fish Total		*128*	*0*	*11*	*258*
Animals Total		***1,276***	***128***	***169***	***1,142***

a - Includes material from Drains 1002 and 1031 as well as sheet refuse.

The butchering style and marks present on the Chinatown mammal bones indicate standard Euro-American–style commercial cuts. The beef was mostly steaks and soup bones, rather than roasts, and the pork bones varied from whole to steaks. The meat weights of the pork and beef present in Privy 1035, combined Privies 1056/1058, and the Backyard Refuse were calculated along with the percentages of high-, moderate-, and low-priced cuts (see Chapter 5, Artifact Table 2a-2 for each feature). The privies show consistent proportions of about 60 percent beef and 40 percent pork, while the Backyard Refuse shows a nearly even distribution.

The economics represented by the meat cuts show that the total percentages are most similar between combined Privies 1056/1058 and the Backyard Refuse. Privy 1035 has more high-priced cuts and less moderately priced ones overall. When examining market economics for pork alone, the results show that all the privies are very similar with about 30 percent high-priced pork, about 45 percent moderately priced pork, and about 25 percent low-priced pork. The Backyard Refuse has 25 percent high-priced pork, 54 percent moderately priced pork, and about 21 percent low-priced pork. The pounds of meat (not the percentages) from each economic category for the analytic groupings and the side were compared statistically using analysis of variance and were found to be significantly different ($p<.01$). Thus, even if whole pigs or sides make up part of the Chinatown sample (which has not been demonstrated), pork cuts purchased at markets contribute the remainder.

Pekin Duck

Virtually all of the ducks from San Bernardino Chinatown were of the largest domestic breed (Daniel Guthrie, personal communication 2002). This animal, known as the Pekin duck, was imported from China in 1873 and quickly became the most popular meat duck for all markets (USDA Food Safety Inspection Service). It has an extremely fast growth rate (putting on a pound a week), produces about 200 eggs a season, and is very hardy. Walt Disney's popular cartoon character Donald Duck was modeled after this breed and accurately represents the creamy white feathers and bright yellow bill and feet that are characteristic of these ducks.

Figure 6-29 The popular Pekin duck (courtesy, Metzer Farms).

Evidence for Roasting Pigs

Historic accounts indicate that whole pigs were roasted in Chinatown community roasting ovens, the meat removed and the bones discarded (see previous section, "Roasting Ovens"). Meat references indicate that roasting pigs are young individuals with live weights between 50 and 130 pounds (Romans and Ziegler 1974; Vaughan 1946). The roasted pig depicted in Figure 6-28 appears to weigh approximately 60 pounds. By contrast, hogs utilized for meat cuts have live weights of about 250 pounds (Romans and Ziegler 1974; Vaughan 1946). Roasting pig carcasses are gutted only—the feet and head are left on and no bones are split. Hog carcasses utilized for meat cuts are split along the midline (through the vertebrae, breastbone, and pelvis) and have the head and feet removed for separate sale. Roasting pigs are cooked and the meat removed without cross-cutting any bones. Hog carcasses utilized for meat cuts are subdivided into retail cuts by cross-cutting most bones.

Based on this information, it is possible to differentiate between bones of whole roasting pigs and bones of butchered pork. Bones from roasting pigs should be small, immature, and whole,

having no butchering tool marks other than possible knife scores from meat removal. Bones from commercially butchered pork cuts should be larger, more mature, and exhibit numerous butchering tool marks such as split vertebrae and cross-cut long bones.

In addition, a roasting pig carcass should produce different percentages of high-, moderate-, and low-priced cuts than a group of bones from preferentially chosen meats. The percentages of high-, moderate-, and low-priced cuts were calculated for a side of pork (the percentages would be the same for a whole pig) for comparison. All of the Chinatown features are either higher or lower than the side (Table 6-24). The pounds of meat (not the percentages) from each economic category for the analytic groupings and the side were compared statistically using analysis of variance and were found to be significantly different ($p<.01$).

Table 6-24
Comparison of Pork Economics in San Bernardino Chinatown

Price of Meat Cut	Complete Side of Pork	Privies		Backyard Refuse[a]
		1035	1056/1058	
High	29	28	33	25
Moderate	37	45	45	55
Low	33	27	22	21

a - Includes material from Drains 1002 and 1031 as well as sheet refuse.

However, the taphonomy of roasting oven deposits will have a significant impact on our ability to differentiate roasted pig remains from commercially butchered pig bones. Bones of both smaller animals and younger animals are known to be more likely broken and even destroyed. In addition, discarded bones from roasted pigs would be very attractive to scavengers like dogs and might be entirely consumed. In reviewing the San Bernardino Chinatown faunal data, it is obvious that very few bones survived intact; there are very few large whole bones. While there are many fragments of pig skulls and mandibles, all the relatively whole mandibles are commercially split along the midline and are from pigs too large to have been roasting pigs. Most of the noncranial bones are split vertebrae and cross-cut bones, not intact whole bones. Thus, even if whole roasted pigs made up part of the San Bernardino Chinatown sample, the bones have been extensively broken. In addition, pork cuts purchased at markets also contributed to the diet.

The most similar known deposit (sheet refuse near roasting ovens) is from the Woolen Mills Chinatown. Review of that data indicate evidence for two whole young pigs that meet the criteria for roasting pigs. However, the vast majority of the bones were from long-cut picnic hams and long-cut hams. On many of these mostly whole bones the commercial butchering marks are obvious

Chinese Chickens

It is interesting that the San Bernardino Chinatown faunal remains include bones from both cocks and laying hens as well as subadult chickens in the food sample. In addition, there was an almost exclusive use of domestic rather than wild ducks.

At least five adult male chickens were recovered from Privy 1035 and another five from the Backyard Refuse. Their presence is evident in the spur or sharp projection of bone from the rear upright portion of the chicken foot (Figure 6-30). The spur is used by the cock to perform battle displays for females. Since cocks are generally kept as breeders into maturity, their presence indicates that either home-raised or very inexpensive chickens were utilized for food. Three of the ten spurs recovered had the tip of the spur cut off. It is likely that this was done to prevent the cocks from physically damaging one another during fights over females. All of the bones of these male chickens are from large adults and would have been suitable for stewing. While some of the bones were recovered from a privy feature, it is important to remember that the bones were secondarily deposited into that privy as part of a property cleanup.

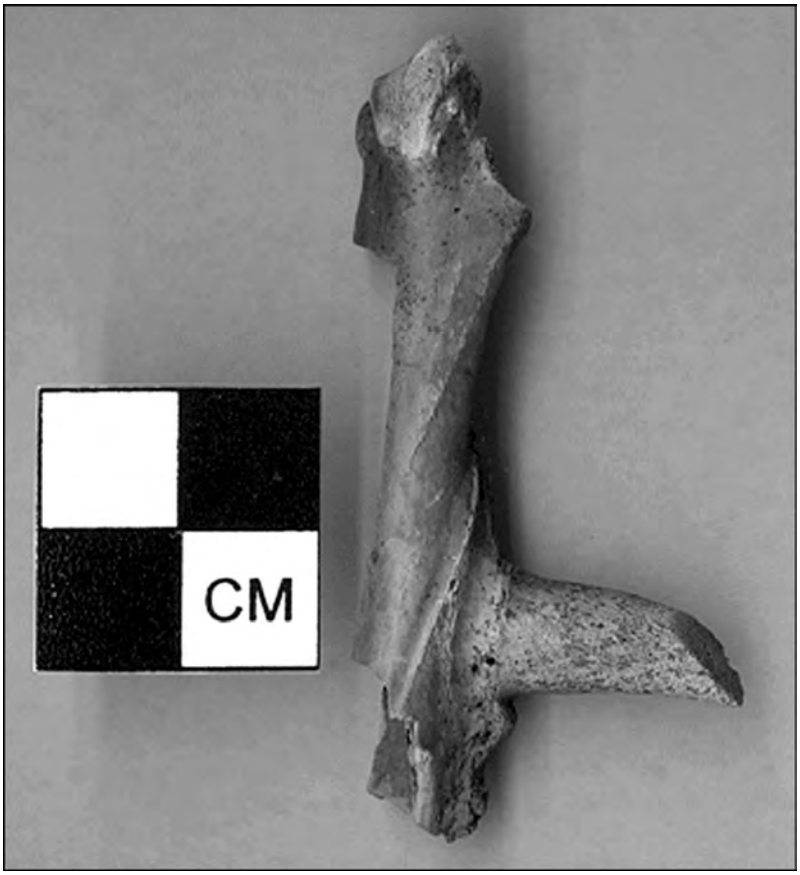


Figure 6-30 Male chicken fighting spur with tip cut off.

Privy 1035 contained 14 percent subadult chickens, while the Backyard Refuse contained only 4 percent subadults. Subadults are not physically mature enough to successfully brood eggs. The Backyard Refuse also contained eight bones full of medullary bone tissue. Medullary bone tissue is a special deposit found only inside the bones of laying females. The tissue is reabsorbed by the female's body for use in production of eggs during the breeding season. Both of these practices, killing chickens for food before they have contributed any eggs and killing laying females, are considered to be indicators of economic stress. The numbers are so small, however, that they may be insignificant or may represent the dwindling years of Chinatown.

Cats and Rats

A number of bones found in the Chinatown refuse are not from food animals; instead, they represent pets, local wildlife, and even vermin. The refuse deposited into the three privies once they were abandoned shows a small percentage of cat and dog chomp marks. It seems likely that this material must have been in another open location before deposition into the privies. The five individual rats present are introduced roof rats (brought to California from the Old World via ships). The few rodents, toads, snakes, and moles all represent the natural fauna of the area. Their small presence probably indicates natural deaths in their chosen shelter location.

Figure 6-31 Chicken bone with circular piercing holes caused by cat teeth.

From the Fish Market

The great majority of the fish remains were found in Privy 1035 and the Backyard Refuse. In each of these deposits, most of the remains were from southern California species, but Chinese fishes were found as well. At least five Chinese species are represented at the site; all of these bones are obviously from salt fish. In modern California Asian markets, only two of these fish—yellow croaker and snapper (*Lutjanus* sp.)—occur commonly as salt fish. Threadfin breams are still very common, although in whole frozen form rather than as salt fish. White herring is a common and well-regarded salt fish in China but is seldom found in contemporary American markets. Puffers, once a readily available salt-dried product, are never seen in today's American markets and are probably not common in south China.

All of the local species were readily available food fishes. It may be noted that the remains classified here as wrass (family Labridae) almost certainly represent the California sheephead (*Semicossyphus pulcher*). They are listed with equivocation because two other wrasses occur along the coast, additional species are found in the Gulf of Mexico, and several more live along the Chinese coast. Comparative specimens were not available for most of these fishes, and some of the Chinese wrasses are processed as salt fish. Nonetheless, these bones are from a relatively large species (larger than most of those listed above), and all of the elements agree perfectly with the California sheephead and differ from other comparative material. Although now greatly reduced in numbers by overfishing, this species once supported an important fishery in which "immense numbers" were taken by Chinese fishermen who salted and dried them (Lockington 1881:42; Stevenson 1899:417).

Comparing Chinatowns

The bones from combined Privies 1056/1058, Privy 1035, and the Backyard Refuse were compared to faunal remains from a local Euro-American site (the Santa Fe yards) and a series of other Chinatowns. The Euro-American refuse spans the same late nineteenth to early twentieth century time period as the Chinatown deposits and is residential in nature (Swope et al. 1997). However, the Euro-American sample is relatively small and appears substantially less diverse than the San Bernardino Chinatown deposit (Table 6-25), although this may be an effect of the small sample size.

The other Chinatowns include Los Angeles, a sheet refuse deposit from San Jose's Woolen Mills Chinatown (Allen et al. 2002), Riverside's Won Ho Leun (Great Basin Foundation 1987), the Yema Po work camp in Hayward (Gill 1985), San Diego Chinatown (Arter 1998), a sheet refuse deposit from Sacramento's early Chinatown on the HI56 Block (Gust 1997), and a town dump at Lovelock Chinatown (Dansie 1979). The latter two deposits have admixtures of Euro-American materials.

Two different kinds of comparisons were made to other Chinatowns. First, Chinatowns were compared by frequency of identified specimens. This was the only comparative information available for most of the deposits. Second, where comparable data were available, Chinatowns were compared using pounds of meat represented and meat weight economics.

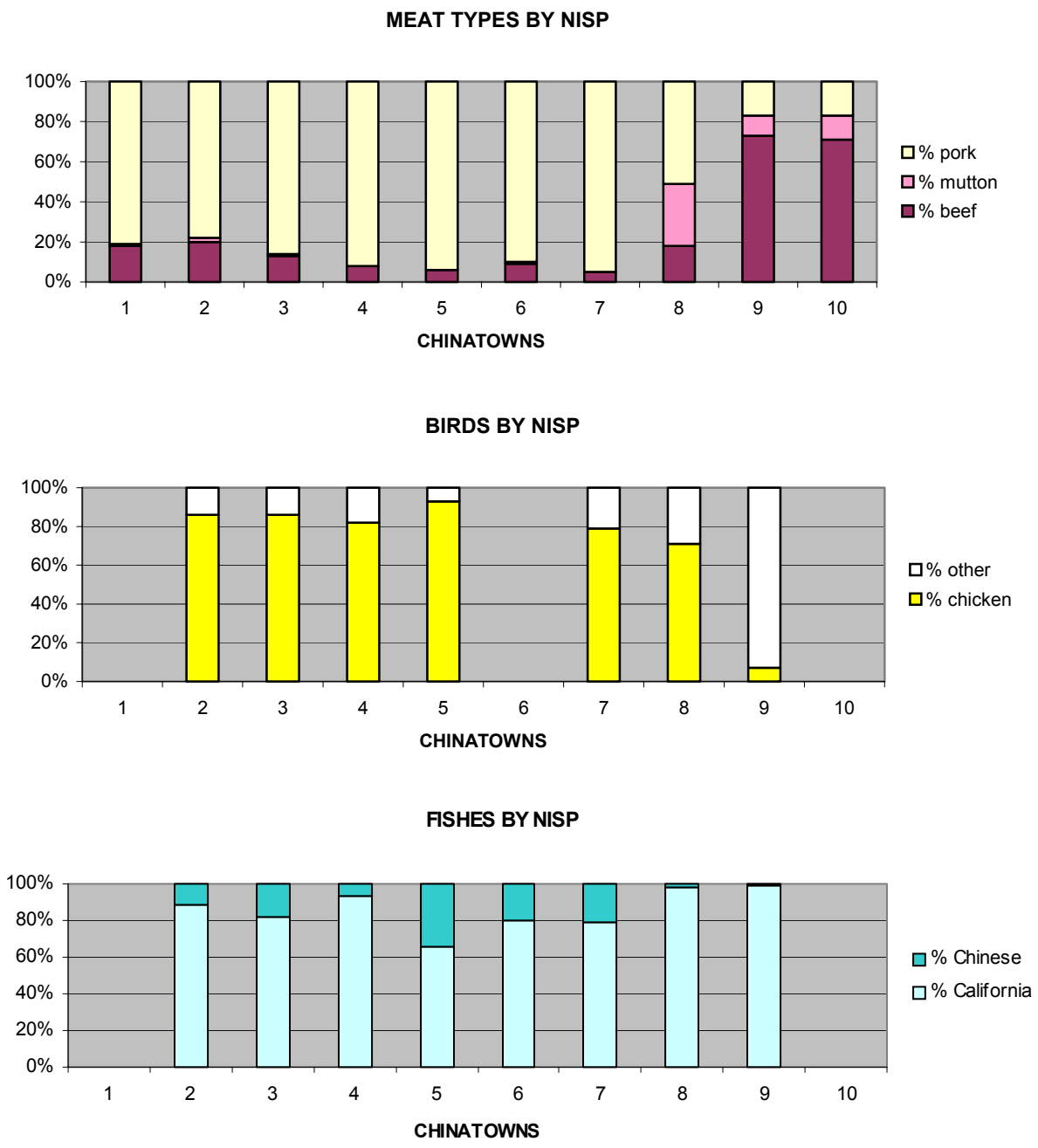
The frequency comparisons show that the San Bernardino Chinatown features are very similar to one another and to the Chinatown assemblages at Los Angeles, San Jose, Riverside, and Hayward (Figure 6-32; missing columns indicate that data were not available). San Diego Chinatown is set apart by its large proportion of mutton and lack of imported Chinese fish. The samples from Sacramento and Lovelock are distinguished by high percentages of beef, perhaps due to the admixture of Euro-American deposits.

The meat weight comparisons show that the proportion of pork is higher and the proportion of high-priced cuts is lower for the backyard midden than for the privies (Figure 6-33). San Bernardino Chinatown deposits are very similar to those from San Jose's Woolen Mills Chinatown, and they differ dramatically from those from Sacramento. The similarities between the San Bernardino Chinatown and the Woolen Mills Chinatown faunal assemblages are not surprising; both represent community refuse deposits with nearby roasting ovens.

Table 6-25
Food Refuse Represented by NISP at San Bernardino Chinatown

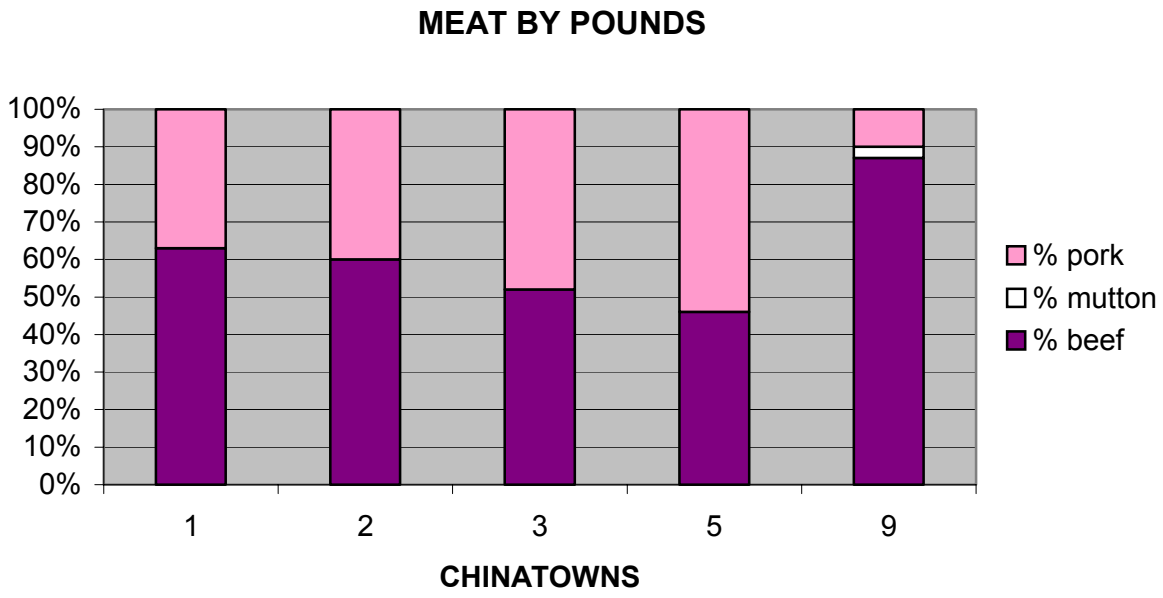
Common Name	Chinatown Pit/Privy Refuse	Chinatown Sheet Refuse	Santa Fe Yards Refuse
Domestic Meats			
Cow	121	81	47
Sheep	7	6	1
Pig	495	534	9
Chicken	605	211	133
Turkey	61	6	0
Pigeon	1	1	0
Duck	32	23	0
Goose	2	0	0
Domestic Meat Total	*1,324*	*862*	*190*
Wild Meats			
Deer	7	0	0
Cottontail rabbit	1	2	0
Jackrabbit	0	1	0
Duck, type unknown	2	3	0
Western pond turtle	9	6	0
Softshell turtle	1	0	0
Eastern box turtle	1	0	0
Yellowtail	1	0	1
Mackerel	0	0	2
Rockfish	2	1	1
Sea basses	0	11	0
Sand bass	0	1	0
Wrasse	2	29	0
White sea bass	2	0	0
White croaker	1	0	0
Ocean whitefish	1	1	0
California barracuda	0	3	4
Petrale sole	1	0	0
Starry flounder	0	1	0
Flatfishes	2	4	0
White herring	0	2	0
Snapper	1	0	0
Threadfin bream	1	3	0
Yellow croaker	1	1	0
Puffers	7	7	0
Wild Meat Total	*43*	*76*	*8*
Total	***1,410***	***1,014***	***206***

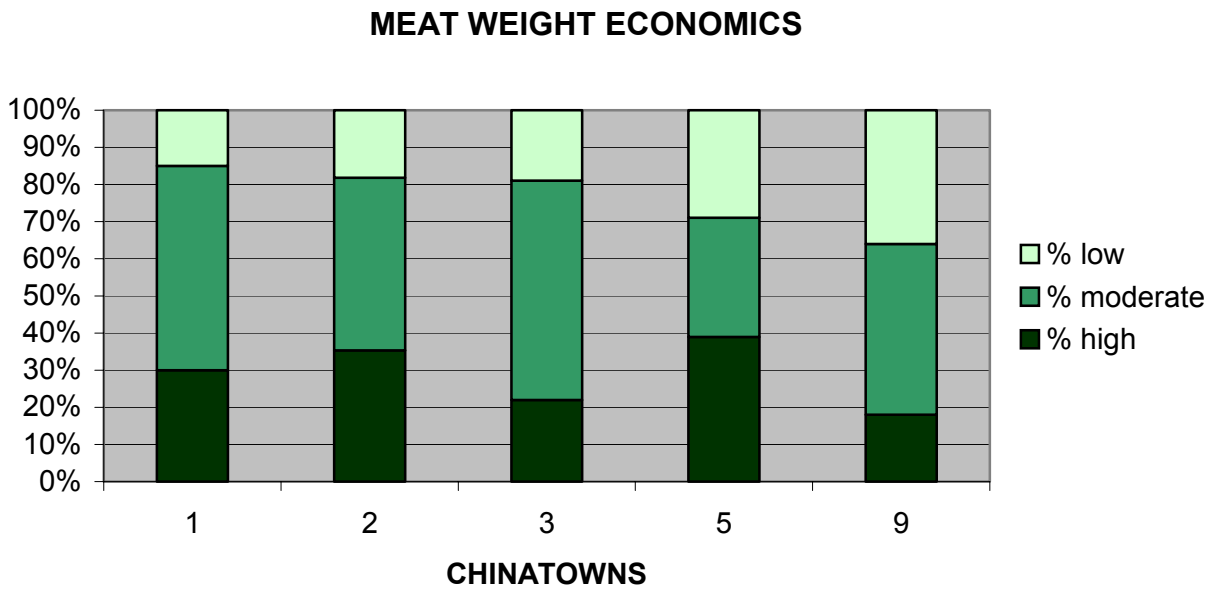
If all meat types are converted to meat weight, the relative importance of minor meat animals becomes more apparent. The combined sample for San Bernardino Chinatown was compared to Woolen Mills and Sacramento (Figure 6-34). San Bernardino Chinatown has more utilization of



KEY: 1 = San Bernardino Chinatown Privies 1056/1058 (this report).
2 = San Bernardino Chinatown Privy 1035 (this report).
3 = San Bernardino Chinatown Backyard Features (this report).
4 = Los Angeles Chinatown, all features (Greenwood 1996).
5 = San Jose Woolen Mills Chinatown Feature 501 (Gust 2002).
6 = Riverside Chinatown, all features (Langenwalter and Langenwalter 1987).
7 = Yema Po Work Camp, Hayward (Gill 1985).
8 = San Diego Chinatown, all features (Arter 1998).
9 = Sacramento Chinatown, HI56 Block, Feature 954 (Gust 1997).
10 = Lovelock Chinatown, Feature 44 (Dansie 1979).

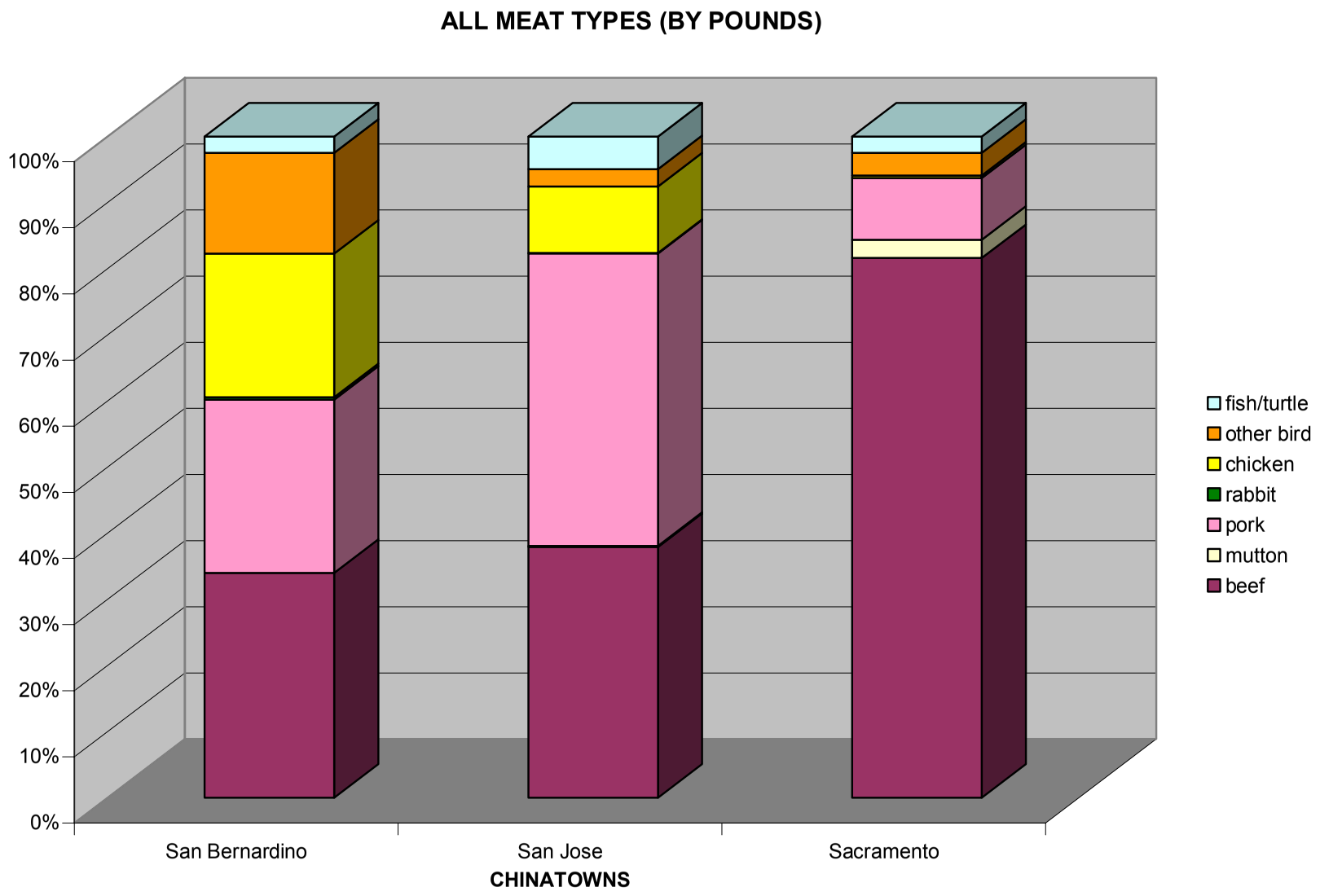
Figure 6-32 Comparisons of meat types recovered from California Chinatowns by NISP.





KEY: 1 = San Bernardino Chinatown Privies 1056/1058 (this report).
2 = San Bernardino Chinatown Privy 1035 (this report).
3 = San Bernardino Chinatown Backyard Features (this report).
5 = San Jose Woolen Mills Chinatown, Feature 501 (Gust 2002).
9 = Sacramento Chinatown, HI56 Block, Feature 954 (Gust 1997).

Figure 6-33 Comparison of California Chinatown faunal assemblages by meat weight and meat economics.



KEY:

San Bernardino	All San Bernardino Chinatown features (this report).
San Jose	San Jose Woolen Mills Chinatown, Feature 501 (Gust 2002).
Sacramento	Sacramento Chinatown, HI56 Block, Feature 954 (Gust 1997).

Figure 6-34 Comparison of all meat types in San Bernardino, San Jose, and Sacramento Chinatown deposits.

chicken and other birds than does Woolen Mills Chinatown or Sacramento deposits. This may be partially due to the later time period of the San Bernardino material. Woolen Mills has more fish than the other sites, possibly because it is closer to the coast. Nonetheless, the overall similarity of San Bernardino Chinatown and Woolen Mills Chinatown remains apparent.

THE SECRETS OF SEEDS AND POLLEN by Susan Smith and Virginia S. Popper

Plant remains, including pollen, seeds, and charcoal recovered from the privies and roasting ovens, help to reconstruct a view of diet and other uses of plants as well as the plant life/ vegetation growing around San Bernardino Chinatown. Macrobotanical (large floral remains such as seeds and charcoal) and pollen data each contain biases inherent in recovery and sample processing methods, the condition and preservation of materials, and the analyst's conclusions and deductions about how plant parts get into privy deposits. A difficult logical hurdle is the recognition of plant remains as food that has passed through the human digestive system versus food by-products—nonfood materials dumped in privies as trash and accidental inclusions. This interpretive division is daunting where pollen is concerned because pollen floats on air currents and is part of the composition of dust. Pollen from local community gardens or from forests in the mountains can drift long distances and become deposited in privies. Seeds, wood, and other plant remains are usually locally derived.

The three privies and two roasting ovens contained 61 identified plant taxa and another nine distinct unknowns (three macrobotanical and six pollen unknowns). Table 6-26 lists the identified taxa; the 22 best candidates for food plants are marked with an asterisk. Some of the categories include several possible plant genera, either because a finer identification could not be made based on the condition of the specimen or the taxonomy has not been developed for a particular type. Cheno-Am is an example of a catch-all category that encompasses several common taxa. Goosefoot (*Chenopodium*), pigweed (*Amaranthus*), saltbush (*Atriplex* spp.), spinach (*Spinaceae*), and tumbleweed (*Salsola*) are just a few of the plants that could be represented by the Cheno-Am label.

It is interesting that only 8 of the 61 taxa were documented by both pollen and macrobotanical materials. This exclusive perspective is a testament to the different plant parts used and the physical paths of macrobotanical and pollen deposition. Pollen recovered from privies and human feces has been interpreted to reflect consumption of pollen, which could result from eating flowers or honey, or from indirect sources such as breathing airborne pollen, or from atmospheric pollen deposited on any ingested food. Urine also may be a significant source of pollen: water, tea, beverages, and juices may contain pollen that would pass through the human digestive system in urine. However, some pollen deposited in privies has nothing to do with food but is environmental (airborne) pollen rain. Pollen can be transported long distances by a variety of vectors (bugs, wind, people), and it even occurs in surface and tap water.

The types of plant materials recovered in privies include seed and charcoal, but preservation of large portions of flowers or fleshy plant parts is not expected. Seeds, like pollen, could reflect either diet or refuse from local weeds and plants in the community. An important distinction in the macrobotanical results is whether plant materials have been burned. In privies, charred plant materials are indicators of secondary refuse, and uncharred materials are more likely to have originated in human feces. So fruits eaten with their seeds, such as figs, blackberries, and

grapes, usually are represented by uncharred seeds, while charred peanuts, beans, and wheat grains were not ingested.

Table 6-26
Plant Taxa Identified from Pollen, Macrobotanical Materials, and Charcoal from Chinatown Privies 1035, 1056, and 1058

Common Name[a,b]	Scientific Name[a]	Pollen	Macros
Agave*	*Agave* sp.	X	
Alder	*Alnus* sp.	X	
Amaranth (pigweed)	*Amaranthus* sp.		X
Bean*	*Phaseolus* sp.		X
Blackberry*	*Rubus* sp.	X	X
Buckthorn Family, includes Buckbrush (*Ceanothus*) and California Lilac (*Rhamnus*)	Rhamnaceae sp.	X	X
Buckwheat	*Eriogonum* sp.	X	
Buttonbrush	cf. *Cephalanthus*	X	
Cattail	*Typha* sp.	X	
Cereal Grass, includes Wheat, Barley, Rye, and exotic weed grasses (e.g., Foxtail)*	Cereal Poaceae	X	X
Cheeseweed	*Malva parviflora*		X
Includes weeds from Chenopodiaceae and *Amaranthus* (goosefoot, pigweed, and others), also spinach (*Spinacea*), chard, and beets (*Beta* spp.)*	Cheno-Am	X	X
Chile Pepper*	*Capsicum* sp.		X
Cocklebur	*Xanthium* sp.		X
Cypress Family, includes Juniper and Cypress	Cupressaceae	X	
Evening Primrose Family	Onagraceae	X	
Fescue grass	*Vulpia/Festuca*		X
Fig*	*Ficus carica*		X
Figwort Family	Scrophulariaceae		X
Filaree; Crane's Bill (introduced species)	*Erodium* sp.	X	
Fir	*Abies* sp.	X	
Four O'clock Family	Nyctaginaceae	X	
Goosefoot	*Chenopodium* sp.		X
Grape*	*Vitis vinifera*		X
Grass Family	Poaceae	X	X
Honeysuckle	Caprifoliaceae, cf. *Lonicera*	X	
Knotweed Family	Polygonaceae		X
Knotweed	*Polygonum* sp.		X
Lily Family, includes yucca, onion, and others*	Liliaceae	X	
Mexican Tea	*Chenopodium* cf. *ambrosiodes*		X
Mint Family*	Lamiaceae	X	
cf. Mung Bean*	*Vigna* sp.		X
Mustard	*Brassica* sp.		X

Table 6-26 (continued)
Plant Taxa Identified from Pollen, Macrobotanical Materials, and Charcoal from Chinatown Privies 1035, 1056, and 1058

Common Name[a,b]	Scientific Name[a]	Pollen	Macros
Mustard Family, includes several leafy garden vegetables (cabbage and kale) and native weeds and herbs*	Brassicaceae	X	
Nightshade	*Solanum* sp.		X
Nightshade Family, includes tomato, potato, tobacco, groundcherry, and others*	Solanaceae	X	X
Oak	*Quercus* sp.	X	X
Parsley Family, includes several spices and herbs*	Apiaceae	X	
Pea Family, includes range of landscaping, garden, and native trees, shrubs, herbs and weeds (e.g., peas, beans, locust trees)*	Fabaceae	X	
Peanut*	*Arachis hypogaea*		X
Phlox Family	Polemoniaceae	X	
Pine	*Pinus* sp.	X	X
Pink Family	Caryophyllaceae	X	
Prickly Pear	Platyopuntia	X	
Purslane	*Portulaca oleracea*		X
Ragweed, Bursage, Burrobrush	*Ambrosia* type	X	
Red Maids	*Calandrinia* sp.		X
Rose Family, includes several cultivated and native genera (e.g., peach, almond, apple, ornamental roses)	Rosaceae	X	X
Rose Family, possibly blackberry or cherry, grain structure tricolporate coarse striate (25 x 8 μ)*	Rosaceae, cf. *Rubus* or *Prunus*	X	
Sagebrush	*Artemisia* sp.	X	
Sedge Family	Cyperaceae	X	
Squash Family*	Cucurbitaceae		X
Sunflower Family, Chicory tribe, includes Dandelion, cultivated Lettuce, and others*	Asteraceae, *Lactuca* type	X	
Sunflower Family, includes broad range of native shrubs, herbs, and weeds, and cultivated exotics	Hi-Spine Asteraceae	X	
Sunflower Family, spiny pollen grain	Asteraceae echinate pollen type	X	
Sycamore	*Platanus* sp.		X
Tansy Mustard	*Descurainia* sp.		X
Tomato*	*Lycopersicon lycopersicum*		X
Walnut*	*Juglans* sp.	X	
Wheat*	*Triticum* sp.		X
Willow/Poplar	*Salix/Populus* sp.		X

a - * = Taxa that represent cultivated or possible food plants.
b - cf. = compares favorably.

Parasites in the Privy by Karl J. Reinhard

Archaeoparasitology is the scientific analysis of ancient remains for evidence of parasitic disease. Archaeoparasitologists analyze coprolites (ancient feces), soil samples, mummies, written records, artifacts such as lice combs, and even art to identify infections. The kinds of evidence that archaeoparasitologists find include the eggs, larvae, and DNA of ancient parasitic worms; the cysts of ancient protozoa; and the eggs, exoskeletons, and DNA of lice and fleas. These finds provide the basis for reconstructing the state of health for past human populations. Specific goals include reconstructing diet, trade patterns, socio-economic impact on parasitism, the influence of sanitation development on parasitism, and the effect of changing philosophies about ill-health that altered the spread of infectious disease.

The analysis of sediment samples from the Caltrans District 8 San Bernardino Headquarters Demolition Project provided an opportunity to evaluate the introduction of Asian parasites into California. Not since H. J. Hall's (1982) analysis of sediments from immigrant Chinese latrines in Sacramento 20 years ago had such an opportunity occurred. Thus, the study of the project sediments provided a new chance to glimpse the state of Chinese health. (Reinhard et al 2008)

The New World at the time it was discovered by Europeans was not a world free of disease. Archaeoparasitologists have identified many species of parasites in American Indian sites. In prehistory, thorny-headed worms infected Native Americans in the Great Basin. The prehistoric Anasazi of Arizona and New Mexico hosted the highest pinworm infection rates ever recorded for any human population. A tapeworm known as *Hymenolepis nana* cycled among the Anasazi and also among pre-Inca agriculturalists in Peru and Chile. Fish tapeworms, hookworms, whipworms, lung flukes, and the giant intestinal roundworm known as *Ascaris* also infected Andean peoples. More serious protozoan parasites infected Native Americans in prehistory. Chagas' Disease plagued Native Americans from Chile to the Mexico-Texas border. A protozoa parasite called *Leishmania* disfigured faces in Peru. Hookworms and whipworms infected people in Brazil. In the northern parts of North America, hydatid cyst disease, caused by a tapeworm of carnivores, infected people from southern Alaska to North Dakota. In addition, bacterial diseases including tuberculosis and cholera infected Native Americans.

European colonization exacerbated the existing problems of infectious disease. The introduction of various bacterial and viral diseases from Europeans is the best known consequence of colonization. However, there were more mundane changes in parasite epidemiology. One change was that fecal-borne disease became a constant aspect of town life in the colonies. Whipworm and ascarid parasites were ubiquitous in European settlements. Although these parasites were present in the New World, they only occasionally infected Native Americans. European colonies brought with them the forms of privies typical of the Old World. These barrel and pit latrines sequestered the eggs of fecal-borne parasites for short periods of time, but flooding or cleaning of the latrines eventually spread the eggs through the settlements. Whipworm and ascarid eggs can survive for years and still be infective. Samples from drains and streets within some historical sites have yielded hundreds to hundreds of thousands of these eggs per milliliter of sediment. Such discoveries demonstrate that, ultimately, latrines were a poor solution to control infectious disease.

Another epidemiologic complication of Euro-American life was the poverty and class differentiation that were inherent in previous European societies. This meant that there was an underclass of people who had limited access to antiparasite medicines, basic sanitation, basic hygiene, and sound

continued

Parasites in the Privy (continued)

nutrition. They tended to live in more squalid neighborhoods and in more crowded conditions than more affluent classes. As a consequence, they had more infectious disease problems, especially with parasites that proliferate in filthy conditions.

But what of immigration from Asia? Asia is home to many parasites that did not exist in the New World, even after European colonization. These parasites included the Chinese liver fluke (*Clonorchis sinensis*), the intestinal fluke (*Fasciolopsis buski*), the oriental lung fluke (*Paragonimus westermani*), and the Asian blood fluke (*Schistosoma japonicum*). These parasites were present in Asia in ancient times as indicated by archaeoparasitology in Korea, China, and Japan. They infected many people and undoubtedly some immigrants entered the Americas with these parasites. For this reason, the analysis of sediments from Caltrans District 8 San Bernardino Headquarters Demolition Project was undertaken with a particular focus on a search for the eggs of Asian parasites.

Two sediment samples contained parasite eggs. Privy 1035 yielded 1,065 ascarid eggs and 710 whipworm eggs per milliliter of sediment, while Privy 1056 contained 3,374 ascarid eggs and 3,552 whipworm eggs per milliliter of sediment. These fecal-borne roundworm eggs are nearly ubiquitous in historical town sites. These numbers are not high for latrine sediments and are relatively normal for historical sediments. At low or moderate infections, these parasites rarely cause severe disease. More interesting was the discovery in both of these privies of the delicate eggs of *Clonorchis sinensis*, the Chinese liver fluke. The discovery of these eggs shows that the Chinese immigrants in California brought with them at least one species of parasite from Asia.

The Chinese liver fluke, like many flukes, has a multihost cycle including fish and snails. These intermediate hosts have important roles in the life cycle of the parasite. The parasite goes through asexual reproduction in the snails. Thus, the number of parasites produced by a single egg is amplified by the snail stage of the life cycle. The fish is important in conveying the parasites to their definitive host, a human. The definitive host is the animal that harbors the sexually active stages of the parasite. If the parasite survives the culinary preparation of the fish, it will eventually migrate to the liver and live there for many years, mating and laying eggs. The eggs pass through the bile duct into the digestive tract and then onward to the open environment.

However, the introduction of this parasite to California was a dead end. The intermediate snail hosts to which it is adapted in Asia are absent in the Americas. The archaeological identification of parasite eggs in latrines that date from the late nineteenth century to the early twentieth century shows that the parasite was possibly introduced by immigrants during this period who may have lived long lives with their infections. If infections were light, the human hosts probably had no symptoms or mild indigestion with light abdominal pain. If they had heavy infections, then they could have suffered from pronounced abdominal pain, diarrhea, jaundice, enlarged and tender livers, and/or anorexia. In chronic cases, liver cancer could have resulted from infection. No traditional Chinese remedies for this ailment are known to this author.

Not everyone was parasitized. One latrine, Privy 1025 behind Starke's Hotel, contained no eggs, even after repeated examination, and the third Chinatown privy (1058) also did not contain parasites. The rule of thumb in parasitology is that 10 percent of the hosts have 70 percent of the parasites. This means that the majority of hosts either are not infected or have just a few parasites. Certain individuals and families are prone to infection, while other people are very resistant. The distribution of parasites in the privies of San Bernardino will provide interesting research data for future studies.

Sources of Plants/Plants in the Environment

In the late 1800s and early 1900s, the local landscape likely included a wetland/riparian community along Warm Creek, native plants characteristic of coastal sage scrub, and urban vegetable and ornamental gardens. Most of the plant remains from the Caltrans District 8 San Bernardino Headquarters Demolition Project excavations represent wild and weedy plants that thrive in disturbed places such as roadsides, fields, and fallow gardens. The most abundant weedy plants recovered in the pollen and macro samples are members of the Cheno-Am, sunflower, mustard, and grass categories, such as amaranth, goosefoot, tansy mustard, and fescue grass. Many of the identified plants probably grew near the project site. There were few introduced exotic plants represented in the pollen results, which is evidence that the privy deposits were not significantly disturbed after the final filling episode.

Low numbers of mustard, Mexican tea, cheeseweed, common purslane, and possibly crane's bill were identified in the samples, but no eucalyptus or palm was identified. The Warm Creek riparian community is reflected by pieces of charcoal from sycamore and willow/poplar as well as pollen from cattail, buttonbrush, and sedge. Buckthorn, oak, and rose family pollen and charcoal represent the local chaparral vegetation. Pine, juniper, and oak pollen could have come from the mountains to the east, and pine charcoal could represent lumber. Agave, rose family, and honeysuckle pollen may reflect ornamental gardens and landscaping.

Agave pollen was unusually abundant in almost all of the pollen samples analyzed. Agave pollen is only rarely recovered from archaeological sites, likely because these plants are insect-pollinated and produce very little pollen and that pollen is not dispersed far from the plant. The frequency and abundance of agave in the privies did not show any particular pattern among features or types of deposits; it was found in 9 of 10 samples, including those from Chinatown and hotel contexts. While the agave pollen may have had a dietary source, it more likely represents a natural introduction to the privies. Agaves were common native plants in the late 1800s and early 1900s around San Bernardino. Agave pollen may have been concentrated in privies by insects either incidentally from foraging or deliberately in a food or nest cache.

Dining and Food Preparation

Clear distinctions between primary privy deposits and secondary refuse layers (food consumption versus food preparation and other uses of plants) were identified by integrating the results from pollen, macrobotanical (large plant remains, such as seeds), and geomorphology (soil) analyses. The botanical data also produced unique signatures that separated the Euro-American hotel privy (Privy 1025) from the Chinese privies.

The Chinese privies contained the same fruits as the hotel, with more fig, blackberry, and grape seeds in the primary layers than in overlying trash layers. The Chinese cuisine differed from the Euro-American hotel food by including more chili peppers and quantities of one or more taxa in the mustard family. Mustard pollen was enriched in the Chinese primary privy layers compared to overlying trash layers, yet only four mustard seeds were recovered, and these were in the trash layers of two of the Chinese privies. This pattern indicates that the Chinese diet was the source of the abundant mustard pollen. There are several popular food plants in the mustard family,

such as cabbage, kale, broccoli, and radish, and (as discussed previously) there was a thriving community of Chinese gardeners at the edge of town trading produce in Chinatown (see discussions of the census and occupations above). The Chinese privies also produced rare plant taxa, such as mung bean, peanut, squash, and mint. Compared to the hotel, the Chinese privies were characterized by a greater variety of plants, which in part is attributed to more trash mixed into the primary layers but also may signal a greater use of vegetables than in the Euro-American diet.

Macrobotanical remains provide the only pertinent information about food preparation in the roasting ovens. These ovens probably were used exclusively for roasting meat. One oven contains no seeds, and the other contained tiny carbonized unidentifiable seed fragments. If seeds or fruits were processed in the ovens, they burned completely to ash. The low diversity of charcoal taxa in the roasting ovens compared to the privy samples suggests that specific woods were preferred for roasting. These woods may have produced long-lasting hot coals for roasting meat. In addition, the two ovens contained different types of wood. Roasting Oven 1036, containing primarily a diffuse type of wood, is in the vicinity of a temple and may have been used for periodic festivals and gatherings around the temple. Roasting Oven 1001, containing primarily buckthorn and rose family wood (local wild types), may have been fueled by local wood gathered to cook meat for weekend sale to laborers.

Macrobotanical findings from the San Bernardino Chinatown can be compared to research results from other Chinese and non-Chinese sites in the vicinity. Nearby studies in San Bernardino included samples from privies associated with 1870s–1920s Euro-American immigrants (Lawlor 1997a) and from an 1888–1889 middle-class Euro-American privy (Lawlor 1997b). Analysis of plant remains from the nearby Chinatown in Riverside provides additional comparative material (Kent et al. 1987). Comparing the San Bernardino Chinese privies with the Riverside study suggests that this San Bernardino Chinatown was more acculturated. None of the Chinese foods recovered from Riverside were found, although very few large seeds were recovered in the samples analyzed here. The Euro-American privy from this study closely resembles the middle-class Euro-American privy with its abundance of small fruit seeds to the exclusion of almost all other seeds (Lawlor 1997b).

Table 6-27 lists only macrobotanical results for these three previous studies along with the Chinese and non-Chinese contexts from this study. Differences in the types of small seeds recovered from these sites may stem from the size and number of samples in the study and sample processing (screening versus flotation). The authors are not aware of any previous published or unpublished reports of pollen performed using sediments from analysis of Chinese privies.

Table 6-27
Plant Taxa Identified from Previous Local Macrobotanical Studies

Common Name	Scientific Name[a]	Family	Project and Reference				
			Riverside Chinatown (Kent et al. 1987)	San Bernardino Chinatown (this study)	San Bernardino Hotel Privy 1025 (this study)	San Bernardino Downtown Project (Lawlor 1997a)	San Bernardino Privy Sample, Santa Fe Yard (Lawlor 1997b)
Oriental Plants							
Adzuki Bean	*Vigna angularis*	Fabaceae	X				
Bitter Melon, Leprosy Gourd	*Momordica* cf. *charantia*	Cucurbitaceae	X				
Chinese Cabbage	*Brassica chinensis*	Brassicaceae	X				
Chinese Olive	*Canarium album*	Burseraceae	X				
Chinese Watermelon	*Benincasa* cf. *hispida*	Cucurbitaceae	X				
Chinese Winter Radish	*Raphanus sativus*	Brassicaceae	X				
Cowpea	*Vigna* cf. *unguiculata*	Fabaceae	X				
Lotus	*Nelumbo nucifera*	Nelumbonaceae	X				
Lychee Nut	*Litchi chinensis*	Sapindaceae	X				
Mung Bean	*Vigna radiate*	Fabaceae	X				
Mung Bean	cf. *Vigna* sp.	Fabaceae		X			
Yiet Kwa, Oriental Pickling Melon (cucumber)	*Cucumis* cf. *melo*	Cucurbitaceae	X				
Cultigens, Fruits, and Berries							
Almond	*Prunus dulcis*	Rosaceae	X				
American Plum	*Prunus* cf. *Americana*	Rosaceae	X				
Apricot, Chinese Almond	*Prunus* cf. *armeniaca*	Rosaceae	X				
Bean	*Phaseolus vulgaris*	Fabaceae	X				
Bean	*Phaseolus* sp.	Fabaceae		X			
Blackberry	*Rubus* cf. *procerus*	Rosaceae		X	X	X	X
Cherry	*Prunus* cf. *cerasus*	Rosaceae	X				
Chili pepper	*Capsicum* sp.	Solanaceae		X	X		
Citrus	*Citrus* sp.	Rutaceae				X	
Coriander	*Coriander sativum*	Apiaceae	X				

Table 6-27 (continued)
Plant Taxa Identified from Previous Local Macrobotanical Studies

Common Name	Scientific Name[a]	Family	Project and Reference				
			Riverside Chinatown (Kent et al. 1987)	San Bernardino Chinatown (this study)	San Bernardino Hotel Privy 1025 (this study)	San Bernardino Downtown Project (Lawlor 1997a)	San Bernardino Privy Sample, Santa Fe Yard (Lawlor 1997b)
Cultigens, Fruits, and Berries (continued)							
Corn	*Zea* sp.	Poaceae	X				
Date	*Phoenix dactylifera*	Palmae					
Elderberry	*Sambucus mexicana*	Caprifoliaceae			X		X
Fig	*Ficus carica*	Moraceae		X	X	X	X
Grape	*Vitis vinifera*	Vitaceae		X	X	X	X
Olive	*Olea europaea*	Oleaceae	X			X	
Peach	*Prunus persica*	Rosaceae	X				X
Peanut	*Arachis hypogaea*	Fabaceae	X	X			
Pecan	*Carya illinoensis*	Juglandaceae	X				
Plum	*Prunus domestica*	Rosaceae	X				
Squash Family (undiff.)	*Cucurbitaceae*	Cucurbitaceae	X	X		X	
Summer Squash	*Cucurbita pepo*	Cucurbitaceae	X				
Tomato	*Lycopersicom lycopersicum*	Solanceae		X	X		X
Watermelon	*Citrullus* cf. *lanatus*	Cucurbitaceae	X				
Wheat	*Triticum* sp.	Poaceae	X	X			
Winter Squash	*Cucurbita maxima*	Cucurbitaceae	X				
Weedy Plants and Exotics (origin country)							
Amaranth	*Amaranthus* sp.	Amaranthaceae		X	X		X
Cheeseweed	*Malva parviflora*	Malvaceae		X			
China Berry (tropical Asia, Australia)	*Melia azedarach*	Meliaceae	X				
Cocklebur	*Xanthium* sp.	Asteraceae	X	X			
Crabgrass (Europe)	*Digitaria* cf. *filiformis*	Poaceae	X			X	
English Walnut (England)	*Juglans regia*	Juglandaceae	X				
Eucalyptus (Australia)	*Eucalyptus* sp.	Myrtaceae	X				

Table 6-27 (continued)
Plant Taxa Identified from Previous Local Macrobotanical Studies

Common Name	Scientific Name[a]	Family	Project and Reference: Riverside Chinatown (Kent et al. 1987)	San Bernardino Chinatown (this study)	San Bernardino Hotel Privy 1025 (this study)	San Bernardino Downtown Project (Lawlor 1997a)	San Bernardino Privy Sample, Santa Fe Yard (Lawlor 1997b)
Weedy Plants and Exotics (origin country) (continued)							
Fescue Grass	*Festuca* sp.			X			
Figwort		Scrophulariaceae		X			
Ginkgo (Japan & China)	*Gingko biloba*	Gingkoaceae	X				
Goosefoot	*Chenopodium* spp.	Chenopodiaceae		X		X	
Grasses		Poaceae		X			
Knotweed	*Polygonum* sp.	Polygonaceae		X			
Mustard	*Brassica* sp.	Brassicaceae		X			
Natives							
Nightshade	*Solanum* sp.	Solanceaceae		X			
Pepper Tree (South America)	*Schinus molle*	Anacardiaceae	X				
Purslane	*Portulaca oleraceae*	Portulacaceae		X	X		
Red Maids	*Calandrinia* sp.	Portulacaceae		X			
Tansy Mustard	*Descurainia* sp.	Brassicaceae		X			
Natives							
Buckthorn	*Rhamnaceae*			X			
Juniper	*Juniperus* sp.	Cupressaceae	X				
Oak	*Quercus* sp.	Fagaceae		X			
Palmer Oak	*Quercus palmeri*	Fagaceae	X				
Pine	*Pinus* sp.	Pinaceae		X	X		
Rose family	*Rosaceae*			X			
Sunflower	*Helianthus annus*	Asteraceae	X				
Sycamore	*Platanus* sp.	Platanaccea		X			
Walnut	*Juglans californica*	Juglandaceae	X				
Willow/Poplar	*Salix* sp./*Populus* sp.	Salicaceae		X			

a - Plant names from reference sources; abbreviation cf. used for tentative identifications (compares favorably).

6.5 RECREATION IN CHINATOWN

The excavations at the San Bernardino Chinatown revealed an unprecedented quantity of material related to gaming and gambling, inspiring a closer look at these pastimes.

EQUAL CHANCES? THE GAMES AND GAMBLING OF THIRD STREET

Many of the items used in Chinese gambling games are interchangeable: coins, glass gaming pieces, dominoes, and chessmen can be used as counters or chips (Table 6-28). . Glass gaming pieces are commonly recovered from Chinese archaeological sites and have been referred to as *zhu* (pearl or bead) in these studies and by historic Cantonese speakers (Culin 1893). Wegars (2005, 2006) has revealed a more complex nomenclature. When the pieces are used as general gambling tokens (for *fan tan*, for example), they are called *du zhu* (*du*, gambling; *zhu* or *chu*, wager). *Zhu*, however, refers to spherical items, not hemispherical, flat-on-one-side pieces. These latter items are also often referred to as *qizi* when used in connection with modern games such as *weiqi* (Japanese Go) or other chess-like board games. Due to the different uses of these items and in pronunciations and meanings between regions in China, "glass gaming piece" (abbreviated ggp) is recommended as a descriptive, neutral term (Costello et al, 2008:139-141).

Table 6-28
Common and Chinese Names for Games and Pieces, and Terms Used in This Report

Common Name for Game	Chinese Name for Game	Game in this Report	Chinese Name for Piece	Piece Name in this Report
Go (Japanese Name)	*Weiqi* (surrounding game)	*Weiqi*	*Quzi*	Glass Gaming Piece
Fan Tan	*Fan Tan* (repeatedly spreading out)	*Fan Tan*	*Du zhu, zhu (chu)*	Glass Gaming Piece
Dominoes	Various	Tile Games	*Kwat pai* (bone tablet)	Tile
Lottery	*Pak Kop Piu* (the game of the white pigeon ticket)	Lottery	—	N/A
Dice	Various	Dice Games	*Shik tsai* (colors; a little thing; the smaller of the two)	Dice

The Cache in Privy 1035

While a variety of gaming pieces were found throughout the project area, the majority of the items associated with gambling in Chinatown were recovered from Privy 1035 (Figure 6-35), where 70 percent of the artifacts recovered are related to gambling games (Table 6-14). Excavations and analysis concluded that this privy was constructed around 1910, remained in use until the abandonment of Chinatown in 1941, and was filled during site clearance in 1944. Recovered items consist of ggp, tile, dice and gaming pieces in the form of coins and buttons (the latter also indicative of laundries) (Table 6-29). The ggp were designated as either "black" or "white," although the dark ones, being made of scrap glass, exhibit a range of colors. The majority of the coin gaming pieces were contained in a Chinese brown glazed stoneware jar and are discussed in detail below.

Privies are often the hiding place for objects associated with illicit behavior. Paraphernalia could be stored in a container and hung inside the privy vault (presumably at a reasonable distance from the privy contents) until needed for a game. This practice may have taken place on

Figure 6-35 Field excavations of Privy 1035.

Table 6-29
Gambling Items:
Privy 1035 Gambling Paraphernalia

Piece	Type	MNI
Ggp	Black/Multicolored	612
	White	768
	Total	*1,380*
Coin	Vietnamese dong (zinc)	1,313
	Vietnamese dong (brass)	1
	Chinese wen	6
	Total	*1,320*
Tile	Wood	*53*
Button	Porcelain only	*578*
Dice	Chinese	17
	American	1
	Total	*18*
Total		***3,349***

Third Street, but the archaeological evidence is inconclusive. The datable artifacts below the cache are of the same period as those above. It appears more likely that the gaming pieces were a constituent of the wholesale clean-out of the Third Street buildings. An element of hiding may still have been in place. The executors of the Wong Nim estate could have deliberately disposed of the items in order to protect the reputation of "the Mayor of Chinatown." Alternatively, the individuals engaged in the clean-out may have viewed the gaming pieces as worthless relics of a bygone era.

Coins, buttons, and ggp are common on Chinese sites in California. The neighboring Chinatowns to San Bernardino are Redlands and Riverside. Archaeological evidence from Riverside offers a comparison with the Third Street collection (Figure 6-36). No artifacts related to gambling were recovered from Redlands.

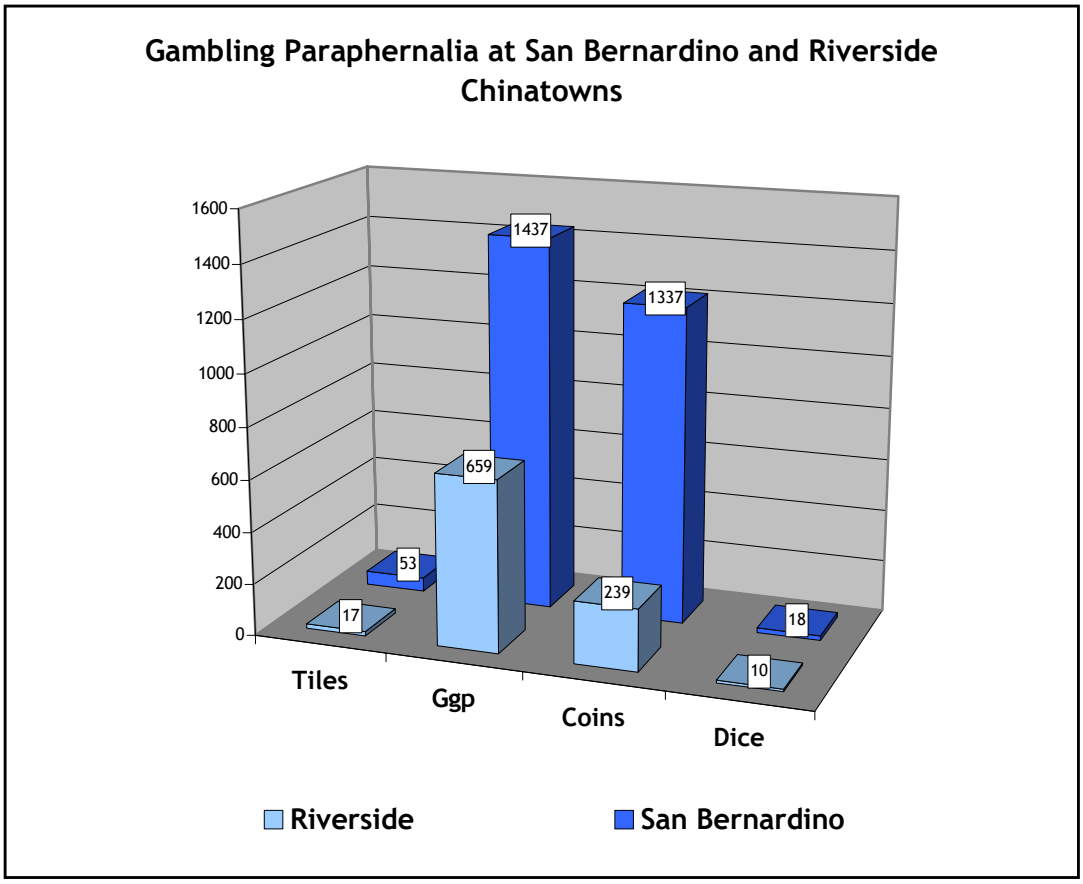


Figure 6-36 Comparative graph of San Bernardino and Riverside gambling paraphernalia.

The Riverside project area covered 2.7 acres, and 16 features were identified. The Chinatown portion of the San Bernardino project encompassed 0.55 acre, and 12 significant features were excavated. Despite the smaller acreage and smaller number of features in San Bernardino, artifacts related to gambling are nearly three times as abundant (Figure 6-36). Gaming pieces were found in a diversity of features at Riverside, indicating that these activities were practiced in locales throughout the community (buttons were not included as gaming items in the Riverside

report). Conversely, the Redlands investigations covered 5.66 acres and 14 archaeological features, within which gaming artifacts were conspicuously absent. Padon and Swope (1997:110) concluded that gambling in Redlands may have been centered in the residential area, across the street from the excavations in the commercial sector. In San Bernardino, 97 percent of the gaming assemblage was recovered from Privy 1035. This suggests gaming activities at a single location rather than at multiple gambling venues on Third Street, in a behavioral pattern perhaps similar to Redlands. The lesser number of gambling artifacts dispersed throughout the Riverside site may indicate a lack of emphasis on gambling, whereas the concentration of gambling artifacts in one locale in San Bernardino (and possibly in the unexcavated portion of Redlands' Chinatown) may point to a more commercially developed enterprise.

Games such as *fan tan*, *weqei*, tile, and dice games also offered an opportunity for social gathering (Figure 6-37). Participants are likely to have sat with the same players at the same location on a regular basis. The lottery may have been an activity solely focused on gambling. However, the other games may have required frequent meetings in a familiar environment with familiar faces. In Los Angeles, parlors were incorporated into "social clubs" that were said to be immune from police raids (Lou 1980:168). There, over a game of *weiqi* or *Tá Tin Kau* (a tile game of "heavens and nines" [Culin 1893:491–537]), the Chinese American community maintained the right to expression and preserved a rich cultural heritage.

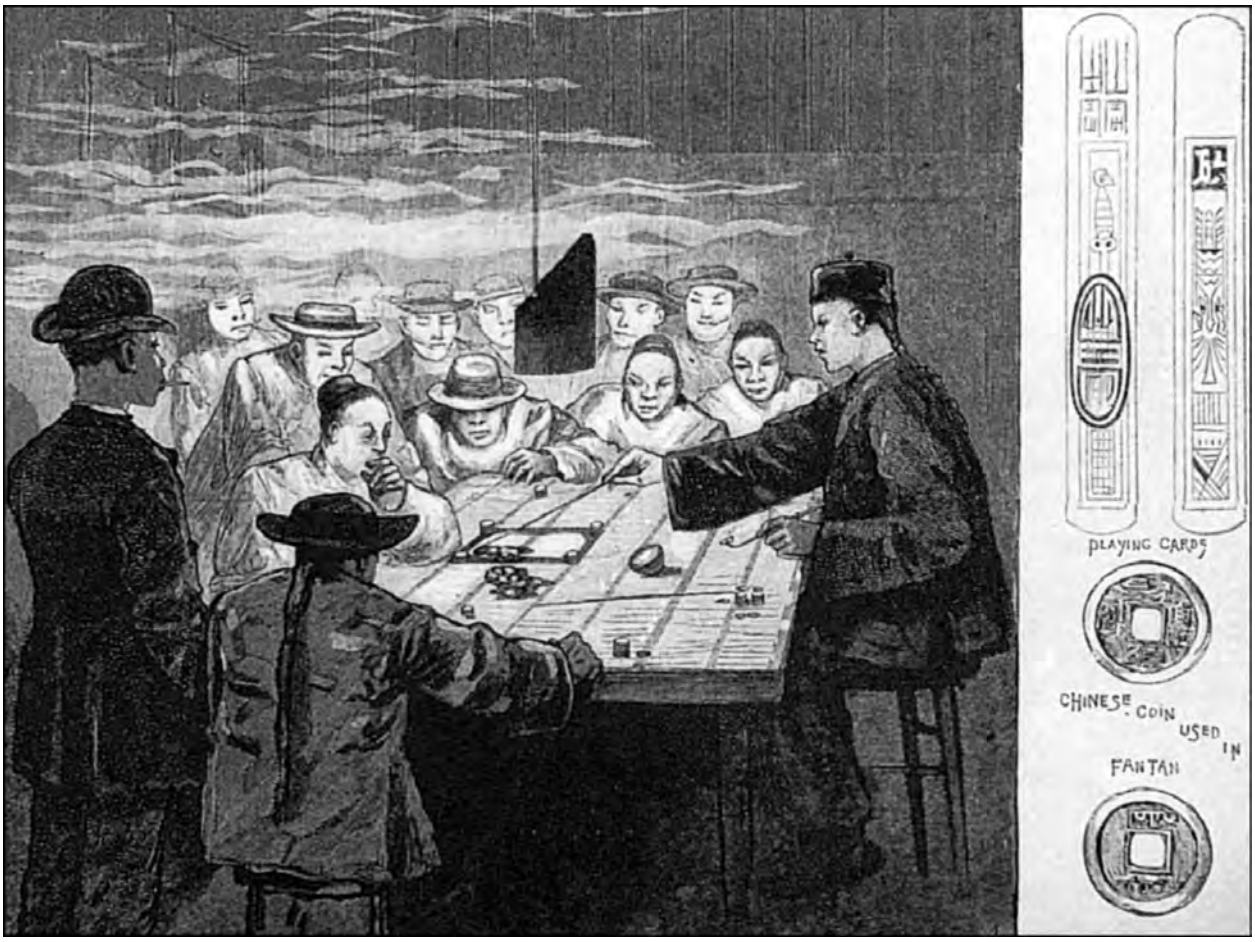


Figure 6-37 Late nineteenth-century Chinese gambling scene (Choy et al. 1995:109).

THE GAMES

A variety of games were played amongst the Chinese community on Third Street. A brief explanation of the types of games played and their paraphernalia and rules is presented below. Many of the games have complex rules and strategies. Therefore, where possible, references to sources that provide detailed descriptions of the games are given.

Weiqi

Paraphernalia. Board, 19 x 19 lines, 181 black and 180 white ggp (Figure 6-38). Ggp are small glass bead-like pieces with a flattened underside.

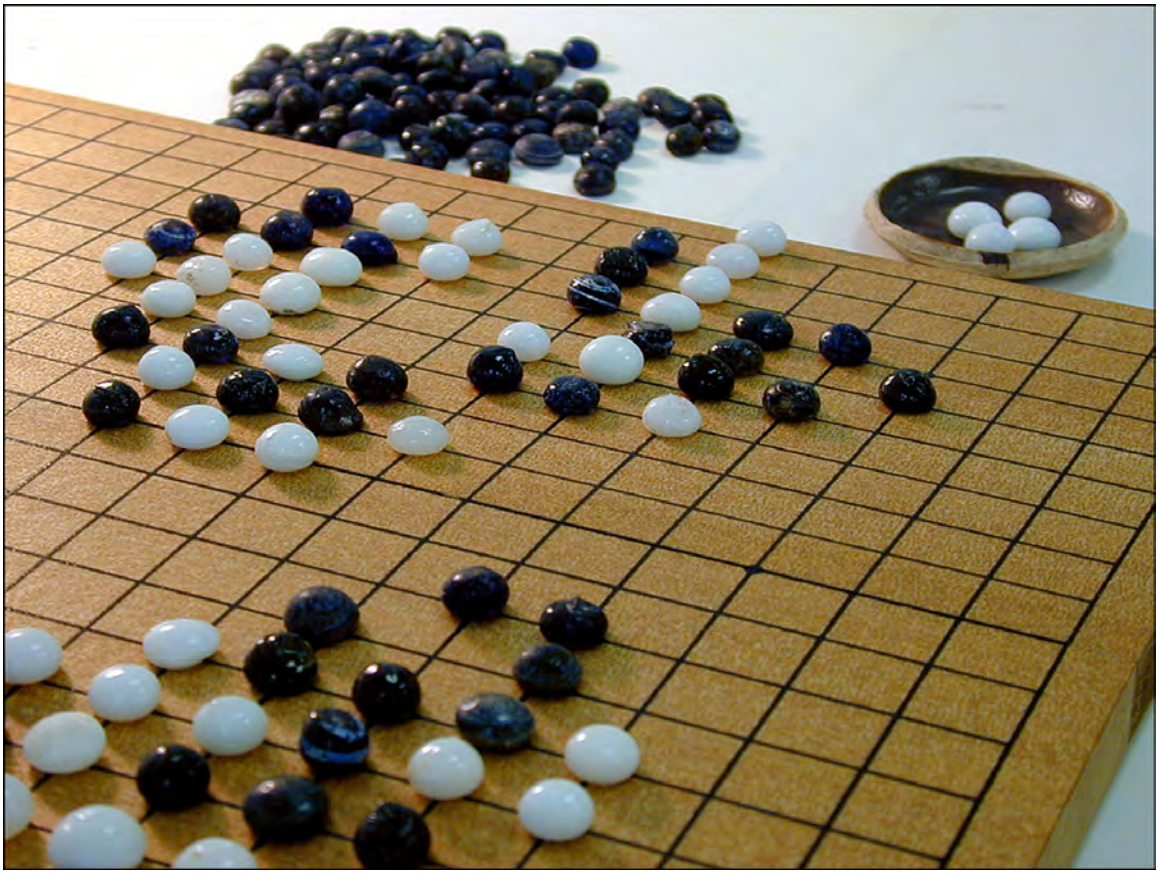


Figure 6-38 Ggp pieces from Privy 1035 on a modern *weiqi* board (photograph by Keith Warren).

Rules. *Weiqi* is a territorial game. The board, marked with a grid of 19 lines by 19 lines, may be thought of as a piece of land to be shared between two players. One player has a supply of black pieces, called stones (ggp), and the other has a supply of white pieces. The game starts with an empty board, and the players take turns placing one stone at each turn on a vacant point. Black plays first, and the stones are placed on the intersections of the line rather than in the squares. Once played, stones are not moved. However, they may be surrounded and captured, in which case they are removed from the board as prisoners. At the end of the game, the players count one point for each vacant intersection inside their own territory and one point for every

stone they have captured. The player with the largest total is the winner (British Go Association 2002).

Comments. *Weiqi* (*Go* is the Japanese term) is thought to be about 3,000 years old; unlike other games played in Chinatown (such as *fan tan*), it is much more a game of strategy than chance, and akin to chess rather than poker. Gambling may have taken place over the game of *weiqi*, but generally the game appears to have been considered an intellectual diversion instead of a wagering opportunity.

Further information. Additional information on the game may be found at the following sources: www.yutopian.com; www.britgo.org; www.kiseido.com.

Fan Tan

Paraphernalia. "Spreading out square," "spreading out cup," "spreading out stick," ggp, buttons, or coins.

Rules. *Fan tan* is a game usually played upon a mat-covered table, with a quantity of Chinese coins or other small objects that are covered with a cup. The players guess what remainder will be left when the pile is divided by four, and bet upon the result (Figure 6-39). The name means "repeatedly spreading out," and refers to the manner in which the coins or other objects are spread out upon the table (Culin 1891:1–6).

Figure 6-39 Various ggp pieces recovered from Privy 1035 (photograph by Keith Warren).

Comments. *Fan tan* games are well documented in nineteenth-century literature. Several first-hand accounts of visits to gambling houses give detailed descriptions of the game and the environment in which it was played. Excerpts from these sources are presented below in "The Asian Coins of San Bernardino Chinatown" by Margie Akin. Buttons and ggp also were used in *fan tan*; the type of gaming piece varied from game to game, as is illustrated in this account of a San Francisco *fan tan* parlor.

> At the head of the table sat a lookout or gamekeeper. At the side was the dealer. This man had a Chinese bowl and a long bamboo stick with a curve at the end, like a hook. In front of him, fastened to the table, was a bag containing black and white buttons. He would scoop down into the sack with his bowl and raise it, turning it upside down on the table. The betting would then start [Cook 1931:3].

Further information. Additional information is available in these sources: http://collections.ic.gc.ca; Culin 1891:1–6.

Tile Games

Paraphernalia. Tiles, dice, gaming pieces. Chinese *kwat p'ái* differ from their derivative, dominoes, used in America and Europe. In the Chinese series the blank is absent and the set commences with a double one. The set contains 21 different pieces instead of 28, and 11 of the pieces are duplicated making 32 pieces in a set (Figure 6-40).

Figure 6-40 Photo of a 5/6 Chinese tile (from the collection of Julia Costello: photograph by Julia Costello).

Rules. A variety of games can be played using the same set of tiles. These include *ts'ung shap* (to dispute for tens), *tá tin kau* (to play heavens and nines), and *hoi t'áp* (to open the pagoda, a

solitaire game). *Pai gow* ("to make nine") is a game of Chinese tiles (also adapted to cards) that is popular in modern casinos. The object of *pai gow* tiles is to make two ranking hands using four tiles (two tiles per hand). The hand consists of the "high hand" and the "low hand." In order to win, the player's rankings in both hands must be better than the bank's.

Comments. Culin (1893:491–537) described Chinese tiles as "the commonest gambling implements." Whereas *fan tan* and *weiqi* needed game boards, tile games could be played just about anywhere a flat surface could be found; like playing cards, tiles could be used for a wide variety of games. A total of 53 tiles was recovered from Privy 1035. From these, 19 denominations were identified. The denomination of several other tiles could not be determined. The collection would make up one complete and two partial sets.

Further Information. Additional data on this topic can be found in Culin 1893:491–537.

Dice Games

Paraphernalia. Dice. Chinese dice consist of small cubes of bone marked on each side with incised spots from one to six in number that are arranged in the same manner as the spots on modern European dice as well as on those of Greece and Rome of classical antiquity; the six and one, five and two, and three and four are on opposite sides. The four and the one spots on Chinese dice are painted red, and the six, five, three, and two spots are painted black (Figure 6-41). The one is always much larger and more deeply incised than the other spots, possibly to compensate (in weight) for its opposition to the six (Culin 1893:491–537).

Figure 6-41 Dice from San Bernardino Chinatown (photograph by Keith Warren).

Rules. Like tiles, a variety of games can be played with Chinese dice, including *Shing kun t'o* (The Game of the Promotion of the Mandarins), *Chak t'in kau* (throwing heaven and nine), and *Chong un ch'au* (Game of the Chief of the Literati). *Shing kun t'o* is played by two or more persons upon a large paper diagram on which are printed the titles of different officials and

dignitaries of the Chinese government. The moves are made by throwing the dice, and the players, whose positions upon the diagram are indicated by notched or colored splints, are advanced or set back according to their throws.

Comments. Dice also are used in board games such as sugoroku, which is similar to backgammon. Culin (1893) states that dice games were not as popular as fan tan or tile games. One American and 17 Chinese dice were recovered from the San Bernardino excavations.

Further Information. Additional information on dice games may be found in Culin 1893: 491–537.

Lottery Paraphernalia. Lottery tickets, bowls, board, writing implements.

Rules. Lottery (*pak kop piu)* players select numbers from a set of 80. The "numbers" are actually Chinese characters derived from a poem of 80 characters in which no two repeat (Figure 6-42). With each drawing, 20 numbers are selected. Players' winnings correspond to the amount of numbers

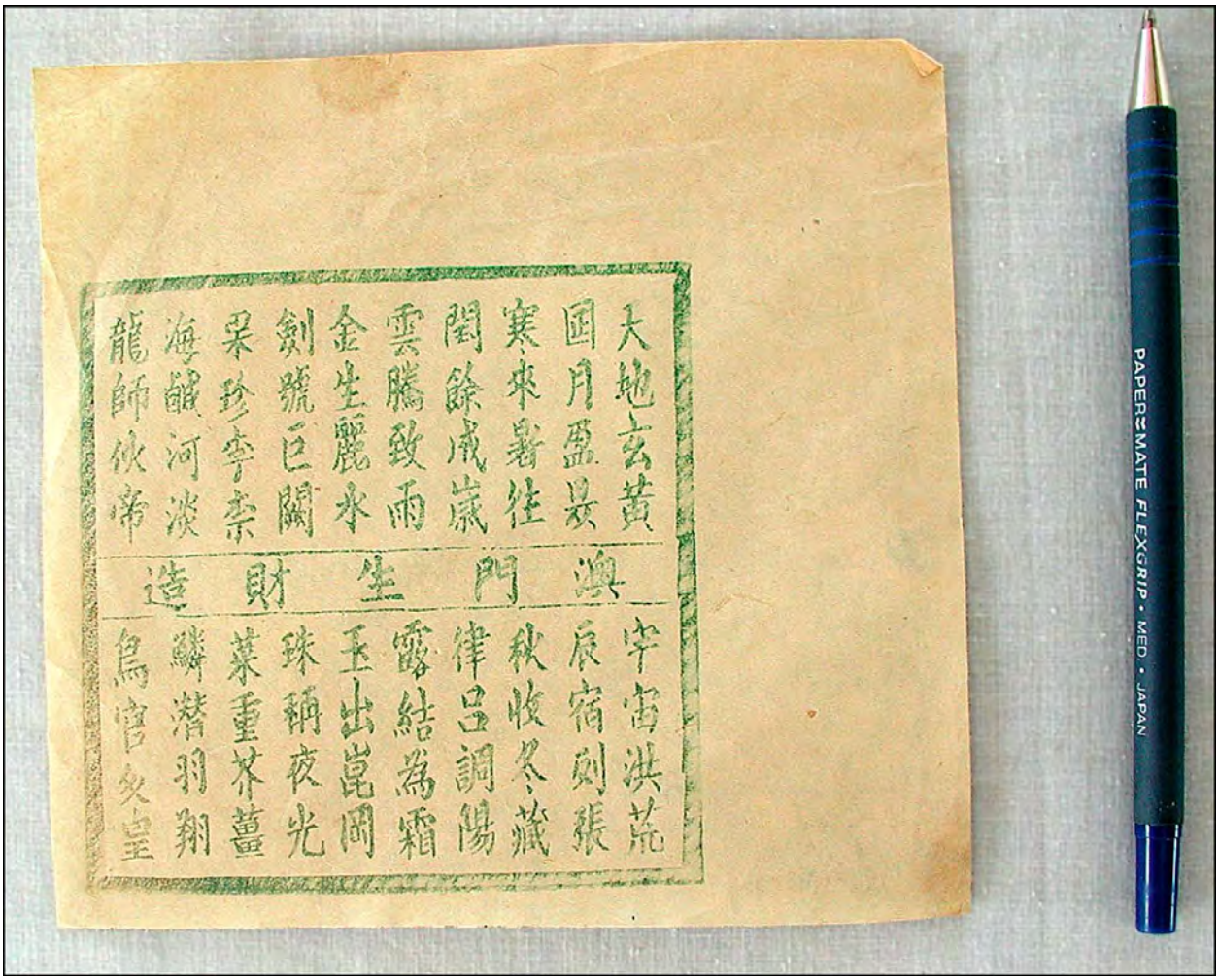


Figure 6-42 Modern Chinese lottery card with pen for scale (from the collection of Julia Costello; photography by Julia Costello).

they match with the 20 numbers drawn. Culin (1893) suggests winnings for each dollar wagered as:

For 5 winning numbers $2
For 6 winning numbers $20
For 7 winning numbers $200
For 8 winning numbers $1,000
For 9 winning numbers $1,500
For 10 winning numbers $3,000

Comments. Although no archaeological evidence of lottery activity was discovered in San Bernardino's Chinatown, it is very likely that regular drawings took place. The majority of California's Chinatowns had an operational lottery. The name "the game of the white pigeon ticket" is thought to come from a time when pigeons were used to distribute the lottery results. The lottery eventually developed into modern Keno.

Further Information. For additional information, see Culin 1891:7–13.

PLAYING BY THE RULES

Gambling in San Bernardino's Chinatown—by both Chinese and others—was certainly illegal, although the extent to which the law was enforced is unknown. In many cities, a well-placed bribe could easily persuade the local police to ignore the commotion of a fan tan game. In nearby Los Angeles during the late 1870s the police were accused of collusion (Lou 1980). Although operation of a fan tan game was a state offense, the authorities appeared to have done little to uphold the law (Lou 1980). Throughout California, amplified anti-Chinese feelings pressured law enforcement officials to increase raids on gambling houses, which drove the games behind closed doors. Games had been held openly up until the city administrators required action. The new approach (perhaps based on a political agenda rather than one of social reform) resulted in fan tan rooms adopting a less blatant disregard for the law. In San Francisco, operators of the parlors used elaborate methods to keep the police from discovering the game.

> The construction of the gambling rooms was very interesting. There was a large door 2 inches thick, of heavy oak, seasoned and studded with bolts. The door jamb and the outer front were the same, but on the back of the door was a large bar on a swivel with two cleats on each side. When the door was slammed, the Chinese could turn the swivel and lock the door in order to keep the police from entering. Of course, because of the bolts studded on the door, it could not very well be chopped down.
>
> Alongside the door was a little room with a window, where the lookout sat. He held the strings controlling the door, and was there to watch everyone that entered. On entering, you would pass through a hallway about ten feet long, then through another door, either right or left, into a hall of about the same length, which would lead to the game.
>
> Three doors generally had to be passed through before reaching the game. The halls were always arranged so that if the police got through the first door, they had to pass through a

> second door, which, of course, would be locked. By the time they finally got to the game room, all evidence would be removed [Cook 1931:3].

Accounts of police raids on San Bernardino games are scarce. Local newspapers report a raid on a monte game in 1878 (*Daily Times* 1878:3), arrests at a *fan tan* game in 1888 (*Daily Courier* 1888a:5), and of the exploits of one serious gambler in 1888:

> Blooded Gamblers
> A Chinaman Betting $1000 Checks at Tan
>
> A great racket was kicked up last night in Chinatown over a tan game, in which a Celestial came very near breaking the bank. He is employed in one of the families in San Bernardino and has considerable money. Last night he went as usual to the Chinese quarters and in the course of a game put up a $1000 check, a $1 greenback and $3.50 in coin. He won. Thereupon, such a commotion occurred as only Chinese can create and it was settled after calling the police. The banker thought the check was for $10 and refused to pay it. How it will turn out remains to be seen [*Daily Courier* 1888c:5].

The amount of money regularly gambled in Chinatown is unknown. Undoubtedly fortunes were won and lost just as they are in modern casinos. The player putting up $1,000 appears to have been a high roller. In 1900, the average annual income of all workers in the United States was $438 (U.S. Census Bureau 1965:91–92).

FORTUNE AND FOLKLORE

Gambling, as a game of chance, is universally surrounded in myth, superstition, and cultural talismans.

The Mythology of Games

Many of the games described here are mentioned in Chinese legends. *Weiqi* is said to have been invented by Emperor Yao (2357–2255 B.C.) to enlighten his son Dan Zhu. It is also recorded that Shun's son Shang Jun was in need of enlightenment and Shun (2255–2205 B.C.) invented *weiqi* to teach him. The earliest mention of *weiqi* is found in "25th Year of Xiang Gong in Zho Zhuan." In 559 B.C., *weiqi* was used as an analogy for an indecisive person. The proverb *Ju Qi Bu Ding* means a person who picks up a stone and is undecided as to where to make a move (Yutopian Enterprises 1999). The red fours on dice are attributed to a Ming Dynasty Emperor (A.D. 1368–1643) who, after a sugoruku game, ordered that the fours be painted red in remembrance of his victory (Culin 1893:491–537). Chinese tiles are attributed to many inventors including Hung Ming (A.D. 181–234), who allegedly designed the game to keep his soldiers awake during the night watch (Culin 1893:491–537).

While the true origins of many games may be lost in myth, it was important that the games continued to be played. The stories attributed to the games are part of Chinese folklore and while the games are alive so too are the legends.

Superstition

Gamblers the world over are notoriously superstitious and the Chinese are no exception. Below is a selection of superstitions held by Chinese gamblers (Culin 1891:15–16):

- White (the color of mourning) is used on the walls and decorations of gambling houses. It is thought to bring bad luck to the patrons (and good luck to the house).
- Orange peel is kept in the box of *fan tan* gaming pieces, again to bring good luck to the house.
- Gamblers refrain from reading books before playing. The word *shu*, meaning "book," also sounds like a word in a provincial dialect meaning "to lose."

Numbers also can be seen as lucky and unlucky (Cacdac 2000).

- The number one means loneliness.
- The unluckiest number is four because it sounds like the Chinese word for death.
- The luckiest number is eight because its Chinese word also means prosper.

The Temple and the Table

Many gamblers would visit the temple in the hope of finding better luck. Culin (1891:16–17) suggested that players would burn candles, incense, and mock money before the shrine of Kwan Tí (the God of War) and that winners of large sums often would make contributions to the temple. The temple in San Bernardino was dedicated to the goddess Kuan Yin. What influence she may have exerted on the local tables is unknown, but perhaps visitors to the Third Street gaming rooms would pass through and make an offering before taking their chances on *fan tan*. The temple, the adjacent store, and quite possibly the gaming rooms were all owned by Wong Nim.

Fortune Telling

Chinese attitudes toward luck also are demonstrated by their affection for fortune telling. Chinese astrology is well known, but in San Bernardino the archaeological record may illustrate two lesser known forms of divination. In fortune telling with tiles, the tiles are placed face down on a table, mixed, placed side by side in rows, and reversed. The fortune teller then manipulates the tiles until three sets are formed. Once the sets are established, the fortune teller refers to a text that aids in the reading (Culin 1893:491–537). Coins also can be used in fortune telling. In a method that is related to the *I Ching*, coins are placed in a tortoise carapace or similar container and spread in front of the customer several times. With this process, the fortune teller selects the eight characters from which the fortune is derived (Earnshaw 2001).

Strategy for Spirituality

Of all the games played in the Chinese community, *weiqi* is perhaps the most interesting culturally. This ancient and elegant game of few rules with mathematical and intellectual complexity is connected to the fundamentals of Chinese thinking. In the *Thirteen Passages of Wei Qi*, Zhang Yi wrote:

> There are 360 plus 1 intersections, and 1 is the beginning of all numbers. It occupies the Tengen (center point) and drives the whole board. There are 360 days in the year. With four corners of the board symbolizing the four seasons, and in the 90 intersections in each quadrant for each of the 90 days in every season. The 72 intersections along the edge of the board, symbolize the weather [Yutopian Enterprises 1999].

This interpretation reflects the common thinking of the ancient Chinese and the concept of integrating astronomy and meteorology with the meditative aspects of *weiqi*.

> There are oriental folk tales reminiscent of Rip Van Winkle in which people have been stopped by an old man (one of the immortals), played a game of Go, and upon getting up from the board have found a hundred years have gone by. This purely mental aspect of the game is in its intellectual dynamic. These Chinese had seen it as encompassing the principles of nature and the universe and of human life, as the diversion of the immortals, a game of abundant spiritual powers [Buss 2002].

> Beyond being merely a game, to enthusiasts Go can take on other meanings: of a nature analogous with life, an intense meditation, a mirror of one's personality, an exercise in abstract reasoning, or, when played well, a beautiful art in which black and white dance across the board in delicate balance [Benson n.d.].

THE ASIAN COINS OF SAN BERNARDINO CHINATOWN by Margie Akin

The largest hoard of Asian coins yet recovered in the American West came out of Privy 1035 in San Bernardino. With 1,320 coins, this hoard was over twice the size of any similar accumulation found in the past. Coins from other site features brought the total recovery to 1,337 coins. Most of the coins from Privy 1035 were found still strung together in the traditional method of storage and transport (Figure 6-43). Except for a few odd coins scattered in adjoining soil layers, it appeared that the lot had been contained in a Chinese ceramic jar that was probably shattered at the time of final deposition. As the coins were exposed and examined, it was immediately clear that many of the coins were Vietnamese *dong*, a zinc coin with a square hole in the center and four Chinese characters on one side. Looking at this material and where it was found, archaeologists were faced with several interesting questions. What had the coins been used for? Why were so many coins found in a privy? Why were they Vietnamese coins, when there were no Vietnamese people in San Bernardino in the nineteenth century nor was there any direct trade with Vietnam at the time?

There were clues to the probable uses of the coins. Dominoes, an ivory die, and hundreds of glass ggp were found in association with the coins. This circumstantial evidence suggested that the coins had been used in gaming. However, since good archaeological

Figure 6-43 The strings of coins as uncovered during excavation of Privy 1035 in September 2001.

interpretations are based on scientific fact, it was necessary to find some way to verify this theory. Also, some of the other ways that these coins were known to have been used in the American West during historical times needed to be ruled out. If the coins were verified as gaming equipment, that still left the question of exactly where the coins came from and why so many were Vietnamese rather than Chinese.

In order to answer these questions, all of the known uses for Asian coins in the American West were explored. Each type of use, briefly reviewed below, is associated with characteristic traits or attributes that are associated with that use. For example, coins that were used as talismans tended to be older, high-quality Chinese brass coins, whereas those used for gaming purposes tended to be very uniform, more recent coins that also were in circulation as small change in the country of origin at the time they were imported to America.

The next step was to clean and identify the coins. This was the most time-consuming task, especially as more than 1,300 coins had to be individually processed. Once the coins were identified, it was possible to see the overall characteristics of the complete assemblage of coins and compare it to all of the possible known uses for the coins. Studying the assemblage as a whole also may indicate the period of time when the coins were imported from Asia. Finally, the place where the coins were recovered—their archaeological context—provides further information about how they were used.

Types of Asian Coins Used in the American West

The two types of Asian coins most commonly found in archaeological sites in North America are the Chinese *wen* and the Vietnamese *dong* (Figure 6-44). Both types of coins are very distinctive, having a square hole in the center and Chinese characters on one or both sides. The

Vietnamese *dong* were modeled on the Chinese *wen*, although often produced (especially during the 1800s) from zinc instead of brass, copper, or iron.

Figure 6-44 Typical Chinese *wen* (left) and (right) a Vietnamese *dong* of Gia Long (1802–1820) inscribed "7 van."

Dong and *wen* were not marked with the exact year that the coin was produced. Instead, they were marked with "reign" dates. A reign date indicates that the coin was made during the reign of a particular emperor. Sometimes the emperor was in power for a long time, and a coin marked with his reign name could have been made anytime during his reign. For example, the most common coins recovered in San Bernardino have the reign name of Emperor Minh Mang, who ruled from 1820 to 1841. A coin with this reign name could have been produced any time during that period. Each emperor, in consultation with historians, astrologers, and political advisors, chose a slogan-like name for his reign, and the emperor was officially known by this name until his reign ended. (An American equivalent might be a reference to the "New Deal President" or the "Great Society President.") Numismatists almost invariably refer to the emperors by their reign names, even when another name is used more commonly by historians. The reign names usually have both political and religious significance as well as a multitude of nuances and possible translations.

Vietnamese reign names were meaningful in Vietnamese and also had meanings in Chinese that were similar or identical to the Vietnamese meanings. One concern of the emperor's advisors was ensuring that a reign name had no possible embarrassing meanings in Chinese. The Vietnamese reigns represented by the coins from the San Bernardino Chinatown began in 1802 and ended in 1883. They are listed in Table 6-30 with dates, Mandarin readings of the characters, and English translations of the Mandarin readings. There are several possible translations of the reign names of the emperors.

Table 6-30
Reign Names on Vietnam Coins Recovered from San Bernardino Chinatown

Vietnamese Emperor Name	Dates of Reign	Mandarin Character	English Translation
Gia Long	1802–1820	Jia Long	Fine Prosperity
Minh Mang	1820–1841	Ming Ming	Brilliant Destiny
Thieu Tri	1841–1847	Shao Zhi	Continuous Rule
Tu Duc	1848–1883	Si De	Inherited Virtue

Coins were developed in China about 2,600 years ago; these round, cast coins were well accepted as a workhorse of commerce by 2,400 years ago. The coins that were imported from China to North America thousands of years later had basically the same form as those earlier coins. All of these Chinese coins, from the ones that are thousands of years old to the last ones that were produced a little less than 100 years ago, are known collectively as *wen* (the term "cash" is sometimes used in English). *Wen* were composed of various brass or copper alloys or occasionally iron, and were cast by pouring molten metal into molds. This method of production was later replaced with machine striking, but not until the close of the nineteenth century. *Wen* ranged from about 18 to 28 millimeters in diameter and featured a large square hole in the center. The coins had a raised rim and four Chinese characters on one side, two of these characters indicating the reign name of the period when the coin was minted. The reverses are varied, but most coins dating after the late 1600s bear two Manchu words indicating the place where the coin was minted.

Only seven of the coins recovered in San Bernardino are Chinese *wen* (Table 6-31). The others are Vietnamese *dong*, which appear, at first glance, to be very similar to the Chinese *wen* on which they are modeled. After 1802, most *dong* were made of zinc, including all but one of those found in San Bernardino. Zinc *dong* are a grayish-white when first cast but oxidize very easily and soon take on a darker color; they are not considered as attractive as the brass or copper coins. *Dong* are easily damaged by water and deteriorate rapidly in soil; most of the *dong* recovered at this site were in bad condition. Some were broken, and many more were difficult to read due to oxidation and scale deposition after burial. Both *dong* and *wen* often were stored together on strings, taking advantage of the central hole. The great majority of the San Bernardino coins were recovered in this form and had become stuck to each other, which made them difficult to separate for cleaning and identification (Figures 6-45 and 6-46).

Figure 6-45 A string of Vietnamese *dong* recovered in San Bernardino Privy 1035.

Figure 6-46 A string of Chinese *wen* imported in 1910 (from the collection of Grant Keddie, British Columbia).

What Are the Coins Worth?

The Chinese *wen* had a value of about 1/1000 of a silver dollar in China during the eighteenth and nineteenth centuries, although this exchange value fluctuated with time and varied by locality. The Vietnamese *dong*, however, were worth less than *wen,* and *dong* made of zinc were even less valuable than those made of brass. Early in the reign of Vietnamese Emperor Tu Duc (1848–1883), a silver dollar was worth about 2,600 zinc *dong*, and 10 zinc *dong* were worth one brass *dong,* but these relative values changed often (Krause and Mishler 1985:2521). Therefore, the monetary value (in the countries of origin) of all of the recovered coins combined was less than a silver dollar.

Table 6-31
Reign Names on the Chinese *Wen* Recovered from San Bernardino Chinatown

Chinese Emperor Name	Dates of Reign	English Translation Wylie (1866)	English Translation Giles (1912)
Kang Xi	1662–1722	Peaceful Luster	Lasting Prosperity
Qian Long	1736–1795	Celestial Support	Enduring Glory
Dao Guang	1821–1850	Reason's Luster	Glory of Right Principle
Tong Zhi	1862–1874	—	United Rule

The Vietnamese government made some attempts to assign higher values to some *dong*, and some of the zinc coins recovered at this site bear numbers on their reverses which were intended as denominations. People who used the coins generally ignored these assigned denominations and valued the *dong* by weight and by whether they were zinc or brass.

The low currency value of the coins must be considered when determining how the coins were used in San Bernardino. Both *dong* and *wen* were produced in the billions and were so common that even today they are not very valuable. The most common varieties, in good condition, can be purchased currently from coin dealers for about 50 cents or less. Even a scarce example with

an unusual mintmark will have a value of only a few dollars. In broken or poor condition, *dong* have no market value. So, even though this collection from Privy 1035 was the largest Asian coin hoard ever found in North America (with 1,307 coins recovered), the current market value for the whole assemblage would be less than $100 due to the poor condition of most of the coins. The real value of the coins is in what they can tell us about the history of California.

Descriptive accounts of Chinese communities in books, newspapers, and even journal articles have used the term "cash" to refer to *dong* and *wen* (in some older sources the term "chin" is sometimes found from the generic Chinese term *qian* for "coin"). "Cash" as a coin name is a South Indian word meaning "small copper coin," and at one time Portuguese and English merchants used the term for the basic denomination of Chinese coins. But the word "cash" has several other meanings in English and was never used by the Chinese themselves (Room 1987). There are four basic types of Asian coins manufactured with the ancient design incorporating a square hole and Chinese characters: the Chinese *wen*, the Vietnamese *dong*, the Japanese *mon*, and the Korean *mun.* Using the correct term for each type of coin instead of the word "cash" is not only more accurate but is also more respectful of the language and culture of each of these distinctive countries.

Archaeology and Analysis

The recovery, processing, and analysis of the coins was accomplished in several phases. First the intact coin hoard was removed from the ground with its surrounding earth. Then, after the coins were cleaned, identified, and recorded, a descriptive profile of the different characteristics of the whole group of coins was developed. The descriptive profile allows examination of ideas about what the coins were used for against known uses for similar coins. Finally, the entire assemblage of coins was compared to groups of coins recovered from other archaeological sites.

Recovery and Cleaning

The coins were found in a very small area within an abandoned privy filled with items from the Chinatown buildings when they were demolished in 1944. As the archaeologists worked their way down through the layers of soil and artifacts, the coins that first appeared were highly corroded zinc coins, many of which either fell apart as they were handled or were in danger of breaking. Old domino tiles and hundreds of ggp also were removed from the immediate area for cleaning and conservation. When a concentration of coins still arranged in strung rows was encountered, Asian coin expert Dr. Margie Akin was called to the site. Plans then were made to remove an entire block of the compact soil for delivery to a location where it could be processed without further damaging the coins. The earthen block (a little more than one cubic foot) was wrapped in cotton gauze, sealed with tape, and transported to the processing location (Figure 6-47). It was given a unique number for analysis: Layer 2082.

As the layers of duct tape and cotton gauze were removed, the upper surfaces of several strings of coins were revealed. The dirt surrounding the coins was hard and embedded with fragments of ceramic, glass, wood, and many *go* pieces (Figure 6-48). Working from the top of the block, the compacted soil was removed with small brushes until the objects, including the coins, could be removed from the block. Ceramic, glass, wood, and bone artifacts were bagged for transfer to the main laboratory.

Figure 6-47 Archaeologists removing block of earth containing the coins.

Figure 6-48 The block of earth with the coin hoard exposed in the laboratory.

As the material was processed, it became evident that the soil matrix consisted of two basic layers separated by a roughly horizontal barrier made up of the remains of a Chinese stoneware jar and parts of a wooden box (Figure 6-49). The top layer contained all of the coins, most of them still strung together, mixed with and resting on the broken pieces of the jar (for type of jar, see Figure 6-22, the jar farthest to the right). The bottom layer below the jar and wood contained only glass from several different objects and a few odd bits of ceramic and bone. The coins had been placed in the jar at some time in the past and stayed within or next to the broken jar in the privy.

Figure 6-49 Strings of coins resting within a stoneware jar.

Other artifacts of interest that were recovered from the matrix cube included a small ivory die and pieces of the same type of metal used in the construction of the storage boxes for the domino tiles found at the site (see the following section). Many dominoes were recovered from the immediate area, although none were found in the cube of matrix examined for coins. A complete bottle with a glass stopper and fragments of several other glass containers were the major finds in the lower half of the matrix, the area that was void of coins. These artifacts belonged to the larger collection of goods that surrounded the coin jar, having inadvertently been included in the lump of soil that archaeologists removed for study; they are analyzed with that larger collection. When the remains of the wooden box and the ceramic jar were removed, there was nothing left in the matrix except some broken glass.

Once the coins had been removed from the matrix, those that were still forming partial strings were separated from the others. Then it was a simple but time-consuming task to clean the coins. Most of the coins were cleaned with a dry toothbrush, although some were so covered with zinc oxide corrosion that a light wire brush was required to remove adhesions. A light touch is required when working on zinc coins as they are very brittle.

Many of the coins had calcium carbonate scale deposits on them, in some cases completely obscuring the inscriptions. Calcium carbonate derives from the hard water that is found close to the surface under downtown San Bernardino as well as the hard water from the city water system. Depending on the season, this water may contain from 300 to 800 parts per million of hardness elements (Greg Guy, water chemist, personal communication 2002), especially calcium and magnesium, which had formed a crusty layer on the coins. In order to remove this scale, about 180 of the coins were immersed for 5 minutes in an industrial descaler (an inhibited muriatic acid and citric acid solution), then rinsed repeatedly and dried.

The single brass Vietnamese *dong* and the six brass Chinese *wen* were encrusted completely in calcified zinc oxide (a seventh *wen* was recovered from another portion of the site). Adjoining zinc coins served as sacrificial anodes, protecting the brass while being obliterated themselves. As a result of this naturally occurring chemical process, the 14 zinc coins that were originally next to the brass coins turned to dust. Obviously they could not be identified and are not included in the counts given here. The brass coins were given an extra 5 minutes in the descaler and wiped clean after repeated rinsing.

Some stubborn deposits were removed by abrasive techniques, and some of the zinc surfaces were exposed on about 75 of the coins. The coins were cleaned only as much as necessary to identify them and prevent any further deterioration. After the coins were cleaned, they were secured in Mylar-lined cardboard holders. The holders, measuring 2 by 2 inches, allow the coins to be easily examined without being damaged. Once a coin was placed in the holder, it was stapled into place and the staples were squeezed tight against the cardboard with pliers. When properly stored using this method, the coins are only minimally exposed to the atmosphere and the Mylar is not chemically reactive with the coins. Information about the coin then was written on the cardboard holder.

As it became clear that almost all of the coins were of only a few types, it was decided to leave some of the coins in the form of partial strings for display purposes. A total of 120 coins representing 9 percent of the assemblage were preserved in strings to show how they were stored when they were still in use. All other coins were individually cleaned, identified, and placed into the Mylar and cardboard display holders.

After cleaning, as much of the following information as could be deciphered from each coin was recorded:

- Country of origin;
- Reign name;
- Date of the reign;
- Metallic composition;
- Diameter in millimeters;
- Denomination; and
- Condition.

Each coin was assigned an individual number on the master list of the California Asian Numismatic Survey, and this number was recorded on the Mylar and cardboard holder. Because all of the coins appeared to have been deposited simultaneously in the jar, no further efforts were made to record provenience beyond indicating that they came from the matrix cube. Forty-four coins from other portions of the site, included in the counts given here, were identified separately by catalog number.

California Asian Numismatic Survey

Numismatists are people who study coins, tokens, medals, paper money, and other similar objects. Margie Akin, Ph.D., is a numismatist specializing in Asian coins and is one of the foremost authorities in this field in the western United States. In 1988 she founded the California Asian Numismatic Survey (CANS), a database of information about Asian coins from both archaeological excavations and historic ethnographic collections in western North America. The society was established to collect sufficient data for studying the distribution of coins over time and space and in association with different activities. Started with funding from the University of California, CANS is currently maintained by Dr. Margie and Kevin Akin. CANS differs from other regional coin surveys in several respects, particularly in requiring direct physical examination of the coins and related material. In order to establish a good database of coins associated with different activities during different time periods, a large regional scope is needed. Most of the data presently maintained in CANS were collected in California. However, coins from Alaska, British Columbia, Washington, Oregon, Idaho, Nevada, and Arizona also are included.

Types of Asian Coins in the Assemblage

Once the coins had been completely cleaned and identified, overall characteristics of the entire group became apparent. The most important fact that came to light was that more than 99 percent of the coins were Vietnamese *dong*, and all but one of the *dong* were made of zinc rather than brass. They were rather uniform in size, varying from 23 to 27 millimeters in diameter. Four Vietnamese reign dates were represented, not counting unidentifiable coins or those left in strings (Table 6-32). One Vietnamese brass *dong* of the Minh Mang reign also was found.

Table 6-32
Coins from Vietnamese Reigns in the San Bernardino Chinatown Collection

Emperor	Reign Dates	No. of Coins	Percentage
Gia Long	1802–1820	101	16.4
Minh Mang	1820–1841	723	51.3
Minh Mang[a]	1820–1841	1	0.1
Thieu Tri	1841–1847	9	0.8
Tu Duc	1848– 1883	384	31.5
Not Identified[b]	—	112	
Total[c]		***1,330***	***100.1***

a - Coin is made of brass.
b - Preserved in intact string of coins.
b - Percentage total greater than 100 is due to rounding.

Although some Vietnamese coins have mintmarks indicating where they were produced, they are scarce. Even if there is a mintmark, it may not be legible. None of the Vietnamese coins in this group had visible mintmarks.

As mentioned before, the Vietnamese government minted some of the *dong* with denominations on them. These denominations were supposed to indicate that the coin was worth the same as 6, 7, or 10 of the standard *dong*, but the denominations were largely ignored. All of the coins recovered at this site would have been found in circulation together in Vietnam during the last half of the nineteenth century. From here they were exported first to China's Guangdong Province and then to California.

The six Chinese coins from Privy 1035 were found in the middle portions of unbroken strings of coins. They were probably not visible to whomever deposited the strings of coins in the jar. All are of very common types, with diameters ranging from 23 to 25 millimeters. These Chinese coins of the Qing Dynasty remained in circulation in parts of China into the 1950s (Table 6-33).

Table 6-33
Coins from Chinese Reigns in the San Bernardino Chinatown Collection

Emperor	Reign Dates	Mint	No. of Coins
Kang Xi	1662–1722	Board of Revenue Mint, Beijing	1
		Hangzhou Mint, Zhejiang Province	1
Qian Long	1736–1795	Board of Revenue Mint, Beijing	1
		Board of Works Mint, Beijing	2
		Yunnanfu Mint, Yunnan Province	1
Dao Guang	1821–1850	Board of Works Mint, Beijing	1
Total			***7***

Why Vietnamese Coins in Chinatown?

Vietnamese coins have been recovered from the Riverside (Akin and Akin 1987), Redlands (scavenged and not formally reported), and Los Angeles (Akin 1996) Chinatowns. When they were first recovered in Riverside in 1985 there was no known explanation for why Vietnamese coins were there. However, research into the circulation patterns of Asian coins in the nineteenth century now offers us an explanation (Akin 1992).

As discussed in Chapter 2, the residents of San Bernardino Chinatown (like those of the nearby Riverside and Redlands Chinatowns) were part of the large agricultural workforce employed before and shortly after the 1893 Exclusion Acts. Almost all of these laborers came from Guangdong Province, which adjoined Vietnam to the northeast. At the same time that these American Chinese communities were expanding, Vietnamese *dong* were becoming very common in Guangdong, where *dong* were being used to help alleviate a shortage of small change. Because of the close trade ties between Guangdong and the American Chinatowns, the Vietnamese coins were finding their way into the stream of trade goods moving across the Pacific. However, Chinese sites in California with known occupations before the 1880s do not have any Vietnamese coins. How could the change from *no* Vietnamese coins to *many*

Vietnamese coins be explained if the people who were emigrating and involved with the trade were all Chinese?

Chinese sites in California with occupation ending before the 1880s had no zinc Vietnamese coins because at that time Vietnamese coins circulated only in Vietnam, and there was virtually no commerce between Vietnam and California. However, beginning in 1879, French occupation authorities minted modern colonial coins for circulation in Vietnam. By the mid-1880s, Chinese bankers active in Vietnam were buying up the zinc *dong* and transporting them across the Chinese border to Guangdong, where they placed them into circulation. There was a shortage of small change in Guangdong at the time, so the zinc *dong* were accepted as currency. In 1889 the Chinese government mint in Canton began production of high-quality machine-struck brass *wen*, and within a few years the market for the Vietnamese coins disappeared. Consequently, it was only for a short, tightly defined period—about 1885 to the 1890s—that large quantities of zinc Vietnamese *dong* circulated in Guangdong Province, which was a center of trade and emigration to California.

The implication is clear. If Vietnamese *dong* are found at a Chinese archaeological site in California, it is fairly certain that they were imported between about 1885 and the late 1890s. Sometimes this fact can be used to help date (or confirm dates at) a site, as was the case in the excavations of the Los Angeles Chinatown (Akin 1996:98–104). While it can be determined that the coins found at this San Bernardino site were imported into California sometime between 1885 and the late 1890s, this is not useful in dating the site because other evidence indicates that deposition in the privy occurred many years later.

What Were the Coins Used For?

The next step in the analysis of the coins is determining how they were used, particularly examining the theory that they were used in gaming. This is accomplished by looking at all of the known uses for similar coins and determining which is the best match. Although coins are generally thought of as money, their value as currency was too low for them to have been used for this purpose anywhere in California (Akin 1992). With a currency value of somewhere between one and three thousand per dollar, their use for almost any other purpose would have been more practical. What were these other possible uses?

Different populations imported Asian coins into the New World over a period of two centuries, where they became part of the material culture associated with one of five different kinds of activities. As nonmonetary objects, when they were used in any of these activities the coins had a value far greater than their exchange value of less than one-tenth of a U.S. cent. In order to avoid overlooking any possible use for the coins, all known uses should be reviewed to see if they match the profile of the coins recovered from the San Bernardino Chinatown privy.

Coins as Gaming Pieces

One possible use for the coins is gaming, the activity in which the recovered *dong* and *wen* were most likely utilized. The important thing to keep in mind is that, although games usually involved gambling, coins were used as game pieces and not as money. In the following contemporary descriptions of *kwat pai* (dominoes) and *fan tan*, it becomes clear that the coins

functioned as counters (rather like poker chips) with domino tiles and as part of the gaming equipment itself in *fan tan*.

The following description of a game using *kwat pai* ("bone tablets") includes a role for three of the elements found together at the San Bernardino location: domino tiles, dice, and coins. In this game the coins function as betting chips.

> Due to the effectual raids that were made by the police upon the games of *fan tan* as well as the severe penalties imposed upon all who were arrested, that game was generally abandoned. The game now universally played is "dominoes." Instead of playing the game as Euro-Americans do, the Chinese mixed the dominoes well together. Two dice were thrown for choice. The player getting the highest number of spots on the dice drew the first six dominoes. The second best throw took second choice, and so on. The game generally was played with four persons. The first choice then played the first domino; whoever matched that domino won it and played another domino. At the end of each game, pieces of Chinese coins were given out, representing a certain amount of American money. All bets were settled outside the game room [*San Francisco Bulletin* 1876].

The game most closely associated with both Vietnamese *dong* and Chinese *wen* was *fan tan*. *Fan tan* was very popular with both Chinese immigrants as well as their work associates and neighbors. Games were organized primarily in special shops in Chinese neighborhoods, but work crews often organized games in temporary camps associated with their migratory labor. Asian coins were used solely as game pieces and markers, never as the money actually being wagered. Game operators imported *dong* and *wen* specifically to be used as game pieces, preferring uniform sets of coins (Culin 1891:5). During the 1880s, as *dong* came into circulation in Guangdong, they were put to use in the United States in the game of *fan tan* in which different coins represented different game functions (Culin 1891:6).

In Culin's 1891 description of *fan tan*, the coins were used as game pieces. He clearly states that the coins are not being used for wagering, and describes the coins preferred by the game operators:

> Fan t'an is a game usually played upon a mat-covered table, with a quantity of Chinese coins or other small objects which are covered with a cup. The players guess what remainder will be left when the pile is divided by four, and bet upon the result. The name means "repeatedly spreading out," and refers to the manner in which coins or other objects are spread out upon the table. . . . The t'an kun ["ruler of the spreading out"] takes a handful of bright brass "cash" from a pile before him and covers them with a shallow brass cup about three and one half inches in diameter, called t'an k'oi or "spreading out cover". The players lay their wagers on or beside the numbers they select on the plate, and the t'an kun raises the cover and carefully counts off the "cash" in fours, one at a time, not touching them with his hands, but using a tapering rod of black wood about eighteen inches in length, called the t'an pong, or "spreading out rod," for the purpose. If there is a remainder of one, after he has removed as many fours as possible, "one" is said to be "opened"; if two or three remain, "two" or "three" is "opened", or if the pile has contained an even number of fours and there is no remainder, the "four" is "opened". The operation is conducted in silence, and when the result is apparent, t'an kun mechanically replaces the separated "cash" into the large pile and takes another handful from it, which he covers as before [Culin 1891:2–4].

In the same report, Culin indicated that the coins were used as counters or markers in the game of *fan tan* but that bets were conducted only in American money; *dong* were used as counters, however, to represent cash deposits held by the manager of the game:

> The coins used in playing *fan t'an* are those of the present dynasty, such as are now current in China and imported expressly for gambling purposes in large quantity. . . . The brass cash [wen] are not used as counters upon the board, leaden pieces from Annam [Vietnam], called *nai ts'in*, "dirt cash," being substituted to prevent confusion [Culin 1891:4, 6].

One description of *fan tan* in an 1858 *San Francisco Bulletin* article reports that the game was "played with Chinese *cash*, or brass coin, of which it takes in China one thousand to make a dollar. The pieces, however, are used, not as money, but as dice or counters" (University of California, Berkeley n.d.).

Another account of *fan tan*, this one published in 1854, almost 40 years before Culin observed the game, uses language that produces an aura of mystery or other-worldliness. The setting is San Francisco:

> CHINESE GAMING HOUSE
>
> Let us now enter a house of this kind, conducted by a Chinaman. Here is a row of frame buildings, two stories in height, with their sharp, steep roofs, presenting pointed gables to the street, and as they rise in long succession, resembling the teeth of a huge saw. Attached to the upper story of each is a verandah, extending over the sidewalk, and rising to the height of the peaks. The spaces between the slender columns are so finished that the whole resembles a long series of open gateways or doors; and before each hangs a solar lamp, which in the evenings is in full blaze. Within is no ornament, but all is as dingy as the faces that greet the visitor. In the room on the first floor are long narrow tables, coarsely made. . . . On each table stands a metallic burner, of very odd, though simple construction. . . . The lamps, and the delicate "cigarettes", carefully rolled in white paper, which the Chinese offer to every visitor, and constantly smoke, render the walls of the room as dark as the complexions of the orientals. Around each table stand ten or fifteen Chinese, while many others are passing in or out.
>
> At one end of the table sits the owner, with a pile of gold and silver coin before him, and at his side stands a man holding a short stick, who is the operator in the game. In the center of the table is a piece of gilt cloth about a foot square, and between it and the operator lie about two hundred Chinese coin, or, about the size of a cent, with a square hole in their centre [sic]. When the game begins, the bet, which may be any sum, is staked with the owner of the table, and as many may enter the circle as choose to risk their money. The corners of the gilt cloth are numbered from one to four, and the bet is made by "boarding" the stake on either of the numbers. When they are "all down" the operator takes a handful of the chins, lays them before him, and with the stick moves them in fours towards himself, until the whole number laid before him are thus moved. If the number of chins which remain after the last series of fours has been moved, is odd, those parties whose money is laid on the odd numbers win the stakes, and the owner loses as much money as has been placed there, but he wins as much as the amount placed on all the even numbers. If no money is staked on the four numbers, he wins the whole

> stakes. This is the fashionable Chinese game, and is called *fonton*. It has, at least, the merit of fair chances for all the parties [Capron 1854:150–151].

In this description the separation of coins into "betting money" and "game pieces" also is clear. Although the coins shared the same space, their functions were different. One set of coins served as circulating currency, and the other set supplied game pieces of little value.

The dominant Euro-American establishment exhibited varying degrees of tolerance for the games at different times. Most of the time, however, it was considered illegal. The amount of prosecution and its severity would depend on the general moral climate of the community as well as the degree of corruption in the police force. The fact that gaming activities often were forced underground to some degree has had an effect on the archaeological record. San Bernardino is not the only place where gaming equipment is found in the privy. A privy at the Tucson Chinatown (also used well into the twentieth century) was found to be a hiding place for gaming equipment (Lister and Lister 1989). The description of domino tiles cited above notes that the game operators had switched from *fan tan* to *kwat pai* in response to prosecution.

Medicinal Uses for Coins

The second set of activities that traditionally incorporated coins is composed of several medicinal treatments using coins, especially zinc coins. In China, several medicinal teas incorporate coins as ingredients. Brass and zinc coins were thoroughly washed and then boiled in water to produce a "tea" that was consumed by the patient. The zinc in the coin, which had been leached into the slightly acidic liquid, was expected to promote healing and enhance the immune system. Bronze coins, with their high lead and tin content, were boiled to produce a solution for the treatment of the external parts of the ear. The Vietnamese coins, with the highest levels of zinc, were ground up and the powder was mixed into an aqueous solution or ointment for topical use on eyes, ears, and hemorrhoids. The tea "prescriptions" required coins of different metallic composition and, therefore, different coins for the treatment of different ailments (Ching 1987). It is not unreasonable to suggest that the Chinese laborers, who had to rely on self-treatment for most medical problems, would have kept a few coins around for such purposes.

Labels on health aids for the treatment of sore throats and cold symptoms that are sold in most drugstores today substantiate the belief held by many non-Chinese people that zinc has a therapeutic value. Zinc is a common ingredient in lozenges and mouthwash solutions, and ointments used to treat rashes often contain zinc oxide as well.

Ethnic Chinese and other cultures in many parts of Southeast Asia practice coin rubbing. The practice is known as *juasha* in China, *cao gio* in Vietnam, and *koo kchall* in Cambodia. Coin rubbing is a treatment for "hot" diseases and is related to the more familiar cupping and acupuncture (Roberts 1988; Walterspiel and Rogers 1987:309). It also may be related to a form of "animal massage," scratching oneself with a fingernail. This practice is designed to remove the top layer of dead skin and thereby aid the kidney in the elimination of wastes and stimulate the capillary circulation (William Bowen, personal communication 1992).

Coin rubbing is used as a symptomatic treatment for colds, flu, and other discomforts. It is still very widely practiced by many Asian-Americans, both recent immigrants and those who have

lived here for two or three generations. There are several variations, and different oils are preferred either as a personal choice or because they are supposed to be especially efficacious for any given treatment.

The most common procedure consists of a systematic massage with the edge of the coin, using downward strokes that parallel the spine and then spread out to the sides paralleling the ribs. The massage begins at the top of the shoulder blades and moves in a curve along the underside of the shoulder blade. The same movement is done a little farther down the back, repeated again a little farther down, and so on. Each massage stroke may be repeated in the same location twice, or the entire pattern may be repeated. Depending on the time available, three, four, or five curves may be traced on each side. The coin is held at about a 30-degree angle from the body. A soothing lotion is applied simultaneously with the massage.

Maxine Hong Kingston, a contemporary Chinese American author, presented a fictionalized account of Chinese agricultural workers in Hawaii in her book *China Men*. Based on stories she had heard from her elders, she described what might have been an almost daily routine for Chinese laborers stranded far from home:

> At the very end of the day, the men exchanged remedies. They scraped one another's backs with spoons to get rid of rheumatism and arthritis. For heat sickness they scraped necks with the edge of a coin cooled in water, the square hole in the middle of the coin giving a good grip. They slapped the insides of one another's elbows and knees, where tiredness collects . . . [Kingston 1980:99].

While the account is fiction, it is historically based, and it is easy to see how the description of men trying to ease their pain with their own self-treatments could take place in any community of laborers.

Talismanic Uses of Coins

Another way that Asian coins were used involved activities generated by traditional beliefs of Chinese and other Asian immigrants. Coins played an important role as talismans, offerings, and symbols in Chinese folk religion (Huang 1984). Examples include small groups of coins tied with red thread. Coins were used as good luck pieces that could be attached to keychains, instruments, or other items of personal importance. The coins that make up "coin swords" (groups of coins tied onto a central iron rod in the shape of a sword) were used in some Buddhist rituals and as offerings and gifts for special occasions (Armentrout-Ma 1984:3). Larger and earlier coins, such as the coins of Emperor Kang Xi, have long been preferred for most talismanic and religious uses, which is why they are often recovered in sites like the Riverside and Los Angeles Chinatowns.

However, the Vietnamese zinc *dong* recovered in San Bernardino were considered to be inferior to their Chinese cousins, the *wen*, in every way. Certainly the material that *dong* were composed of—base zinc—was not beautiful or as valuable as other coins. The most valuable aspects of talismanic coins were their great age and their association with powerful people in the past, such as Emperor Kang Xi.

Coins as Decorations

Coins have been used as buttons; as decorations on clothing, baskets, and furniture; and for other decorative purposes. Most such coins seem to have been affixed in China to items intended for sale to non-Chinese. Some items with coins as decorations were so popular that they have been used in almost every house of every older town in the western United States, sewing baskets being the prime example. Additional holes may have been drilled into the coins to facilitate attaching them to other objects (Akin 1996).

Coins were imported for use as decorations for more than 300 years, starting with coins traded to Native Americans and used to decorate clothing. As items of Chinese manufacture became popular in Victorian homes, coins attached to objects such as baskets or boxes were found in the home of Euro-Americans. The Vietnamese *dong*, however, were not suited to this purpose because of their dark, unattractive color; certainly the Chinese themselves would not have selected them to decorate anything. In fact, *dong* were sometimes referred to as "dirt" money by the Chinese. Again, the context of the coins would also disprove their use as decorations—items of beauty are "passed down" or sold, not dumped into the privy. The absence of Chinese coins at the site argues that they were valued enough to be taken away as the Chinese immigrants left for other residences.

Trade with Native Americans

During the eighteenth and nineteenth centuries, the fur trade between China and ports along the coast of North America brought Chinese *wen* for exchange with aboriginal peoples. Not only are the *wen* attractive coins (with holes that make them especially suitable for sewing onto clothing and basketry), but they are composed of brass or sometimes copper—metals especially prized by Native Americans. *Wen* have been recovered from aboriginal and trading post sites in Alaska, British Columbia, Washington, Oregon, and California (Akin 1988; Beals 1980; Keddie 1978). However, the introduction of Asian goods to the Native American population of North America's West Coast was largely ended by 1850 and, therefore, was never connected with urban Chinese settlements. It also should be noted that no examples of *dong* have been found as part of these trading activities.

San Bernardino: Coins for Gambling

Having examined all of the possible uses for the coins, it is easy to see that two can be ruled out simply because the coin "profiles" do not match. The coins were not part of the trans-Pacific trade with Native Americans, nor were they used as decorations. That leaves three possible functional matches. There is abundant evidence that nearly all the coins recovered from the San Bernardino Chinatown were used in gaming. The coins recovered from the privy match historical descriptions of the games and fit the profile of coins used in gambling—inexpensive, well-matched coins of roughly equal size and weight. And finally, the context of those recovered coins—being found with other gaming equipment in a location that was often used to hide evidence of gaming (the privy)—strongly suggests their use in gaming.

That leaves two other possible uses for the coins to consider—talismanic and medicinal. One Chinese coin of the type often used as a "charm" was recovered from Drain 1002 where an

assortment of household rubbish had accumulated. In the nearby Riverside Chinatown, talismanic coins were recovered from basements and ditches where similar household rubbish had been shoved aside in the past. This single coin was from the auspicious reign of Kang Xi and is a large beautiful brass coin from an unusual northern mint (Hangshou Mint in Zhejiang province). This coin is larger (27 millimeters) than coins normally used for gambling. The physical characteristics of the coin itself as well as the context in which it was found (as an individual coin) argue for its use as a talisman.

The use of coins as part of medicinal treatments is the final consideration. The only way to be sure that a coin had been used in one of the folk medicines described earlier would be to find it in direct association with other medicinal products (next to a bottle of tiger balm, for example). None of the coins recovered from this site was found in this context. Historical documents and ethnographic studies indicate that coins would be taken from one function, used as "opportunistic tools," and then returned to their normal use. Any of the coins recovered, although regularly used in gaming, could have been pulled out one day for a coin-rubbing treatment and then tossed back into the box with the other coins. This kind of transitory use does not leave much of a footprint in the archaeological record. For these reasons, although it is possible that some of the coins may have been opportunistically used for medical treatments, there is no direct evidence for that use.

One of the coins from this site probably served a talismanic use in San Bernardino, while the others were used in games commonly played by Chinese immigrants. Any of the coins could have been used at one time or another for medicinal purposes. Although the Chinese coins were made and originally used as currency in China between 1662 and 1851, and the zinc coins were minted and circulated in Vietnam between 1802 and 1883, the coins were exported to California from China's Guangdong Province during the period from 1885 to the late 1890s. While a privy is a fairly common place to find Asian coins and other gambling paraphernalia hidden, they may have been deposited in the old privy as late as 1944.

THE THREE LIVES OF THE GAMING TILES FROM SAN BERNARDINO
by Laramie Hickey-Friedman and Sabrina Carli

Chinese gaming tiles (small wood rectangles closely resembling dominoes) and their metal storage boxes were recovered with other gambling and household items dumped into Privy 1035. Excavators first noticed a concentration of tiles emerging from the artifact-rich soils, not far from the cache of coins discussed above. Carefully removed, they were adjacent to one complete and one partial metal box which appeared to be their associated containers. The archaeologists placed individual dominos on paper towels in plastic bags, the metal boxes were covered in plastic, and all were refrigerated in an effort to aid preservation.

The finds presented technical challenges, by virtue of what they were made of and the manner in which they had been stored after excavation. Their successful conservation was achieved by working directly with the field archaeologists, establishing a dialogue between the two disciplines of archaeology and conservation. As a result, the historic tiles have been given a new life: their first was in the Chinese gambling games of San Bernardino; their second was as forgotten rubbish, buried underground; and now in their third life they are accessible for study, exhibition, and the education of the next generation.

Conservation Treatment

Goals for the treatment of these objects were to stabilize their physical condition and remove heavy soil accretions, under the presumption that in the future the artifacts would be exhibited.

An individual artifact has a finite lifespan, dependent upon the conditions to which it is exposed. During its purposeful life it undergoes expected use and wear. When it becomes buried there is a sharp increase in deterioration as the materials of the artifact are altered by the new environment. An unexcavated artifact generally reaches equilibrium with its burial environment, remaining stable. From the moment the artifact is again exposed to an ambient environment, the processes of deterioration begin anew, often at an accelerated rate. The understanding of physical properties of materials and their processes of deterioration assist with post-excavation stabilization, providing long-term preservation of excavated artifacts.

Condition Assessment

In an effort to stabilize the artifacts until conservation the wrapped tiles and earth-filled metal boxes were kept refrigerated. For conservators, keeping damp artifacts "in cold storage" refers to a method of quick freezing carried out in a specialized facility. Unfortunately, refrigeration resulted in substantial biological deterioration. The artifacts arrived at the conservation laboratory in early January 2002 (Figure 6-50). The dampness of the artifacts and their environment resulted in the disintegration of the paper towels, fragments of which adhered to the surface of the tiles. The overall condition of the tiles was damp with external soil accretions and varying degrees of mold growth. The moisture and mold had softened the wood fibers, making the tiles fragile.

Upon initial examination both metal boxes were mineralized and brittle (Figure 6-51). From lifting the artifacts in a block of soil at the excavations, moderate soil encrustations remained on the exterior and substantial encrustations on the interior. The walls of the fragmentary box were pulling away from the internal soil block and associated tiles. The intact metal box had a slightly fragmented top revealing at least one tile encased in an internal soil block.

Treatment

Prior to conducting each step of conservation treatment, extensive testing was undertaken to assure the preservation of the artifacts.

Since the tiles were not saturated, standard treatment for waterlogged organic materials was not warranted. However, the rate of drying was critical to avoid cell collapse that would result in cracking, shrinkage, and distortion. An innovative approach was required. Compressed natural vegetable sponges were tried as a controlled method for removing the excess moisture from the tiles. A sponge was placed with a tile in a sealed polyethylene bag (Figure 6-52). This system provided the dual benefit of removing excess water content from the tiles while simultaneously buffering the micro-environment. Also, as moisture was taken up, the sponges expanded, providing a visual measure of moisture absorption, confirmed by weight. As a result of this slow drying process the tiles showed minimal physical change and the biological growth was chemically neutralized (Figure 6-53). Bulky soil accretions and paper towel remnants were mechanically removed. In some cases, soil residue was left on the surface to avoid disturbing the

Figure 6-50 **Conservator Laramie Hickey-Friedman examining the tiles (photograph by Julia Costello).**

Figure 6-51 **The partially complete metal box with tiles in the interior.**

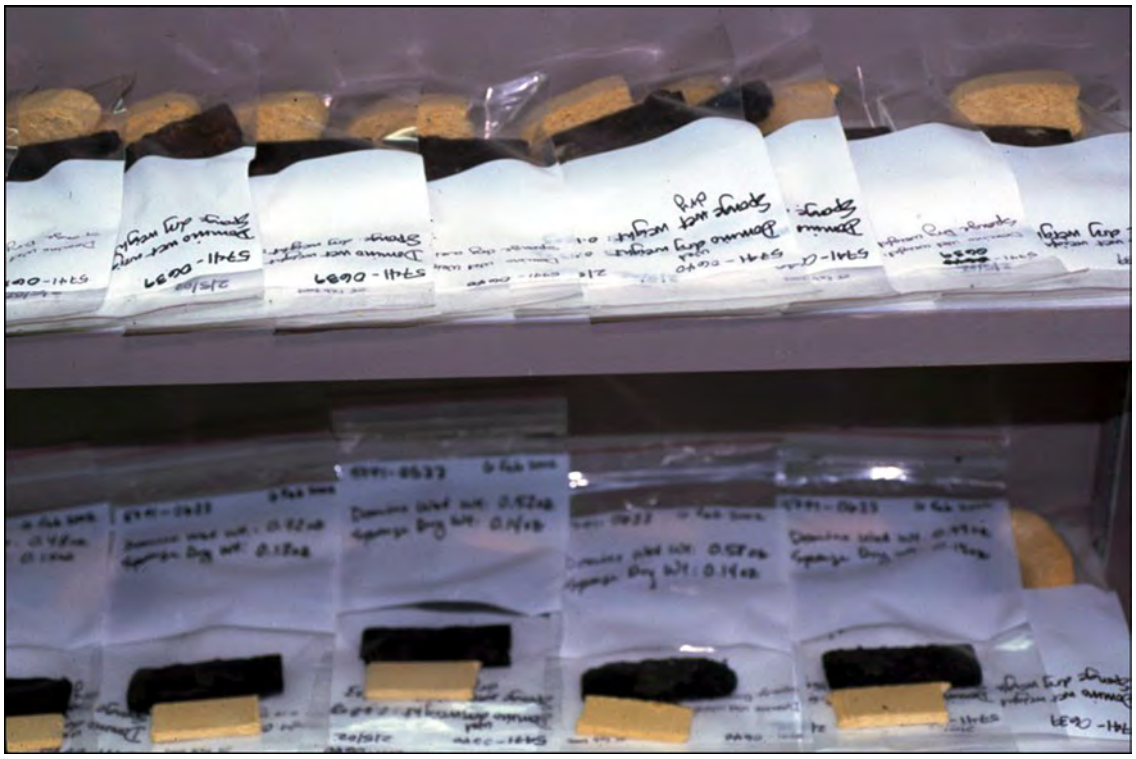


Figure 6-52 **Each tile was numbered, placed in a separate bag with a compressed sponge, and carefully monitored.**

Figure 6-53 **A conserved tile and accompanying sponge that absorbed the destructive moisture.**

fragile wood fibers and any surviving pigment traces. Tiles exhibiting extreme fragility were consolidated using a cellulose ether consolidant.

In the conservation laboratory, tiles excavated from the fragmentary metal box were treated as the others had been. The placement and orientation of surviving box elements were recorded and the surrounding soil matrix retained. During excavation a small stack of metal coins along with counters (ggp) were found within the soil matrix. These were returned to the archaeological laboratory for cataloging and analysis. The soil and corrosion accretions were mechanically reduced from the metal fragments and, where possible, the metal fragments were stabilized and reassembled.

The archaeologists had hoped that the better-preserved box would contain a complete or nearly complete set of gaming tiles and had initially requested that it be excavated for those artifacts. In fulfilling this request, however, the box would not have survived. This dilemma provided an excellent opportunity to use nondestructive analysis to make an informed decision on how to proceed. X-ray radiographs were taken of the box to determine its overall condition and the nature of its contents (Figure 6-54). Surprisingly, it was found to contain only a few tiles. As the box did not contain a full set of tiles and many other examples of tiles had been recovered from the excavation, the archaeologists and Caltrans agreed to leave the box intact and not pursue removal of its contents. This ensures that any future research will be conducted on unadulterated material, and the box and x-rays will make an interesting interpretive exhibit.

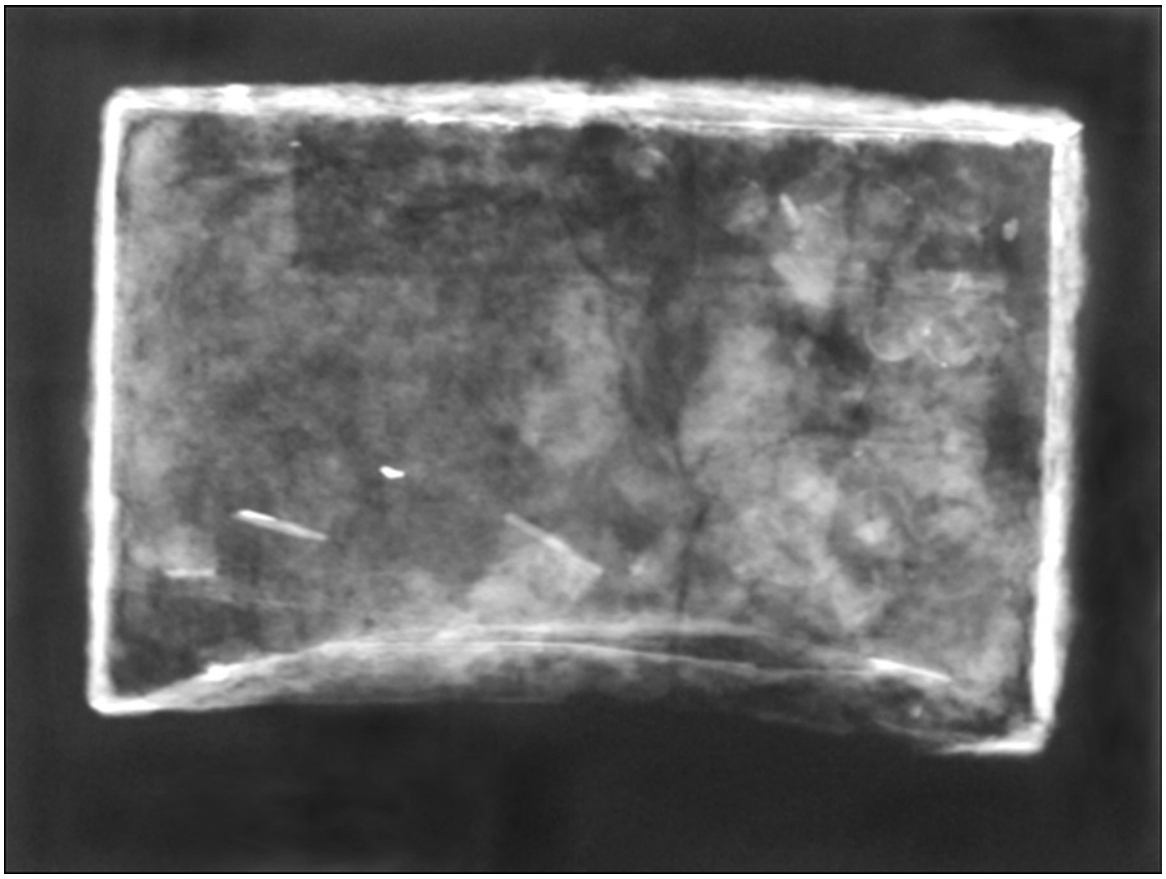


Figure 6-54 An x-ray of the complete box showing only a few objects in the interior.

Benefits of Conservation Treatment

By virtue of this conservation treatment, the future of these artifacts is better ensured. The goal for conservation of the tiles and metal boxes was to stabilize their physical condition. The removal of moisture and soil from these objects both prepared them for limited exhibition and provided long-term preservation of the excavated artifacts. Although still extremely fragile, their structure is stable and the processes of deterioration have been dramatically slowed. This conservation treatment also has inspired improved communication between conservators and archaeologists both during and prior to excavation.

OPIUM USE

Most American Chinatowns had facilities for smoking opium, a practice imported from China. These facilities, however, also attracted non-Chinese and became a focus for the anti-drug campaigns in the late nineteenth and early twentieth centuries.

The Artifacts

Whole and fragmentary evidence representing a total of 23 opium tins, 44 opium pipe bowls, and 13 opium lamp chimneys was recovered from the controlled excavations at San Bernardino Chinatown (Figure 6-55).

Figure 6-55 Opium paraphernalia from the San Bernardino Chinatown collection (photograph by Keith Warren).

Detailed studies of opium smoking and associated paraphernalia were undertaken by Jerry Wylie and Pamela Higgins (1987) for the Riverside Chinatown report and by Jerry Wylie and Richard Fike (1993) for Priscilla Wegars' 1993 collection of articles. At Riverside, 404 pipe bowl sherds representing 88 individual pipes and 31 types were recovered (Wylie and Higgins 1987:334). The collection from the San Bernardino excavations contains many items similar to those recovered from the Riverside site. Where possible, typologies and classifications established during those studies have been applied to the current investigations, although most of the opium bowl fragments recovered were too small for identification. The above studies present excellent discussions on the historical and cultural implications of opium use. An overview of those themes is presented below.

Two whole pipe bowls were recovered during trenching in Chinatown. The first, a bowl with a six-sided smoking surface, is similar to the C2 classification defined in the Riverside report (Wylie and Higgins 1987:352). The second bowl is an extremely unusual design in the form of a snail shell sculpted in reddish clay (Figure 6-56). Pipe bowls molded into animal figures have

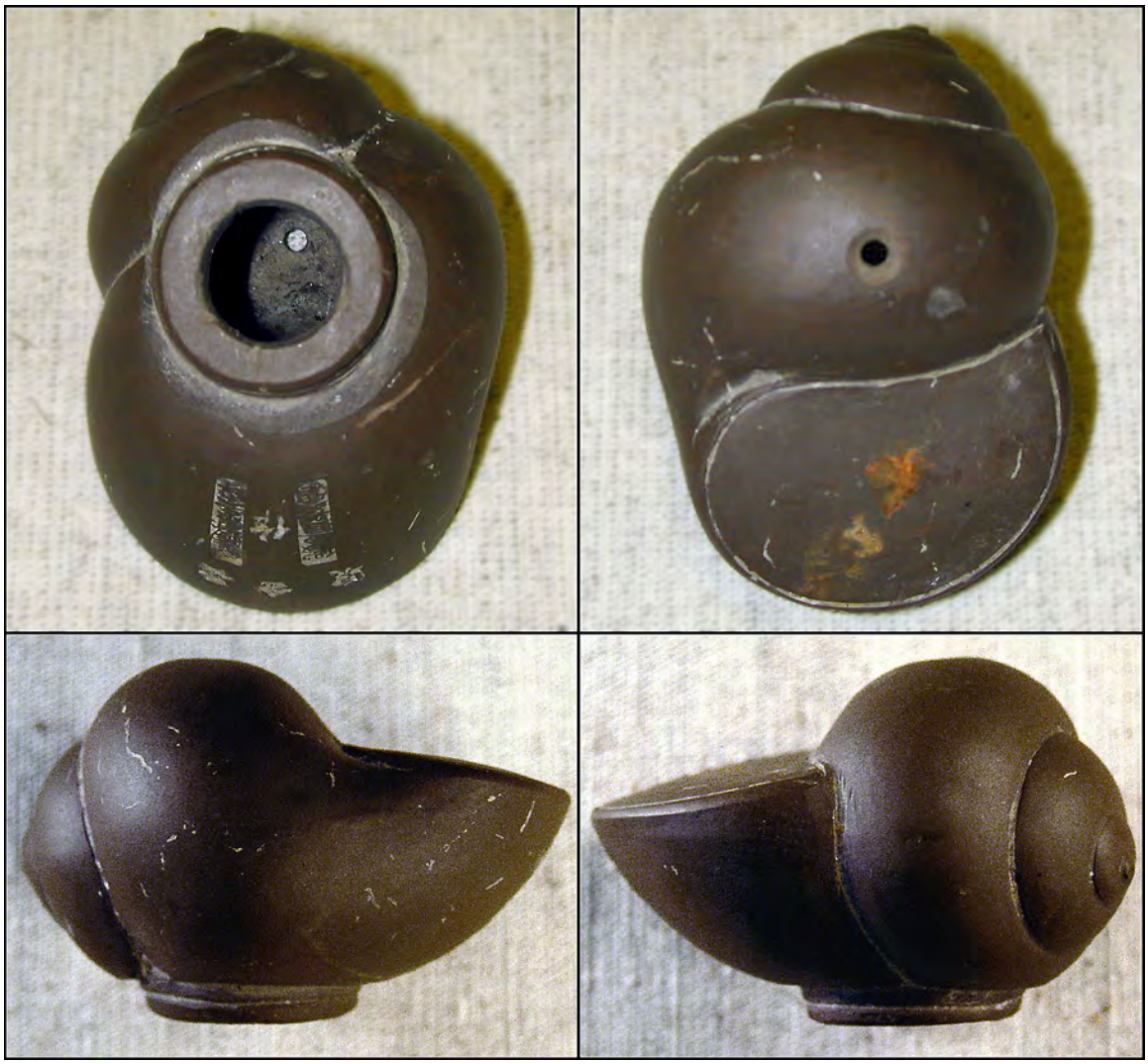


Figure 6-56 Snail-shaped opium pipe bowl from San Bernardino (photographs by Keith Warren).

been previously identified, and fragmentary evidence of a pipe bowl in the form of a crab body was recovered from Riverside (Wylie and Higgins 1987:383). The shell form found in San Bernardino may be the first whole example of this type to be discovered in an archaeological context. A table of the opium paraphernalia recovered from controlled excavations in San Bernardino is summarized in Table 6-34.

Table 6-34
Opium-Related Artifacts Recovered from San Bernardino Chinatown

	MNI by Feature				
Category	**Drains/ Sheet Refuse[a]**	**Privy 1035**	**Privy 1056**	**Privy 1058**	**Total**
Brass Alloy Opium Tins	13	5	2	3	23
Ceramic Opium Pipe Bowls	14	13	8	9	44
Clear Glass Opium Lamp Chimney	5	4	2	2	13
Total	***32***	***22***	***12***	***14***	***80***

a - Includes Drains 1002, 1031, and 1060; Sheet Refuse 1057.

H. H. Kane, M.D., wrote about "smoking amongst the Americans of New York" and described opium as being imported from China "in small tin boxes, holding about four ounces, and worth from $7.75 to $8.30 per can" (Kane 1881:646). Opium smokers usually would visit "dens," "smoking houses," or "joints." These establishments provided the location and the apparatus needed for opium consumption. Generally, once a smoker had purchased an individual smoke for 25 cents, he would lie on a bunk and the paraphernalia would be brought to him. A smoking kit consisted of:

> A box of buffalo horn (*hop toy*) to hold the opium; a long needle *(yen hanck*), on the end of which the opium is taken up, "cooked" and fixed upon the bowl; a small glass lamp, with a perforated bell-shaped glass cover, and in which sweet or nut oil is burned; a pair of scissors for trimming the wick; straight and curved knives for cleaning the needle and bowl; a sponge to clean and cool the surface of the bowl; a box for the ash, or *yen tshi*; (*this would be saved and re-smoked*) and two trays, the one smaller than the other, on which all these articles rest [Kane 1881:646].

The most important part of the kit was the pipe itself. Pipe bowls came in a variety of shapes, but generally the pipe consisted of a bowl and a stem. Kane described these in detail:

> This pipe, the origin and antiquity of which are unknown, though supposed to have originated in Arabia, consists of two parts, a stem and a bowl. The stem is of bamboo, so cut that it includes the space between two joints and one quarter of the next. The best measure twenty-four inches in length and about four inches in circumference.
>
> The bowl, which is usually of a hard red clay and hollow, may be bell shaped, ovate, or hexagonal. On the under surface is a metal flange or neck, by which it is fitted to the

> stem. It is usually wrapped with cloth to make it fit more accurately. The upper surface of the bowl is either flat or slightly rounded. In its center is an opening of about sufficient size to admit an ordinary knitting needle. The opium pipe is called by the Chinese the *yen tsiang*, or opium pistol [Kane 1881:646].

Other pipe parts, such as connectors and saddles, also are part of the technology and are described in detail by Wylie and Fike (1993:268).

A small number of the San Bernardino pipes and pipe bowl sherds exhibited Chinese marks. These marks were not translated as part of the current study. Wylie and Fike (1993:270) suggest that "virtually every bowl has one or more Chinese marks consisting of characters, symbols or designs," and that "translations are difficult, even for native speakers, because many alternative meanings are possible and many characters are missing."

Table 6-34 demonstrates a relatively even distribution of opium paraphernalia throughout the Chinatown features. Drains 1002, 1031, and 1060 along with Sheet Refuse 1057 represent a slow accumulation of backyard refuse and contain 40 percent of the opium-related artifacts. This presents evidence of opium use during the accumulation phase of the 1880s to the 1930s. Privy 1035 yielded 28 percent of the opium-related artifacts and the majority of the gambling items. The amount of opium paraphernalia recovered from Privy 1035 is not dramatically greater than adjacent (and earlier) Privy 1056 and Privy 1058. It would appear from these data that opium smoking was undertaken in the gambling house to no larger a degree than in other locations. Whereas the gaming likely occurred at a single venue, opium smoking probably took place at multiple sites and throughout the occupational period of San Bernardino's Chinatown.

A Short History of Opium Use

The archaeological record suggests that opium has been used by many great civilizations, including the Sumerians, Assyrians, Babylonians, and Egyptians. The Greeks were probably the first to cultivate and trade in the drug, and also developed the first surgically sharp knives, a critical tool of opium production. Greek traders took opium to Asia and North Africa; from there it was carried by Arab merchants to China (PBS and WGBH/Frontline 1998).

At first ingested, opium smoking may have been introduced to China by the Dutch in the 1600s (White 1985:162) or by Chinese traders returning from Java in the early 1700s (Dudgeon, in Ball 1903:448). Initially, opium was mixed with tobacco and smoked. Following the development of equipment specific to opium use, refined opium was smoked without tobacco. In 1729, as a measure against the burgeoning problem of opium addiction, Chinese Emperor Yung Cheng banned opium smoking, and in 1800 the importation of opium was forbidden by the imperial government. However, the trade still flourished and vessels from many countries, including the United States, made huge profits from the Chinese market.

The efforts of the Chinese authorities to protect their people were thwarted by the British. By the 1830s the imbalance of trade between Britain and China was draining Britain's wealth. There was nothing China wanted to purchase in exchange for the silks, spices, porcelains, and other goods demanded by Europeans. Britain obtained control of opium exports from India, and the Chinese attempted to restrict its importation by seizing and burning the opium at Canton in 1839

(Wallbank et al. 1992). The British responded with military action, and the war that followed led to the treaty of Nanking. Hong Kong was ceded to Great Britain and opened to British residence and trade. While perhaps a cultural conflict as much as a matter of drug control, victory in the Opium Wars assured Great Britain of a rich income through promoting this drug to a captive population. Soon the Chinese began producing their own opium for domestic consumption and export, and 10 provinces were growing opium poppies by 1870 (Wegars 1993:256).

Chinese Opium Use

Many of the nineteenth-century Chinese immigrants came from the Canton province, an area at the center of the opium trade where the population (either through choice or coercion) had become all too familiar with the drug. Opiates had long been in use medicinally for the treatment of ailments such as diarrhea and insomnia (Holmes 1884:793). The use of the drug recreationally was common by the nineteenth century; many immigrants, although not necessarily users, would have had some knowledge of the practice.

It is uncertain how Chinese attitudes toward the use of opium may have changed upon arrival in the United States. Many smoked for pleasure, while some were clearly addicted. The recreational smoker may have used the drug as an antidote to the problems of an immigrant in an often hostile land. Opium smoking, like gambling, typically took place behind the facade of a store or boarding house, and similarly provided a way of maintaining a community culture. Richer Chinese who chose to partake preferred a more elitist approach.

> The wealthier Chinamen have accommodations for opium smoking in the upper or back rooms of the building which they occupy as stores and dwellings, and do not associate with the common herd who patronize the public opium dens [Knox 1876:262].

A study of Chinese labor on the West Coast suggested that in 1888 a broom maker expended 23 percent of his $315 annual income on opium (Meriwether 1888). How much of a problem, if at all, this may have been for the individual is open to speculation. Occasional smoking was commonplace and many smokers did not become dependent. The Chinese approach to moderation also may be a factor in its use, and recreational opium smoking was considered more suitable for holidays (Courtwright 1982:70).

Non-Chinese Opium Use

Chinese immigrants brought opium smoking to the United States in the nineteenth century. Although smoking may have been new, the use and misuse of opium and its derivatives by other methods already was common practice in most cities and towns. Opium as a pain reliever and antidiuretic was a boon to nineteenth-century medicine. However, its addictive properties were not well understood and it was widely used and abused in household remedies. Opium also was available in alcoholic extracts such as Laudanum (alcohol and opium derivatives) and Paregoric (alcoholic solution of opium and camphor). Other common products included VAPOR-OL, which contained three opium grains per fluid ounce, and Mrs. Winslow's Soothing Syrup, which contained one grain of morphine per fluid ounce and was marketed as a pacifier for teething children. It also may have eased the stress of a harried mother (Addiction Research Unit 2001).

Many American opiate users were female. During the 1870s, doctors began injecting women with morphine to alleviate "female problems" or assuage hysteria. The ready availability of products containing opium derivatives compounded the problem; by the 1890s, two-thirds of the medical addicts were women (Keire 1998:1). One such victim wrote of her own distress:

> Oh, why do you doctors not try prevention as well as cure! You have it in your power to warn those who take laudanum now and then for toothache or headache, what an insidious thing it is, and how easily they may become the victims of it. I began that way, and see what it came to. Even now I often wonder if I've quite got over its effects. Does anyone who has gone up to three or four ounces a day, and is suddenly deprived of it, live to tell the tale! [Anonymous 1889].

Anti-Drug Campaigns

Once opiate abuse became recognized as a social malaise, it was evident that prohibitive measures were warranted. In 1875, San Francisco became the first city to pass an anti-drug law; the drug problems faced by San Bernardino authorities were evident as early as 1880. Following the demise of 23-year-old William Palen, who "came to his death in this county, in a Chinese opium den, in the old gas house" (*Weekly Times* 1880:3), legislative efforts were suggested. The inquest into the death of Palen (a vagrant and erstwhile fugitive from the chain gang) led the jury to "further recommend that the Board of Town Trustees pass an ordinance prohibiting the keeping of a house or place of resort for the purposes of smoking opium" (*Weekly Times* 1880:3). Whether this ordinance passed, and, if so, what effect it had is unknown. Certainly by 1888 the situation had not improved. In March of that year, the *Daily Courier* (1888b:3) described "a row of houses on Third Street, in the wash between Warm and City creeks, where all kinds of vile practices are kept up, where opium fiends congregate and inhale the nauseating smoke of the poisonous drug at will." Later that year the police raided a Third Street lodging house:

> Opium Joint is Raided
>
> The amount of opium smoking indulged in, in San Bernardino is astonishing. Every day one can walk along the streets and see numbers of tall, attenuated, dull looking, spiritless fiends who have received their degrading looks through the effects of the fearful drug, and cannot break off the horrible habit. It is not confined to a great deal to the Chinamen, but through them opium smoking is kept up and encouraged and the poor, weak-minded habitues of the habit are permitted to indulge their appetite. Opium smoking is not only carried on in the Chinese haunts, but in different parts of the city fiends have the pipes and lamps with which to carry on their business.
>
> Yesterday morning about 2 o'clock, Officers John and Will Clark raided the Maison Doree lodging house on Third Street and captured four men, all white, with their pipes. They found two men in one room and two in another. In the first room the men had taken the quilts and pillows off the bed and arranged them on the floor, and with the lamp between them were puffing on the foul drug. When the officers interrupted them, one of the men rolled over onto the pipe, endeavoring to conceal it, but the officers soon discovered it and led the victims off. In another room two men were situated in a similar manner and hid their pipe under the mattress of the bed.

> They were all locked up and yesterday afternoon two of them had their trial before Judge Morgan, plead guilty and were fined $10 each. One of them said that he had been addicted to the habit for eight years and could not break it off. The other two will have their trial today [*Daily Courier* 1888e].

The Pure Food and Drug Act of 1906 forced the patent medicine industry to list certain dangerous drugs such as alcohol, cocaine, opiates, and cannabis. This was followed in 1909 by an act to prohibit the importation and use of opium for other than medical purposes. The act dealt primarily with smuggling and was not completely effective. It was amended and strengthened in 1914, and a companion act was passed at the same time. The act "regulating the manufacture of smoking opium within the United States, and for other purposes" was approved and a vigorous enforcement began in 1914 and 1915 (Valaer 1951:18).

The use of opiates within the project area was clearly not limited to being "a Chinese problem." Although the methods of consumption may have varied, the issue of drug abuse was of concern to society as a whole. While attempts may have been made to apportion blame to specific groups, drug use then, as now, was not restricted by ethnic boundaries.

6.6 THE FINAL YEARS

The Third Street community was in decline by the 1930s and gone by the mid-1940s.

THE END OF AN ERA

The life of San Bernardino's Chinatown greatly mirrored that of its most influential inhabitant, Wong Nim. In 1880, 25-year-old Wong Nim was one of 20 Chinese living on Third Street. The census for that year lists Wong Nim as a labor agent; over the years, he would diversify his interests and become a merchant, a landowner, a temple builder, and, unofficially, the Mayor of Chinatown. By 1900 there were 35 Chinatown residents, and the community had grown to include laundries, stores, a priest, and a doctor.

As California moved into the twentieth century and the anti-Chinese sentiment of previous decades began to decline, San Bernardino's Chinatown reached a plateau of development. The established businesses (such as Wong's Wey Yuen Company) continued to operate, but new enterprises were rare and little appears to have changed in the following years. Certainly some of the old ways remained.

E. Q. Sullivan (California Division of Highways District 8 [Chief] Engineer) recalled watching police raids on a gambling hall near the windows of the District 8 offices at least into the late 1920s (Sullivan 1961). Later, in 1937, Wong Yoy visited the Gee Chong Company Store (probably at 19 Third Street) and found that his father—Sam Wong—was seemingly surviving from the proceeds of his lottery operation rather than the continued operation of the store itself (Wong 1987:209). However, as the population aged and a new generation of Chinese Americans found integration easier than their forbears, Chinatown was left to the old guard who, through design or negligence, kept things the way they were.

In 1920 Wong Nim, age 64, was one of 22 Chinese residents in the city, 50 percent of whom were older than 50 years of age. In 1927, the California State Highway Commission demolished the westernmost buildings of old Chinatown on the south side of Third Street, and the former inhabitants' wooden homes were replaced by a new concrete office (Figure 6-57). By 1938, an aerial photograph shows the middle portion of Wong Nim's property cleared of buildings, some apparently moved to the eastern end near Wong Nim's residence, store, and temple (Figure 6-58). The emerging prominence of this block as home to the new headquarters of the California Division of Highways appears to have resulted in some "cleaning up" of the old neighborhood.

Figure 6-57 The newly completed Caltrans District 8 Headquarters in 1927, adjacent to Wong Nim's property on the west (courtesy, California Department of Transportation, District 8).

Like many other small Chinatowns in California such as Riverside, Redlands, and San Luis Obispo, San Bernardino was created from necessity and forgotten through progress. The politics and the racism that pushed the Chinese and their traditions to the outskirts of town were, after a long struggle, greatly diminished; Chinese Americans became an intrinsic part of the American fabric. The success of major Chinatown districts in Los Angeles and San Francisco owes much to the Chinese laundries and stores of small-town California.

As Wong Nim approached the end of his life, so too did Chinatown in San Bernardino. In 1944, the *Sun* wrote:

> Although the joss house and its altar have remained intact, it has not been used by the Chinese for the past several years, primarily because of the dwindling Chinese population in this area [*Sun* 1944b:3].

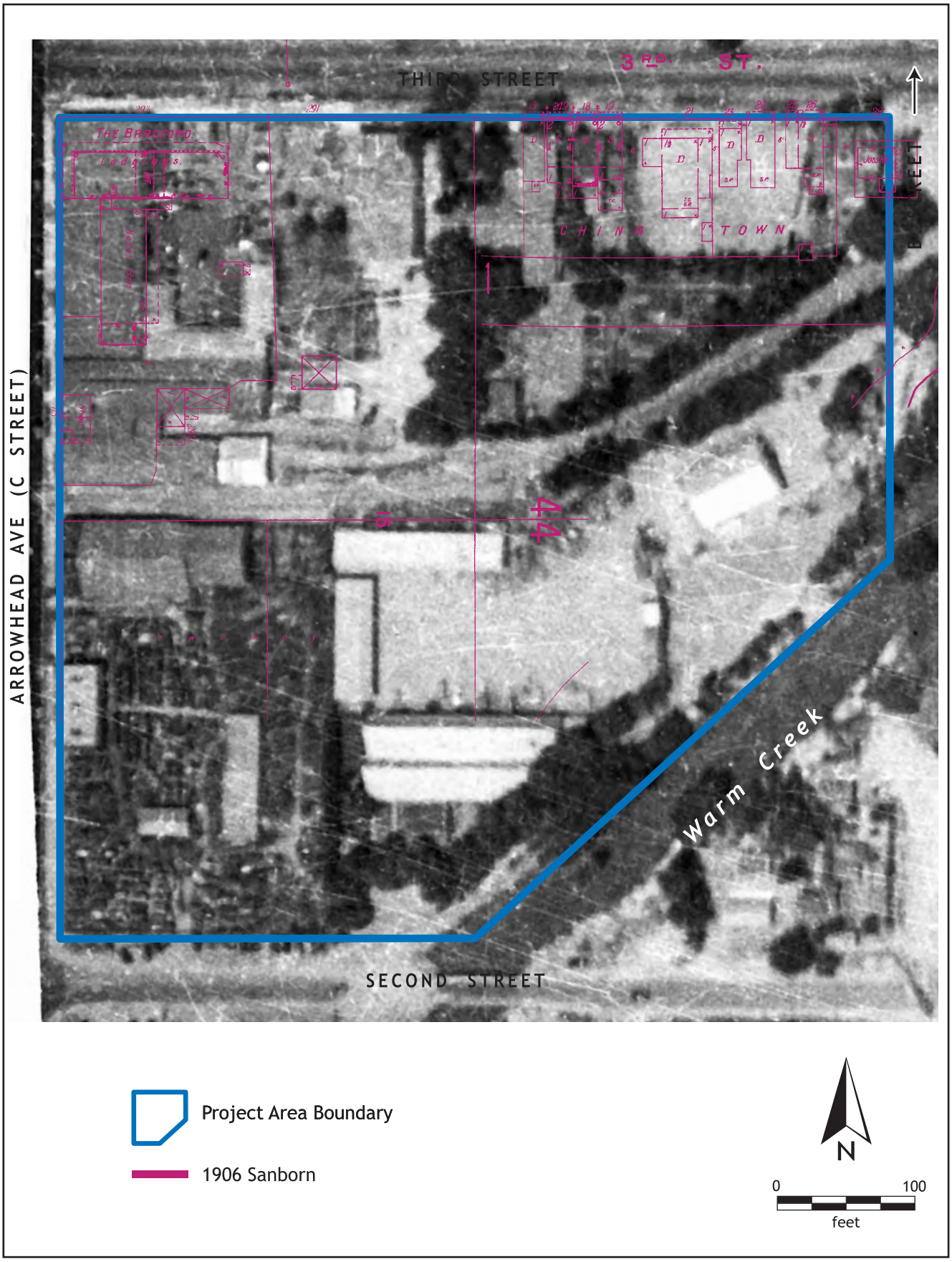


Figure 6-58 **1938 aerial photograph of the Caltrans District 8 office complex with 1906 Sanborn overlay.**

The 1930 Census

The 1930 census shows a slight influx of younger inhabitants, although this apparently did little to alter the structure of the community. Of the 30 Chinatown residents in 1930, 12 were under 35 years of age, and the majority of these had immigrated in the 1910s. However, the average age had risen from 26 (in 1880) to 40, and the population was all male. Wong Nim was the only property owner listed; the remainder of the residents rented at $20–$40 a month. The value of the Wong Nim home was given as $10,000. Lodging with Wong Nim were George Hoo (age 35), Wong Yot (age 65), and 17-year-old Lim Dawg (also recorded as Lim Dau). Dawg was Wong Nim's grandson; he would later reside next door to Wong Nim (at 203 Third Street) and became the sole beneficiary of his will. Occupations included retail merchants, vegetable sellers, and restaurant workers. Of the eight residents listing no occupation, six were over 45 years old. Wong Nim was clearly the preeminent Chinatown resident and still in business as a retail merchant. At the age of 75, the "mayor" may not have been as active in the community as he once had been, but the fact that San Bernardino's Chinatown provided Chinese Americans with homes and employment is a testament to Wong Nim's contribution.

Third Street, like Wong Nim himself, had aged and needed care. Wong Nim was cared for by a nurse in his final year, but Chinatown became neglected and forlorn. The once vibrant street that attracted festival goers and *fan tan* players alike became dilapidated and abandoned. When Wong Nim passed away in 1941, Chinatown became a thing of the past and buried its stories for future generations.

THE LAST VESTIGES

After Chinatown was abandoned in the 1940s, many items were left in the vacated buildings. These artifacts representing a diversity of activities in Chinatown were eventually disposed of in a conveniently open privy (Privy 1035). Investigations at other sites in Tucson, Arizona (Olsen 1978), John Day, Oregon (Barlow and Richardson 1979), and Fiddletown, California (Costello 1988), have inventoried artifacts left in abandoned buildings; the assemblage from Privy 1035 yields similar important information as a collection of Chinese American artifacts. Both John Day and Fiddletown include inventories of Chinese herbalist stores, while Privy 1035 provides information on the day-to-day life of Chinatown residents.

Almost all aspects of Chinatown lifeways can be found in the Privy 1035 collection. The large quantity of gaming pieces is discussed above. Other items include pens, pencils, ink bottles, shoe polish bottles, alcohol containers, opium smoking paraphernalia, a pocket knife, a pocket watch, a harmonica, tools, local medicine bottles, Chinese medicinal vials, toothbrushes, Chinese storage jars and tablewares, imported English tablewares, enamel cookware, and household furnishings such as light bulbs, lamps, and vases.

The collection represents a true Chinese American community. Traditional Chinese porcelains were found alongside European whitewares, and medicines from local pharmacies were used as well as those contained in Chinese vials. Special or commercial cooking took place in the outdoor roasting ovens, while the everyday meals appear to have been prepared over a stove in enamelware pots and pans. Gaming, alcohol, and opium use represented an escape from the routine and reflect indulgences that are still a part of modern society. While different ethnic groups approach life from diverse paths and create characteristic stamps on history, the objectives are fundamentally invariable: shelter, subsistence, and a social life. The people of San Bernardino's Chinatown created their own community that incorporated a cultural heritage into a burgeoning multicultural state.

The disposal of these items into the privy demonstrates how little things had changed for the remaining Chinatown residents. As the California Division of Highways purchased the surrounding land, the activities at 19 Third Street continued in the shadows of the new office building.

In 1944, as unknown individuals dumped the pots and pans, the bottles, and the coins into the privy, they probably considered the material useless and the act one of disposal. Unwittingly, their efforts created an archaeological formation process, a process in which elimination became preservation.

Gravestones

Although many Chinese chose to return to China, there were those whose final resting places are in the cemeteries of San Bernardino. In Pioneer Cemetery, the city's oldest cemetery, they lie among the Starkes and the Bradfords (Figure 6-59). Others rest in the more modern Mountain View Cemetery in a secluded corner (Figures 6-60 and 6-61).

Systematic investigation of Chinese names in sexton's records for Pioneer and Mountain View cemeteries was not conducted. When questioned, employees of Pioneer Cemetery were aware of only four Chinese burials within the cemetery. They directed the researcher to the grave sites and the stone markers were then photographed. One marker was inscribed in English; the cemetery employees did not know the identity of the occupants of the other three plots, all of which had headstone inscribed with Chinese characters. Mountain View Cemetery employees, after consulting the sexton's record, identified the area of the cemetery in which the grave of Wong Nim was situated. During the course of locating Wong Nim's headstone, several other Chinese markers were found in the same area, generally within 50 to 100 feet of Wong Nim's grave. These markers also were photographed. All of the gravestones were subsequently translated by Lin Wang of Far Western Anthropological Research Group in Davis, California.

Figure 6-59 Gravestones from the Pioneer Cemetery, San Bernardino.

You Yu Village | Huang Li Jue (Name in Chinese) | Tai Shan County, Dong Kuo (Place Name)

Dong Kou Village | Huang Shi Duo (Name in Chinese) | Tai Shan County

Kang Le Street | Huang Dian Shi (Name in Chinese) | Dong Kuo Village

Long Guan Chong Village | Si Tu You (Name in Chinese) | Kai Ping (Place Name)

Kang Le Street | Huang Li Yue (Name in Chinese) | Tai Shan County San She Village

Gan __ Village | Huang Pu Ye (Name in Chinese) | Tai Shan County Dong Kuo (Place Name)

Figure 6-60 Gravestones from the Mountain View Cemetery in San Bernardino, including Wong Nim's marker.

Figure 6-61 **Additional gravestones with Chinese characters found in the Mountain View Cemetery, San Bernardino.**

结 论
7 CONCLUSIONS

This report was designed to lead the reader through the process of archaeological discovery and interpretation. Planned demolition of the old Caltrans District 8 Headquarters Building in San Bernardino triggered state environmental laws requiring the agency to achieve compliance with the CEQA: identifying, evaluating, and mitigating negative impacts to important cultural resources. Documentary research identified the site as the former location of the prominent Starke's Hotel and the city's historic Chinatown, as well as being in the vicinity of the Mexican-Period Rancho San Bernardino and pioneer Mormon Fort. Based on Phase II testing, resources were identified and evaluated. The data recovery program was then designed to retrieve important information from the extant hotel and Chinatown remains prior to their destruction. This report has presented the results of those efforts: documentary research, archaeological excavations, artifact identification and analysis, specialists' studies, and interpretations of the findings. As a final synthesis, this chapter summarizes the categories of artifacts recovered from hotel and Chinatown features and then uses the viewpoint of cultural geography to summarize the human use of this small piece of land.

7.1 INTERPRETING THE ARTIFACTS

This section summarizes categories of artifacts recovered from those archaeological deposits determined "important" under CEQA criteria (Table 7-1). The groups and categories are those used for identification and cataloging (see Table 4-1). The numbers of "items" are based on the minimum number of items (MNI) computed from the recovered artifacts. Corresponding to Artifact Table 3a for each feature in Chapter 5, totals exclude some types (such as nails and other building materials) that do not contribute toward meaningful analyses. Faunal and floral remains also are not included here, having been summarized in Chapter 5 and detailed in Appendix D. The discussions for each functional category (presented by group) have similar formats: a statement of relative presence for each category, a description of Chinatown-related items, a description of items related to Starke's Hotel/Bradford House, and (where appropriate) summary statements. No artifacts were recovered in the commercial and transportation groups.

For the Chinatown deposits, Privy 1035 dominates the collection with an MNI of 3,933, constituting 84 percent of the total. This large count is primarily due to the presence of 2,774 items related to gambling, primarily ggp and Asian coins. With the games category removed from analysis (Table 7-1, last column), percentages of the remaining categories are "normalized" (adjusted) to facilitate comparison with other assemblages.

ACTIVITIES GROUP

Commerce

Items in the commerce category constitute 0.4 percent of the hotel deposits and 0.1 percent (0.2% adjusted) of the Chinatown deposits. Recovery from Chinatown was limited to three

Table 7-1
Summary of Selected Artifact Categories For Chinatown and Hotel Deposits[a]

	Hotel Deposits		Chinatown Deposits		
Category	**MNI**	**Percent by Category**	**MNI**	**Percent by Category[b]**	**Percent without "Games" Category**
Activities					
Commerce	4	0.4	3	0.1	0.2
Communication	12	1.2	61	1.3	3.3
Farming/Gardening	1	0.1	3	0.1	0.2
Firearms	62	6.1	13	0.3	0.7
Pets	—	—	1	T	0.1
Domestic					
Clothing Maintenance	6	0.6	3	0.1	0.2
Food Packaging/Storage	5	0.5	213	4.6	11.7
Food Preparation/Consumption	218	21.4	271	5.8	14.8
Food Refuse	3	0.3	14	0.3	0.8
Household/Furnishing	16	1.6	25	0.5	1.4
Household Maintenance	1	0.1	9	0.2	0.5
Industrial					
Industrial	—	—	14	0.3	0.8
Machinery	—	—	2	T	0.1
Leisure and Recreation					
Collecting	1	0.1	2	T	0.1
Games	12	1.2	2,847	60.9	—
Social Drugs	107	10.5	251	5.4	13.7
Personal					
Accouterments	17	1.7	11	0.2	0.6
Clothing/Footwear	281	27.6	630	13.5	34.5
Grooming	20	2.0	6	0.1	0.3
Health/Medicine	102	10.0	68	1.5	3.7
Toys	3	0.3	1	T	0.1
Structural					
Building Material (selective)	8	0.8	13	0.3	0.7
Tools/Hardware	16	1.6	19	0.4	1.0
Undetermined					
Miscellaneous Bead	2	0.2	—	—	—
Miscellaneous Bottle, Jar, Can	51	5.0	109	2.3	6.0
Miscellaneous Closure	13	1.3	12	0.3	0.7
Miscellaneous Metal Item	37	3.6	40	0.9	2.2
Undifferentiated (selective)	19	1.9	34	0.7	1.9
Total[c]	***1,017***	***100.1***	***4,675***	***100.1***	***100.3***

a - Counts from Artifact Tables 3a in Chapter 5.
b - T = trace amount, less than 0.05 percent.
c - Percentage totals greater than 100 are due to rounding.

items: an 1887 copper alloy penny, a 1901 silver alloy quarter, and one unidentifiable coin. Asian coins were used as gaming pieces and are discussed in the games category below. Hotel deposits contained one extremely corroded 1876 silver alloy quarter, one 1876 dime, one 1872 half dollar, and one undatable dime.

All of the coins were inadvertently dropped into an open privy or included with refuse during privy fill. The 1872 half dollar was recovered from Privy 1025, which was abandoned and filled in 1897. That year the national annual average earnings for all industries, including farm labor, were $411 (U.S. Census Bureau 1965:91–92). The loss of a half dollar approximated a half-day's wage for the average worker.

Communication

Items in the communications category constitute 1.2 percent of the hotel deposits and 1.3 percent (3.3% adjusted) of the Chinatown deposits. The 61 items from Chinatown include fragments of ink bottles, pens, pencils, and writing slates as well as paper fasteners. Reflecting activities at the owner-operated businesses on Third Street, record keeping was probably part of daily routines. Three of the ink bottles contained products manufactured by the Sanford Ink Company. A clear glass ink bottle is embossed: SANFORD'S INKS / ONE QUART / AND LIBRARY PASTE (1916–1929, Toulouse 1971:264); a light aqua bottle is embossed: SANFORD'S INKS / HALF PINT / AND LIBRARY PASTE (date unknown, but likely to have been contemporaneous). Library paste is an adhesive made from water and flour or starch (Lexico Publishing Group 2003). A Sanford's master ink bottle of unknown date and fragments of a fourth Sanford bottle also were recovered. The fifth ink bottle was clear glass, contained Thomas ink, and was manufactured circa 1900 (Antique Bottles n.d.; see Table 5-77).

Other modern writing implements from Privy 1035 include a galvanized rubber fountain pen manufactured by Waterman between 1916–1920s (Fountain Pen Hospital n.d.), and 48 brass paper fasteners (rounded head, two-prong type inserted into a punched hole). Similar items were available through Sears, Roebuck and Company and advertised as "Never Break, round head, brass paper fasteners" (Sears, Roebuck and Company 1897:355). Traditional activities are represented by a fragment of a Chinese stoneware ink-grinding bowl that was recovered from Drain 1002. Here, inkstone was ground and mixed with water for application by brush.

Hotel deposits yielded 12 communications items. Privy 1023 contained fragments of one aqua glass ink bottle and four writing slate fragments. Also recovered from the hotel deposits were graphite pencil leads, slate pencils, and a ferrous pen nib. The hotel deposits are associated with hotel employees, owners, and guests, who, like the Chinese, found both slates and pen and ink useful for communication.

Farming and Gardening

Items in the farming and gardening category constitute 0.1 percent of the hotel deposits and 0.1 percent (0.2% adjusted) of the Chinatown deposits. A ferrous shovel head, a ferrous pick head, and a terra-cotta flowerpot fragment were recovered from Chinatown. Hotel deposits contained one unidentified ferrous tool handle. The tools are likely to have been utilized for a variety of gardening and maintenance tasks around the backyards of Chinatown and the hotel.

Firearms

Items in the firearms category constitute 6.1 percent of the hotel deposits but only 0.3 percent (0.7% adjusted) of the Chinatown deposits.

Metal casings, a metal cartridge case, and a lead bullet were among 13 items recovered from Chinatown features. The hotel deposits contained 62 items including 34 metal cases and 24 lead bullets. The greater frequency of ammunition from the hotel features may be attributable to contrasting patterns of land use. The majority of the Chinatown features were discovered within a small area on the Wong Nim lot. The buildings on the lot also were closely constructed, suggesting a compact activity area. The Sanborn maps show that the land at the rear of the hotel contained orchards in 1888 (see Figure 2-10), and later "swampy land" (see Figure 2-5). Owners, guests, and employees of the hotel may have hunted game on the land to the south, indulged in target practice, or controlled vermin around the hotel and its outbuildings.

Pets

Items in the pets category constitute 0.02 percent (0.1% adjusted) of the Chinatown deposits. No items relating to pets were recovered from hotel deposits. The remains of a small domesticated dog were discovered at the rear of the Wong Nim lot and are discussed on page 5.81.

DOMESTIC GROUP

Clothing Maintenance

Items in the clothing maintenance category constitute 0.6 percent of the hotel deposits and 0.1 percent (0.2% adjusted) of the Chinatown deposits. Fragments of a laundry bluing ball and one shoe polish bottle as well as one whole shoe polish bottle with applicator were recovered from Chinatown. Hotel deposits contained six items consisting of two safety pins and four straight pins. While laundries were operated in Chinatown and at the hotel, the recovery of items in this category and specific to those activities is low. Buttons are discussed in the clothing/footwear section.

Food Packaging/Storage

Items in the food packaging/storage category constitute only 0.5 percent of the hotel deposits compared to 4.6 percent (11.7% adjusted) of the Chinatown deposits.

The 213 items recovered from Chinatown deposits include 79 medium storage jars, 30 medium storage jar lids, 19 large storage jars, 29 small storage jars, and 14 soy sauce jars. The vast majority of items in this category are of Chinese brown glazed stoneware. Also included are two Euro-American stoneware crocks, four stoneware Chinese ginger jars, and one porcelain Chinese ginger jar. Privy 1035 contained 41 percent of the food packaging and storage items recovered from Chinatown deposits.

Hotel deposits contained fragments of a white glass lid liner, a Chinese brown glazed stoneware medium storage jar, and a Euro-American stoneware crock.

The Chinese storage jars contained a variety of prepared and preserved foods that were imported from China. These vessels and their uses are discussed in detail in Chapter 6. Chinese reliance on imported foodstuffs is reflected in this higher occurrence of storage vessels. The hotel's comparatively local food sources would not require similar specialty containers. The two fragments of a Chinese brown glazed stoneware jar recovered from hotel deposits are associated with collections deposited after the Chinese workers left the hotel around 1894. Having been abandoned, these vessels subsequently may have been reused by the new employees.

Food Preparation/Consumption

Items in the food preparation/consumption category constitute 21.4 percent of the hotel deposits and 5.8 percent (14.8% adjusted) of the Chinatown deposits. Aspects of this topic are discussed at length in Chapter 6.

Chinatown deposits contained 271 items in this category, including fragments of 94 Chinese porcelain bowls, 24 Chinese porcelain spoons, 13 Chinese porcelain dishes, 9 white improved earthenware plates, 9 clear glass tumblers, and 10 milk bottles. The 19 kitchen items recovered included 2 enamelware pots, 2 sauce pans, and a kettle. Privy 1035 contained 41 percent of the items in this category. Ceramic food vessels in Chinatown are discussed in Chapter 6. Six Euro-American ceramic makers' marks were identified, including three English, one Scottish, and one Polish example. The two domestically produced ceramics were manufactured in East Liverpool and Steubenville, Ohio. Six milk bottles and one creamer bottle contained products of local manufacture. The creamer, half pint, pint, and quart bottles were distributed by the San Bernardino Creamery, a company in operation since 1894 (Swope et al. 1997:77). Bottles from the Sanitary Dairy in San Bernardino (SBDC 1916) and the Gate City Creamery in San Bernardino (LADC 1926) also were recovered (Table 5-77). Other items in this category include a ferrous knife and a silver alloy fork.

Included in the 218 hotel items are 52 white improved earthenware plates, 25 white improved earthenware dishes, 13 white improved earthenware mugs, 2 porcelain dishes, 10 clear glass goblets, 5 clear glass tumblers, and 3 aqua glass soda bottles. Only two kitchen items (a baking pan and a corkscrew) were recovered. Food-related vessels from hotel deposits are discussed in Chapter 6. Marked Euro-American wares include 30 items imported from England and three from Scotland. The three domestically produced ceramics were manufactured in East Liverpool, Ohio (two items), and New York City.

The Chinatown deposits contained a preponderance of traditional items as well as western utensils such as enamel pots and flatware. The recovery of milk bottles is intriguing due to the common problem of lactose intolerance among the Asian population:

> In fact, up to three-fourths of the world's population suffers from this problem in some form. For this reason the cuisine of many cultures, such as those of eastern China and southeastern Asia, contains virtually no dairy products, whether it be butter, milk, cheese, or yogurt [Gilbert 2003].

The bottles may represent products on sale in Wong Nim's grocery store. However, the clientele of the store were mainly Chinese, and while not all individuals suffered from the condition, the recovery of several milk bottles may be somewhat problematic as the contents were not likely

consumed by Chinatown residents. The reuse of bottles obtained from other sources—"recycling" as discussed by social historian Strasser (1999:12–13) or the "frugality effect" defined recently by Adams (2003:49–50)—may offer an alternative explanation. Embossed by the creameries, the bottles also may have been collected for their redemption value and then forgotten.

Food Refuse

Items in the food refuse category, which does not include faunal and floral remains, constitute 0.3 percent of the hotel deposits and 0.3 percent (0.8% adjusted) of the Chinatown deposits. The animal bones recovered and pollen and floral material from soil samples were analyzed by specialists, whose detailed discussions are presented in Chapter 6 and Appendix D.

Chinatown deposits contained 14 items, including nine legumes, one mussel, one O*livella*, and two chione shell. Specimens of *Haliotis, Mytilis*, and cuttlefish also were recovered but were not assigned an MNI. The hotel deposits yielded one oyster shell, one unidentified seed, and one unidentified fruit pit. The increased abundance of shell suggests that the consumption of seafood was greater in Chinatown. Mussels and other shellfish may have been steamed in the backyard.

Household/Furnishing

Items in the household/furnishing category constitute 1.6 percent of the hotel deposits and 0.5 percent (1.4% adjusted) of the Chinatown deposits. The 25 items recovered from Chinatown include eight clear glass lamp chimneys, including one with a beaded rim; a clear, pressed glass vase decorated with three pastoral scenes; a Japanese porcelain vessel decorated with a hand painted gilt and floral design; a semi-porcelain box; and two mirrors. Hotel deposits yielded 16 items including five clear glass lamp chimneys, one white glass lamp globe, one clear glass compote, one clear glass mirror, a number "4" manufactured from lead, and a fragment of white improved earthenware studio pottery.

Electricity is reported to have come to Chinatown by mid-1893 (*Daily Courier* 1893a:3). The presence of lamp chimneys suggests that the interior of some structures (privies, etc.) were still being illuminated by gas or oil in the 1940s. The hotel, which also certainly received electricity by 1893, saw its oil lamps disposed of between 1894 and 1897. The number "4" may have hung on the door of one of the guest rooms.

Household/Maintenance

Items in the household/maintenance category constitute 0.1 percent of the hotel deposits and 0.2 percent (0.5% adjusted) of the Chinatown deposits. Chinatown produced nine items, including five light bulbs, while hotel deposits yielded only one light bulb. Turn-of-the-twentieth-century urban archaeological sites generally bridge the time span between use of oil lamps and gas and electrical lighting (Swope and Hall 2000:171). Both Chinatown and the hotel were electrified by 1893 (see discussion above).

INDUSTRIAL GROUP

Industrial

Items in the industrial category constitute 0.3 percent (0.8% adjusted) of the Chinatown deposits. No items in this category were recovered from hotel deposits. Privy 1035 contained one graphite battery core, 11 metal and graphite battery cores, and two examples of ceramic kiln furniture. The kiln furniture items are approximately one inch diameter, circular, three-footed stands on which ceramics are placed while being fired in a kiln. Their presence and use in Chinatown is unexplained.

Machinery

Items in the machinery category constitute 0.04 percent (0.1% adjusted) of the Chinatown deposits. No items in this category were recovered from hotel deposits. A ferrous wheeled device and a possible ferrous pulley wheel were recovered from Privy 1035.

LEISURE AND RECREATION GROUP

Collecting

Items in the collecting category constitute 0.1 percent of the hotel deposits and 0.04 percent (0.1% adjusted) of the Chinatown deposits. Only three items were assigned to this category. Chinatown deposits contained two milk-quartz rocks that were smooth and possibly tumbled, and hotel Privy 1025 contained one opaque quartz crystal fragment.

Games

Items in the games category constitute 1.2 percent of the hotel deposits and an overwhelming 60.9 percent of the Chinatown deposits. The role of Asian coins, ggp, wood tiles, and dice in Chinese gaming is discussed in greater detail in Chapter 6. The majority (97%) of the 2,847 Chinatown items assigned to this category were recovered from Privy 1035. The 2,774 game items from Privy 1035 include 1,320 Asian coins, 1,380 ggp, 53 wood tiles, 17 Chinese dice, and two metal boxes for the wood tiles.

Hotel deposits yielded 12 items in this category, including six porcelain “China” marbles, two porcelain marbles, two multicolored glass marbles, and one stone marble. The marbles may have been used by children of hotel owners, guests, or employees.

Social Drugs

Items in the social drugs category constitute 10.5 percent of the hotel deposits and 5.4 percent (13.7% adjusted) of the Chinatown deposits.

The deposits in Chinatown contained 251 items in this category, including 84 (33%) examples of opium smoking paraphernalia. Opium pipes, opium lamps, and opium tins are represented. Privy 1035 contained 27 percent of the opium-related artifacts. Opium smoking is discussed in further detail in Chapter 6. Also recovered were 27 brown glass alcohol bottles, 51 olive glass

alcohol bottles, 2 stoneware bottles, and 17 Chinese brown glazed stoneware liquor bottles. Pit 1032 contained 47 bottles representing 39 percent of the Chinatown alcohol and liquor containers. One of the bottles was manufactured by the Illinois Pacific Glass Company of San Francisco, California, between 1902 and 1930 (Toulouse 1971:268). Two others were manufactured in St. Louis, Illinois, and Louisville, Kentucky. A fourth alcohol bottle was embossed FULL ½ PINT (see Table 5-77). No tobacco-related items were discovered in the Chinatown deposits.

Hotel deposits yielded 107 items including 27 olive glass alcohol bottles, 22 brown glass alcohol bottles, 6 clear glass alcohol bottles, 11 stoneware bottles, 4 brown glass snuff bottles (1870–1900) (Ferraro and Ferraro 1964:65), 11 fragments of ball clay pipe, and one metal cigar case. Marked items include a bottle embossed: I.R. BRUNN / IMPORTER / SAN BERNARDINO, CAL (1868–1909), a bottle manufactured by the Duffy Malt Whiskey Company of Rochester, New York, two stoneware ale bottles manufactured by F. Grosvenor & Sons, Glasgow, Scotland; (1869–1923), and five bottles embossed: MILLER'S / EXTRA / TRADE (shield) MARK (in banner) E MARTIN & CO / OLD BOURBON (Polak 1997:128). Two clay pipes were produced by T. Davidson & Company, Glasgow, Scotland (1861–1910) (Bradley 2000:117); three other pipes were also manufactured in Scotland (see Tables 5-39, 5-53, 5-54).

The individuals associated with the hotel and Chinatown appear to have indulged in wine and hard liquor. Based on the artifact record, opium use was limited to Chinatown, while beer and tobacco were more popular on the hotel grounds.

PERSONAL GROUP

Accouterments

Items in the accouterments category constitute 1.7 percent of the hotel deposits and 0.2 percent of the Chinatown deposits. Chinatown deposits contained 11 items in this category. Included are four bone cufflinks, one brass alloy cufflink, one metal knife, one metal and antler pocket knife, one metal purse clasp, and one brass alloy pocket watch. The metal and antler knife is similar to those advertised by Sears, Roebuck and Company in 1897 (Sears, Roebuck and Company 1897:110).

Hotel deposits yielded 17 items in this category, including four bone cuff links, one ferrous pocket knife, one bone pocket knife, one ferrous and shell pocket knife, one ferrous and wood pocket knife, a pale green onyx bracelet, a small (0.75 by 0.50 inch) metal and gold locket, an ivory fan, one straight black celluloid hairpin and one curved black celluloid hairpin, and clear glass inlay with a round flower design.

The recovery of feminine accouterments in the hotel deposits reflects the female presence at the hotel. Women were among the hotel owners, guests, and employees, so the artifacts are likely associated with those individuals. Only one artifact (purse clasp) suggesting a female association was recovered from the Chinatown deposits. The overall lack of female-related artifacts in Chinatown deposits reinforces the presence of a predominantly male community identified in archival sources. The Chinatown artifacts associated with clothing (cufflinks) suggest that the occupants wore western dress instead of, or in conjunction with, traditional Chinese attire.

Clothing/Footwear

Items in the clothing/footwear category constitute 27.6 percent of the hotel deposits and 13.5 percent (34.5% adjusted) of the Chinatown deposits. The Chinatown deposit yielded 630 items in this category, including 593 porcelain buttons, 5 metal buttons, 4 shell buttons, and 4 bone buttons. Privy 1035 contained 94 percent of the clothing/footwear items. Privy 1035 yielded 557 porcelain buttons of the 24-line, Prosser 4-hole, sew through dish type (pants buttons). Also recovered from Privy 1035 were four bone and two shell pants buttons, one porcelain and one metal dress or vest button, and one porcelain and one shell shirt button (Carpenter 1980:6-2).

The hotel deposits contained 281 items, including 147 porcelain buttons, 57 shell buttons, 10 bone buttons, 4 hard rubber buttons, 14 metal grommets, 9 metal fasteners, and 2 metal buckles. Privy 1025 yielded 72 percent of the porcelain buttons, which includes 91 shirt buttons and 8 pants buttons. Hotel deposits also included eight shell lingerie, babies' clothing and dress shirt buttons; two bone and two shell pants buttons; and four hard rubber dress or vest buttons. The hard rubber buttons were manufactured by the N. R. Company and are marked: N.R.CO. / GOODYEAR PAT. 1851. (Luscomb 1967:170).

Laundries were in operation in Chinatown and the hotel yard and are probably the source for most of the buttons. The large number of identical pants buttons in Privy 1035 are typical of Chinese laundry deposits (see "Chinese Laundry Artifacts" on page 6.47). Buttons had a secondary use as gaming pieces. The games of Chinatown and the potential function of buttons in these activities are discussed in Chapter 6.

Grooming

Items in the grooming category constitute 2.0 percent of the hotel deposits and 0.1 percent (0.3% adjusted) of the Chinatown deposits. Chinatown deposits contained six items in the grooming category: one white improved earthenware water basin (ewer); one clear glass bottle, embossed with SOZODONT / FOR THE / TEETH / & / BREATH, manufactured by Hall and Ruckel, Inc., New York, between 1848 and 1930s (Fike 1987:182); two European-style bone toothbrushes; and two bone Chinese toothbrushes. Chinese toothbrushes are distinct from other toothbrushes. The head of the brush is scored on the reverse and the bristle holes pass completely through the head.

The 19 items recovered from hotel deposits include five European-style bone toothbrushes; two clear glass perfume bottles; one aqua hair vigor bottle (J. C. Ayer & Company, Lowell, Massachusetts, 1867–1938); one "Pond's Extract" (skin cream) bottle (1864–1881) (Fike 1987:120); one hard rubber comb; and one white improved earthenware basin. The perfume bottles were manufactured by Phalon and Son of New York between 1859–1870 (Fike 1987:176) and the Lubin company of Paris, France after 1856 (Costello et al. 1998:209).

Female grooming items in the hotel deposits reflect the female presence at the hotel. Women were among the hotel owners, guests, and employees, so the artifacts are associated with those individuals. No grooming artifacts with specific female associations were recovered from the

Chinatown deposits. The overall lack of female-grooming items in Chinatown again demonstrates a predominantly male presence.

Health/Medicine

Items in the health/medicine category constitute 10.0 percent of the hotel deposits and 1.5 percent (3.7% adjusted) of the Chinatown deposits. Chinatown yielded 68 items, including 42 clear glass medicine bottles, 2 ferrous aspirin tins, 1 ferrous pill box, 1 clear glass eye dropper tube, 1 light aqua glass eye water bottle, 11 light-aqua glass Chinese medicine vials, and 3 aqua glass Chinese medicine vials. The eye water bottle was manufactured between 1941 and 1942 and embossed with DR THOMPSON'S / EYE WATER / NEW LONDON / CONN (Table 5-114). Three other bottles exhibit embossments that identify the contents: "Citrate of Magnesia" (a laxative), "Hamlin's Wizard Oil" (a cure-all liniment), and "Aseptic" (an adjective for "free of pathogenic microorganisms"—perhaps an antiseptic product) were recovered from Privy 1035 (Table 5-77)

The hotel deposits contained 103 items in this category. Included are 52 clear glass medicine bottles, 11 aqua glass medicine bottles, 1 cobalt blue glass medicine bottle, 2 clear glass eye lenses, and 2 hard rubber syringes. Seven of the bottles are from San Bernardino pharmacies that were in business between circa 1882 and 1909. Bottles with embossments indicating contents include five "Injection Brou" bottles, and one "Nichol's Infallible Injection" bottle. These were used to treat female venereal disease and are discussed in Chapter 6. A bottle of "Dr A. Boschee's German Syrup, a treatment for the throat, lungs, and chest (Digger Odell Publications 1999; Green 1880) also was recovered (Table 5-3). "Injection Brou" and "German Syrup" are both thought to have contained morphine (Digger Odell Publications 1999).

The lower proportion of heath and medicine items in the Chinatown deposits may be attributable to a preference for traditional herbalist treatments, evidence of which might not survive archaeologically. The proprietary medicines that were used perhaps reflect an aging Chinatown population suffering from failing eyesight, stomach disorders, and aching limbs. Hotel deposits contained medicines specific to female ailments and, as in the accouterments and grooming categories, demonstrate a female presence among hotel owners, guests, and employees.

Toys

Items in the toys category constitute 0.3 percent of the hotel deposits and 0.02 percent (0.1% adjusted) of the Chinatown deposits. One porcelain doll part was recovered from Chinatown Drain 1002. One porcelain doll head, one porcelain doll part, and one porcelain doll foot were recovered from the hotel deposits. Children are virtually absent from the Chinatown historical record; the archaeological evidence seems to support these data. The solitary doll part may have been lost by a child visiting one of the Third Street stores or attending a festival at the temple. Hotel owner Augustus Starke had a daughter, Kate, and a stepdaughter, Anna, who were mature women when the hotel privies were filled in the 1890s. The doll parts may be remnants of their childhood or associated with the children of hotel guests or employees (see "Games" above).

STRUCTURAL GROUP

Building Material

Items in the building material category constitute 0.8 percent of the hotel deposits and 0.3 percent (0.7% adjusted) of the Chinatown deposits. However, these numbers do not reflect true artifact occurrences in features because construction material such as brick, lumber, and concrete were not collected in the field (see "Field Artifact Discard Policy" in Chapter 4).

Chinatown deposits contained 13 items including fragments of concrete and clay brick, clear flat glass, light aqua flat glass, light green flat glass, and a ferrous sewer pipe. Three large segments of forge lining were used in the construction of Roasting Oven 1036. Two of these fire bricks were manufactured by the Whitacre Greer Firebrick Company of Malvern, Ohio, between 1925 and 1930 (Graves 1999a:372, 1999b:197). The third brick was manufactured in 1927 by the Missouri Firebrick Company of St. Louis, Missouri (Graves 1999a:268, 1999b:127). Hotel deposits contained eight items including fragments of ceramic, concrete, and clay bricks; light aqua flat glass; and clear flat glass. The items in this category were likely components of the structures around the hotel and Chinatown.

Nails

More than 6,000 nails were recovered from the entire project area and 92 percent of these were from Chinatown deposits. Because of the abundance of nails, this category was omitted from Table 7-1 so that other artifact patterns are more apparent. Chinatown yielded 5,640 nails, of which 2,859 (50%) were recovered from Privy 1035 and 1,576 (30%) from Privy 1058. The majority (88%) of the items are ferrous medium nails (1.25–2.75 inch). Recovered items also included 101 large nails (3–4.5 inch), 328 small nails (1 inch), and 201 ferrous tacks. Hotel deposits contained 475 items in this category, including 54 large nails, 340 medium nails, and 33 small nails. Medium nails contribute 72 percent of the total.

Similar distributions of nails were recovered from Chinatown and hotel deposits, with medium nails being dominant. These items appear to be readily available and used in abundance by both communities. The greater quantity of nails recovered from Chinatown may be attributable to the larger number of wooden structures at the east end of the block. The nails may have been stored in Chinatown and used for repair or construction or, in the case of Privy 1035, may have been deposited during demolition.

Tools/Hardware

Items in the tools/hardware category constitute 1.6 percent of the hotel deposits and 0.4 percent (1.0% adjusted) of the Chinatown deposits. Chinatown deposits yielded 19 items, including two chisels, a door hinge, a ferrous lock, and an enameled metal door knob. Three keys were among 16 items recovered from hotel deposits. Recovery also included a ferrous hinge and a ferrous hook.

The keys from the hotel deposits (including one with a square tag attached) may have been room keys used by hotels guests or by hotel owners and employees securing the hotel and surrounding outbuildings.

UNDETERMINED GROUP

Miscellaneous Bead

Items in the miscellaneous bead category constitute 0.2 percent of the hotel deposits. One clear glass bead and one white glass bead were recovered from Privy 1025. No items in this category were recovered from Chinatown deposits.

Miscellaneous Bottle, Jar, Can

Items in the miscellaneous bottle/jar/can category constitute 5.0 percent of the hotel deposits and 2.3 percent (6.0% adjusted) of the Chinatown deposits. These items could not be assigned to a specific category because their original contents could not be determined. Chinatown contained 109 items is this category, including 22 clear glass bottles, 8 light aqua bottles, and 8 light green glass bottles. Also were recovered were round, oval, and rectangular ferrous cans, and a variety of colored bottles and jars, including amber, amethyst, blue, and brown glass. Body fragments compose the majority of the glass artifacts; 77 percent of the category was recovered from Privy 1035. Hotel deposits yielded 51 items including 13 light aqua bottles, 13 clear glass bottles, 6 aqua glass bottles, 4 ferrous cans, and miscellaneous bottle body fragments of blue and olive glass.

Miscellaneous Closure

Items in the miscellaneous closure category constitute 1.3 percent of the hotel deposits and 0.3 percent (0.7% adjusted) of the Chinatown deposits. Chinatown yielded 12 items in this category including three ferrous caps, one metal cap, and one cork stopper. Hotel deposits contained 13 items, including two ferrous lids, two ferrous caps, one ceramic stopper, and one clear glass stopper with an oblong finial.

Miscellaneous Metal Item

Items in the miscellaneous metal item category constitute 3.6 percent of the hotel deposits and 0.9 percent (2.2% adjusted) of the Chinatown deposits. Chinatown contained 40 items in this category including five ferrous handles, four ferrous rods, and two ferrous tubes. Hotel deposits contribute 37 items, including 11 ferrous tacks, 2 metal tubes, and 2 metal staples.

Undifferentiated

Items in the undifferentiated category constitute 1.9 percent of the hotel deposits and 0.7 percent (1.9% adjusted) of the Chinatown deposits. Chinatown contained 34 items in this category, including items made of bone, glass, ceramic, rubber, and metal. Hotel deposits yielded 19 items in this category, including artifacts made of bone, glass, antler, and metal.

7.2 A SUMMARY OF LAND USE

In the following discussion, the physical landscape is viewed as the stage for its human actors. The most important elements of this stage are Warm Creek, supplying year-round water in an arid landscape, the adjacent small floodplain, and the low bordering bluff that framed the riparian corridor (Figure 7-1).

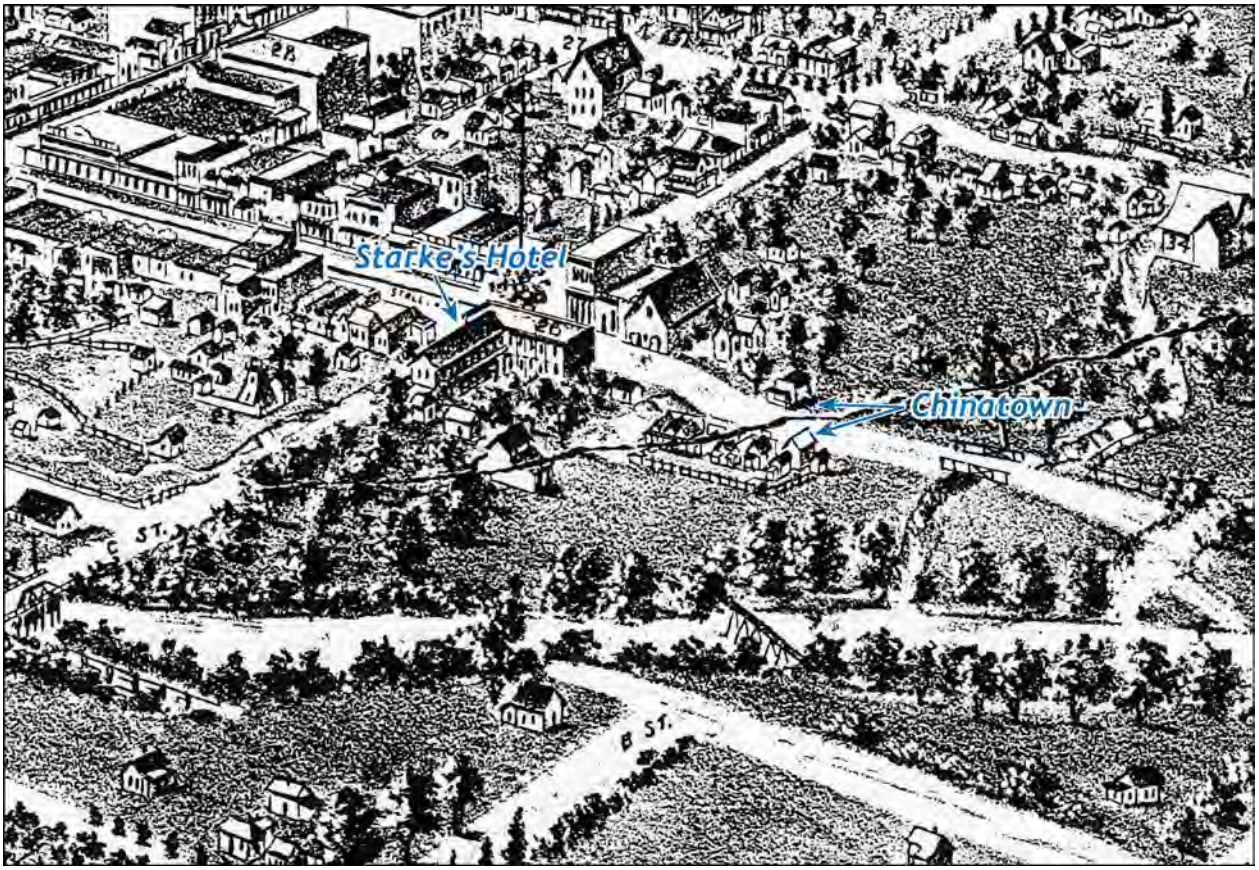


Figure 7-1 The project area as it appeared in the circa 1880 W. H. Symes & Co. map of San Bernardino (courtesy, Heritage Room, A. K. Smiley Public Library, Redlands, California).

While Native Americans may have roamed this vicinity for as many as 11,000 years, traces of their presence were not found in the soils. The documented story of human presence begins with the Lúgo family who, in 1839, built their first adobe home in this section of Rancho San Bernardino (then called Agua Caliente). The location was central to their 35,500-acre ranch, which encompassed most of the San Bernardino Valley and was framed on the north by the transverse ranges of the San Gabriel and San Bernardino mountains. Situated on the dry rise next to Warm Creek, the adobe buildings were secure from seasonal flooding while residents were close enough to take advantage of its waters. Among its uses, Warm Creek apparently carried away leavings from butchered cattle, remains of which were found in downstream archaeological excavations.

The propitious location of the Lúgos' adobe was admired by subsequent settlers who continued to develop the site. Mormon colonists from Utah purchased Rancho San Bernardino in 1851 and constructed their fortified outpost in the Lúgos' yard. Water brought by ditch to the settlement from nearby sources was used for houses and gardens. The shift in southern California from Mexican rule to United States governance was marked by the transformation of Rancho San Bernardino into the County of San Bernardino in 1853. Envisioning a prosperous city, the same Mormon surveyor who laid out Salt Lake City created a similarly well-planned grid for San Bernardino's expansion and development. When the Mormons were recalled by Brigham Young in 1857, the void left behind was quickly filled by a flood of settlers from the eastern states as

well as by immigrants from diverse parts of the world drawn by the cheap land, fertile grounds, and hospitable climate of the valley.

The former hub of activity on the banks of Warm Creek where the Lúgos and Mormons had located was now judged to be too restrictive for continued growth of the city. Its marshy creek bed was seen as an impediment to development. The business district subsequently spread west and north over the rolling grasslands; water was supplied by artesian wells and the diversion of mountain streams. The birthplace of the town, however, was marked by August Starke's respected hostelry. Originally established in one of the Mormon dwellings, the rustically elegant hotel anchored the east end of the Third Street business district.

East of Starke's Hotel, along Warm Creek, were marshy lowlands spurned by the new city. Native Americans, a disenfranchised people who not so many years before had called all of this country their own, assembled seasonally into a small camp on the east bank. While the Native Americans moved away following an 1877 smallpox outbreak, the area now known as "Squaw Flat" attracted a population of tramps, indigents, criminals, and society's castoffs. It was an unsavory and potentially dangerous section of town, a place avoided by the more respectable citizenry.

Among the entrepreneurs attracted to the booming Inland Empire were the Chinese. Having cornered the laundering and vegetable-gardening markets in the Los Angeles area, they carried these skills eastward to San Bernardino. The first "China Gardens" were developed about a mile east of Warm Creek, while laundries were scattered throughout the town along with a few restaurants. The limited number of Chinese residents (150 in the entire county in 1880) lived quietly among their neighbors. Chinese work crews managed by Chinese labor agents contracted to work in orchards and on the railways. These men lived in camps in the countryside, coming into town during their time off.

Although San Bernardino's newspapers published their share of anti-Chinese stories, overt, organized opposition by the town's majority population did not occur until 1876. The focus of these attacks was the laundries, which, in the absence of sewers, dumped substantial quantities of wastewater into backyards and adjacent streets. As these miasmas were created by an industry almost exclusively Chinese, laundries became the focus for local xenophobic sentiment. In 1878, legal pressure compelled the laundries to relocate to the town limits—the unwanted, low-lying section of Third Street east of Starke's Hotel. As Starke and others were willing to rent land to the new community, and Starke's employees were predominantly Chinese, more Chinese moved in and "Chinatown" was born.

By the middle of the 1880s the Chinese had developed a lively one-street community filled with the amenities of home: dry-goods stores, herb shops, restaurants, gambling halls, boarding houses, and a temple. This bustling thoroughfare served Chinese living in other parts of town as well as workers from the surrounding farms and orchards. The town grew from west to east—from higher to lower ground. When the Kuan Yin Temple was moved to the south side of Third Street in 1890, it was placed in the largest accessible area that was still undeveloped, directly adjacent to Warm Creek. Many non-Chinese also enjoyed the diversions of Chinatown and were regular visitors to the gambling halls, opium dens, and restaurants both in and around Third Street. Behind the street facades, the rich private life of the Chinese left evidence in the form of

pig roasting ovens, laundry drains, and daily refuse. It is unknown if the fence erected along these backyards between 1897 and 1906 was constructed by the Chinese to secure their privacy or required by the community to confine their activities and restrict the views from passing railway cars.

Starke's Hotel and the adjacent French Hotel were perched on the only high ground on the block. Starke's Hotel continued to serve as Third Street's eastern bastion of non-Chinese commercial respectability through the late nineteenth century. Behind the stately Third Street frontage, the hotel featured facilities such as a bath house, employee residences, laundry facilities, outhouses, wood storage, livestock barns, a livery, and stables. Southwest of Chinatown along the creek, an orchard had been planted on land above the marshy banks. By the 1890s, however, the hotel was beginning to decline. Elderly August Starke, out-maneuvered by his long-time neighbor Daniel Bradford, lost title to his hotel. Under the subsequent management of Bradford's daughter, the establishment slid from hotel to rooming house, a transition that mirrored the devolution of the neighborhood and was beyond her control.

In 1900 most of the south side of the Third Street Chinatown was purchased by long-time resident (and California-born) Wong Nim. With only 56 Chinese residents within the city limits in 1900, the community's prosperity depended on servicing workers in the surrounding countryside. The virtually all-male population generally worked in the United States only long enough to retire comfortably to their home villages in China. Chinatown's future depended on regular infusions of new immigrants. Beginning in the 1880s, federal exclusion acts effectively shut the doors to Chinese immigrants; by 1920, only 20 remained in San Bernardino, and half of them were more than 50 years old. By 1924 the landmark Starke's Hotel was razed, and the 1930s' portions of Third Street Chinatown had been demolished. At this time, the western part of the block supported auto sales, maintenance, and wrecking enterprises.

The future of the block, however, changed radically as the booming city began reclaiming land in its center by-passed in earlier years. Bureaucratic growth required expansion of municipal facilities by city, county, and state agencies. In 1926–1927, the new county courthouse was built on the north side of Third Street, just west of the northern row of Chinatown structures. In 1924 the California Division of Highways (later Caltrans) also gained a foothold in the unwanted interior of the block south of Third Street. Here they built a shop and sheds, and began systematically adding fill to low-lying areas to stabilize the creek. In 1927 the agency completed a handsome Mission Revival-style headquarters facing Third Street, immediately adjacent to the remaining Chinatown buildings.

After Wong Nim's death in 1941, Caltrans purchased the remaining portions of Chinatown, razed the buildings, and over the next two decades obtained complete control of the entire block. At about the same time, the old Chinatown buildings on the north side of Third Street were renovated as county offices. This allowed them to survive until 1960 when they fell to an expansion of the courthouse lawn. By 1959, Caltrans had replaced its original offices with a modern headquarters facility encompassing the entire block south of Third Street. Construction included substantial earthmoving which, once and for all, rescued the lower portions of the property from the threat of flooding by cutting and spreading soils from the lot's high ground—high ground that had once bordered the Lúgos' yard, supported portions of the Mormon Fort, and upon which the landmark Starke's Hotel had been built. This practical regrading of the block

inadvertently served to preserve the histories of those who lived on the "low ground." Protected under feet of soil, the secrets of the backyards—those of Starke's Hotel kitchen and employees, and the gamblers and residents of Third Street Chinatown—were marvelously preserved. The unearthed artifacts are now telling vivid stories of people and events once buried under the modern world.

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Appendix A

CHRONOLOGY

Block 15 Chronology
Chinese Names in Census Reports

A.1 BLOCK 15 CHRONOLOGY

GENERAL INFORMATION

1839: José del Carmen given permission by the California governor to initiate a colonization plan in the San Bernardino Valley. Lúgo and his brothers bring 4,000 head of cattle into valley and erect an adobe house in an area called Agua Caliente, the site of the present San Bernardino County Court House (Beattie and Beattie 1951:40–42).

1842: Mexican Governor Juan B. Alvarado grants Rancho San Bernardino to Antonio María Lúgo and sons by (Lúgo 1950:197). The home of Antonio María's son, José María Lúgo, is located approximately on the site of the San Bernardino Courthouse (Block 18) (Newmark and Newmark 1929:101, 102; USWPA 1940:11, 15).

1850: Population at Rancho San Bernardino numbers approximately 38, made up mostly of Lúgo Family members and their retainers.

1851: Lúgos sell Rancho San Bernardino to group of Utah Mormons led by Amasa Lyman and Charles C. Rich.

Fearing the Indian revolt of Antonio Garra, Mormons erect a stockade measuring approximately 300 x 700 feet. One-story structures of logs and adobe are built within the stockade and the majority of the more than 400 Mormons move into the stockade. The stockade is occupied for the next 2 1/2 years, then abandoned and dismantled (Hopkins n.d.: 15 December 1851; Ingersoll 1904:132, 139; Lyman 1996:64).

The eastern wall and some of the interior structures intersect the project area on the southeast the corner of Third and Arrowhead streets (i.e., northwest corner of Block 15).

Of the structures that were located here, four were occupied by Bishop William Crosby and Charles Crandel[l], and presumably their families.

1853: San Bernardino County created by an act of the California Legislature in April.

In September, Henry G. Sherwood surveys the San Bernardino town site; the plan contains 72 square blocks, each block containing eight 1-acre lots. The project area occupies Block 15 of Sherwood's "one acre survey." In 1853 according to Sherwood's map, only the northern lots of Block 15 (Lots 5–8) were subdivided; the southern half of the block formed one unnumbered 4-acre lot.

1857: Bishop William Crosby and wife Sarah are among those who heed Brigham Young's call for Mormons to return to Utah.

Crosby sells the Block 15 property to John Lemon on December 2 (San Bernardino County Deed Book B:170).

1858 Lemon apparently mortgages the property to Dudley and Elizabeth Pine who continue to operate an inn on the site (on Lot 5) known as Pine's Hotel (Ingersoll 1904:162).

1863: In July, purchase of Block 15 by the Pines from Lemon (through Lemon's agent, Aeneas Quin) is completed (San Bernardino County Recorder, Deed Book F:14).

1867: In April, the Pines retire from the hotel business and move to Santa Barbara. During their tenure in San Bernardino, the hotel had become a social center of town life (San Bernardino *Guardian* 20 April 1867:2).

In May, an advertisement for Pine's Hotel appears in the *Guardian* signed by August Starke (15 May 1867:2).

On August 10, the San Bernardino *Guardian* announces the arrival in town of several Chinese.

1868 August and Catherine Starke buy Block 15 from the Pines (San Bernardino County Recorder, Deed Book H:138).

1870 U.S. Census reports at least 14 Chinese living in San Bernardino. Two, Sam Sing, age 22, and Sam Lee, age 28, are employed at Starke's Hotel as waiter and cook, respectively. Grouped by households (street addresses not given), the census lists the following Chinese:

Household 1:

Sam Sing, age 23, laundryman
Jim Gang, age 19, laundryman
Joe Hang, age 26, laundryman

Household 2:
Hing Kee, age 20, laundryman
Shue Kee, age 23, cook in hotel
Household 3;
Ah Hang, age 27, cook in hotel
Joe Hang, age 25, cook in restaurant
Household 4:
Ah Kim, age 24, cook in restaurant
Ah Sing, age 29, cook in restaurant
Household 5:
Ah Ding, age 37, cook in family
Ah Gaw, age 36, cook in restaurant
Household 6:
Sam Sing, age 29, cook in family of James W. Waters

1872 August Starke assessed for land ($1,280), improvements ($3,200), and personal property ($2,937), including one wagon, two carriages, two buggies, harness, saddles, 11 horses, three cows, 16 hogs, and furniture (City of San Bernardino Assessment Roll 1874:62–63).

1876: May—Newspaper reports several Chinese are cultivating large sections of land beyond city limits (San Bernardino *Weekly Times*, 13 May 1876:4).

July—Newspaper reports an increase in Chinese women in the city and questions the moral implications for young whites (San Bernardino *Weekly Times*, 1 July 1876:3).

December—Fan See takes out a license to "keep a bar." It is the first such business license issued to a Chinese (San Bernardino *Daily Times*, 12 December 1876:3).

1877: Smallpox outbreak among Native Americans living at Squaw Flat forces their abandonment of the area.

1877–1878: Only five of the town's Chinese residents are assessed for taxes during the year:

Han Tong, $50, Wash House near Whaley's Saloon on 3rd. Two other men at work "but could not get their names."

Quong Tung Han, $50, Wash House near Katz [store] on 3rd. Three other men in same house: [illegible] Cow [sic], Ah You, and Ah Gin. The eviction of Quong from this wash house in 1878 (and the eviction of other Chinese laundry owners) provides the impetus for the formation of a distinct Chinese neighborhood in San Bernardino.

Bing Kee, $300, goods and merchandise.

Yun Wa, $150 for goods and merchandise/$50 for Wash House. Working in the same house were Ah Gun and Ah Ting.

Ah Sim, $50 for vegetable garden/$25 for wagon/$25 for horse, "S. East of Mathews' Mill." (Assessor's Book, Town of San Bernardino, 1877–1878:76.)

1878 Several Chinese laundrymen are brought into San Bernardino County Court for maintaining nuisances by emptying "large quantities of dirty, filthy and unwholesome water" which did produce "divers[sic] noisome, offensive and unwholesome vapors, gases, smells and stenches" (San Bernardino Superior Court, Case Nos. 579, 580, 595, 596).

January 24—Town board passes an ordinance to force Chinese prostitutes out of the town limits and subsequent arrests by the City Marshall (San Bernardino *Weekly Times*, 24 January 1878:3).

July 13—Chinese women, reportedly prostitutes, are noted in a letter to the San Bernardino *Weekly Times* to be "plying their nefarious trade" at the corner of Third and C streets.

October 19—*Weekly Times* reports that laundrymen Quong Tung Hang, Hop Sing, and others have built shanties "just below Starke's [Hotel]." (First report of structures in what would become Chinatown) (San Bernardino *Weekly Times*, 19 October 1878:3).

August Starke begins selling off lots not directly associated with the operation of the hotel.

1878–1879: Alley and Cochrane, a commercial livery, are assessed for "south half of Block 15" (Lots 1 through 4) ($200), improvement on same ($25), and personal property ($775+). Also assessed for Lots 6, 7, and 8 ($8?) and improvements on same ($75) (City of San Bernardino Assessment Roll 1878–1879:2).

1879: August Starke is assessed for $1,200 "town lots" (which are not itemized, except for 3/4 of Lot 8, Block 14) and $3,000 for hotel. He is also assessed for a stage ($150), hogs ($100), hotel furniture

($800), saloon stock and fixtures ($175), and a piano ($100) (City of San Bernardino Assessment Roll, 1878–1879:105).

ca. 1880: W. H. Syme publishes bird's-eye view of San Bernardino which shows the Block 15 Project area. Warm Creek cuts across southeast corner, lined with trees; B Street not cut through. Starke's Hotel is a prominent L-shaped structure and a row of buildings (apparently wood frame) fronting on Third Street between Starke's Hotel (to the west) and a tributary of Warm Creek (to the east), is also shown. This frontage, appearing to be in Lots 6 and 7, is the historical location of the south side of the Chinatown district. Third Street appears to decline in elevation as it approaches Warm Creek (just to the west of these structures), thus placing the row of buildings at a somewhat lower elevation than Starke's Hotel. The Syme birds-eye view is thought to be the earliest two-dimensional representation of the Chinatown district of San Bernardino.

Railway lines for San Bernardino, Arrowhead & Waterman Railway obtain an easement through the middle of the block.

1880: Tenth Census of the United States lists the following. Street addresses are not given, and in some cases street names are illegible. All Chinese enumerated during the census are not listed below. Those listed were proximate to Starke's Hotel on the enumeration sheets implying they residing in households (Numbers 2 and 3) situated along Third Street.

Third Street

Starke's Hotel

August Starke/male/age 56/married/hotel keeper.
Kate Starke/female/wife/ age 42/married/housekeeper.
Augustus H. Starke/male/son/age 28/single/hotel clerk.
Kate Starke/ female/daughter/age 12/at school.
Thomas Starke/male/son/age 10/at school.
William Starke/male/son/age 5.
Frank Starke/male/son/age 3.
Anna Starke/female/step-daughter/single/age 18/at home.
Joseph S. Alley/male/age 40/boarder/single/miner.
Ah Jim/male/age 26/boarder/single/laundryman (probably at Starke's).
Charlie Ho/male/age 23/boarder/single/hotel cook (probably at Starke's).
Ah Ying/male/age 28/boarder/single/gardener (probably at Starke's).
Ah Sing/male/age 25/boarder/single/hotel cook (probably at Starke's).

Household 2

Sam Lee/male/age 18/boarder/single/laundryman.
Wong Yo/male/age 23/boarder/single/washerman.
Wong Yang/male/age 20/boarder/married/ironer (presser).
Wong See Song/male/age 22/boarder/married/washerman.
Wong Quay/male/age 20/boarder/single/washerman.
Wong Song/male/age 23/boarder/single/washerman.
Ah Ye/male/age 24/boarder/single/washerman.

Household 3

Yee Kee/Head(?)/male/age 40/married/merchant.
Mrs. Yee Kee/wife/female/age 30/married/housekeeper.
Ah Soo/male/age 42/boarder/single/no occupation shown.
Ah Yen/male/age 30/boarder/single/barber.

November 29—Daniel M. Bradford, who will later own much of Block 15, arrives in nearby Riverside from Grinnell, Iowa (Roe, James H. *Notes on the Early History of Riverside, California*. Manuscript on file at the Riverside Public Library, Riverside, CA, 1932:162).

December—William Palen, age 23, dies of an opium overdose (ingested rather than smoked) in a den located in the "old gas house" (San Bernardino *Weekly Times*, "Death in an Opium Den," 25 December 1880:3).

1882: November 15—Emeline Bradford, daughter of Daniel M. Bradford and future wife of Charles H. Davis, organizes a Chinese mission school in the basement of the Congregational Church. Ms. Bradford leads the work of the mission for the next four years. Her father is a deacon of the church; Charles Davis was a reverend whose association with the church spanned 21 years ([Mrs.]E. P. R.Crafts, Pioneer Days in the San Bernardino Valley. Redlands, CA: Published by author, 1906:90).

1887: San Bernardino City and County Directory lists the following Chinese merchants in town. In most cases no street addresses are given:

Je Chong & Co., Third St., between B and C—tea, provisions, labor contracts (1887:34, 72).

Quong Ye On, Third St., between B and C—Chinese and Japanese good, labor contracts (1887:50, 72).

That Kee, Third St., between B and C—Chinese provisions (1887:59, 72).

Wing Lung Kee & Co., Third St., between B and C—Chinese provisions and labor contracts (1887:34, 66).

Chung Tung Hang, Third St., between B and C—laundry (1887:72).

Quong Yuen Hi, Third St., between B and C—laundry (1887:72).

Som Kee, 93 Third St., laundry (1887:72).

Yuen Wo, 44 D St., laundry (1887:72).

1887–1888: Sanborn maps recognize a distinct Chinese enclave on Third Street between C and B streets (Arrowhead and Mountain View Avenues).

1887: January 8—Sun Sang Yuen opens an employment bureau and newsstand in Chinatown (San Bernardino *Weekly Times*, 8 January 1887:3).

February 15—The press takes notice of a Chinese funeral, the deceased being the victim of "too much opium" (San Bernardino *Daily Courier*, 15 February 1887:5).

April 22—Justice Parker fines Frank Larkin $7.00 for the "muscular feat" of attempting to carry away a Chinese wash house (San Bernardino *Daily Courier*, 22 April 1887:4).

April 23—Ah Quan is prosecuted for smoking opium. Judge Willis discharged him (San Bernardino *Daily Courier*, 23 April 1887:3).

April 26—The *Daily Courier* complains of a Chinese laundry at the corner of Third and F streets (San Bernardino *Daily Courier*, 26 April 1887:4).

May—Judge Sawyer of the U. S. Ninth Circuit Court voids Napa City's ordinance prohibiting public laundries within certain city limits. The judge found that the laundry in question was only a nuisance "by the arbitrary declaration of the ordinance." The San Bernardino *Daily Courier* calls on the Board of Trustees to reevaluate the city's own laundry ordinance and make the necessary changes (San Bernardino *Daily Courier*, 15 May 1887:4).

August 10—Local authorities order Chinese "at the foot of Third Street to leave those quarters inside of two weeks. The Chinamen have rented a large tract of land near Third Street just outside of the city limits and intend to build a new town there. They are at work on some houses now" (San Bernardino *Daily Courier*, 10 August 1887:4).

August 19—A Chinese festival occurs in Chinatown, although the newspaper does not report the reason, but suggests the reason may have been "the bidding farewell to the old quarters" (San Bernardino *Weekly Times*, 22 August 1887:3).

August—"John Burcham has leased forty lots on Third Street, just east of A Street [Sierra Avenue] to as many Chinese, for a town of their own"(San Bernardino *Daily Courier*, 24 August 1887:3).

1888: February 24—Police raid a fan tan game (San Bernardino *Daily Courier*, 25 February 1888:5).

June 7—The home of D. M. Bradford "on Third Street nearly opposite Starke's Hotel and adjoining Cole and Stetson's livery" was burned to the ground except for the walls (San Bernardino *Daily Courier*, 7 June 1888:8).

June 22—A white youth attempts to burn down Chinatown and is caught dowsing wooden buildings with coal oil. He has to be rescued by local law enforcement when he becomes surrounded by 50 angry Chinese residents.

October 23—Chinese proprietor of a wash house on E Street between First and Second streets is involved in an accident (San Bernardino *Daily Courier*, 22 October 1888:4).

December 20—D. M. Bradford is accused of maintaining a nuisance on his premises on "the South side of 3rd Street between 'B' and 'C'" by allowing a Chinese laundry to operate there (San Bernardino Superior Court, Case No. 2334, People of the State of California vs. D. M. Bradford).

December 20—Mrs. Oliver M. Wozencraft is accused of maintaining a nuisance on his premises on "the North side of 3rd Street between 'B' and 'C'" by allowing a Chinese laundry to operate there (San Bernardino Superior Court, Case No. 2336, People of the State of California vs. Mrs. Oliver M. Wozencraft).

December 26—Ah You and Ne Yah are accused of maintaining a public nuisance by operating a wash house "in and upon the Bradford property between [on] Third Street and C Street . . . and Warm

Creek" (San Bernardino Superior Court, Case No. 2341, People of the State of California vs. Ah You and Ne Yah).

1889–1890: Six Chinese are assessed for property. Locations are not given. They are:
Quong Woo, $100 for personal property and a wash house;
Yuen Wo, $100 for fixtures, a wagon, and a horse;
Wong Lung Ku, $1000, personal property, goods and merchandise
That Kee, $150, personal property and goods in stock;
Quong Yet Oh, $500, personal property, drugs and clothing;
Lin Sing, personal property, goods and merchandise (City of San Bernardino, Assessment Book 1889–1890:125).

1889: San Bernardino City and County Directory does not list Chinese merchants in town.
April—Dr. Fong Wing opens an office at No. 9 Chinatown (San Bernardino *Daily Courier*, 26 April 1889:3).

1890: December—"The location of the Joss house has been changed from the Wozencraft property to a lot at the extreme eastern end of Chinatown and on the south side of Third Street" (San Bernardino *Daily Courier*, 20 December 1890:3). The "Wozencraft property" was located on the north side of Third Street, directly opposite the project area.

1891: May—Dr. Wong Poo Shai opens a dispensary at 531 Third Street, west of the old St. Charles Hotel (San Bernardino *Daily Courier,* 28 May 1891:3).
September 29—Daily Courier mentions a Chinese laundry on C Street, between First and Second streets (San Bernardino *Daily Courier*, 29 September 1891:3).
October—After only a few months, Dr. Wong Poo Shai moves his offices to 264 Third Street east of Cole and Roarke's livery (San Bernardino *Daily Courier*, 10 October 1891:4).

1893: San Bernardino County Directory list the following businesses and persons in the 200 block of Third Street. No Chinese are listed.
218–220 Third St., A. Jonas and Brothers, retail clothing
252 Third St., H. G. Lecher, house and sign painter.
282 Third St., Star Livery and Feed Stables, Cole and Rouke[sic], proprietors.
March 3—Advertisement for Quong Sun Wing and Company, Chinese and Japanese fancy goods at Court and D streets (San Bernardino *Daily Courier*, 3 March 1893:4).
April 27—Mock Chuck, proprietor of the Magnolia Restaurant, is fined $40 for selling liquor without a license. Mock Chuck also operates the Motor Depot Hotel, which may be adjacent or contiguous with the Magnolia Restaurant (San Bernardino *Daily Courier*, 27 April 1893:3).
May 14—The Daily Courier describes a lively brawl in a Chinese restaurant on Third Street "next to the Motor Depot." This may be Mock Chuck's Magnolia Restaurant (San Bernardino *Daily Courier*, 14 May 1893:3).
June 13—Mock Chuck, a Chinese restaurant and hotel operator, is arrested for operating a house of prostitution (a misdemeanor) within the corporate limits of the city. He is tried under state law, but pleading not guilty, he is refused a trial by jury. He is found guilty and fined $100 or 100 days on June 15 after a one-day trial. Mock Chick appeals and Judge George Otis concurs that the city ordinance under which the arrest was made is unconstitutional and that a jury trail is warranted under state law (San Bernardino City Recorder's Court, Case No. 5032, People of the State of California vs. Mock Chuck). Out come of the second trial, if it indeed occurred, is not known.
July 27—Daily Courier reports City Marshall Ralphs conducted raids on opium dens on B Street [now Mountain View] near Third Street after following two white youths into a Chinese laundry. Opium den was located at the back of the shop. One youth arrested, one escaped. Opium paraphernalia confiscated. Chinese released on bail (San Bernardino *Daily Courier*, 27 July 1893:3).
July 27—Local character, Bronco Charley, while intoxicated picks a fight with several Chinese. One responds by hitting Charley over the head with a hammer. Charley was arrested. Article begins, "Now that Chinatown sports electric lights . . ." (San Bernardino *Daily Courier*, "Bronco Charley—Has a game of knockout with some Chinamen," 27 July 1893:3).
September 12—Muc Chuc [Mock Chuck] reportedly robs a friend and leaves town. (San Bernardino *Daily Courier*, 12 September 1893:3).
September 14—An article entitled "A Good Thing" notes the closing of Muck Chuck's [sic] Motor Depot Hotel, identified as a brothel, near the Third Street Motor Depot (San Bernardino *Daily Courier*, 14 September 1893:3).

1894–1895: Wong Nim sues E. A. Phillips for nonpayment of fees charged by Wong in his capacity as a labor contractor. Phillips had contracted with Wong for several Chinese laborers to work on his ranch at West Highlands for $1,050, but had paid Wong only a portion (Superior Court, Case No. 5868, Wong vs. Phillips).

1894: January 13—Twenty-three Chinese arrested in San Bernardino for operating a fan tan game (Riverside *Daily Press*, 13 January 1894:3)

March—William Traw (or Trau) is arrested for attempting to burn down Chinatown. He is later sentenced to five years in jail (San Bernardino *Daily Courier*, 20 March 1894:3).

1900: Twelfth Census of the United States. No street numbers given, although streets are in some cases. Very little information is included on individual Chinese.

Third Street

No Household Number
- Chin Wong
- Sun Wong
- Chin Yip
- Yon Wong
- Sang Wong
- Ong Joi
- Herbert Ming
- Lam Wo
- Fung Tong
- Chin Hain(?)
- Sam Joe
- Si Wong Pa/female/wife

Household Number 170
- Joe Quatra/Head/male/age 50/widowed/laborer
- Goy Wong

No Household Number
- Gon Wong
- Minn Wong
- Lung Wong

Household Number 740
- Wong Hangout/proprietor/male/age 38/single/Sing Lee Laundry.
- Wong Sin/partner/male age 34/married/partner in Sing Lee Laundry.
- Wong Wo/male/age 33/single/employee at Sing Lee Laundry.
- Ah Lon/male/age 41/married/employee at Sing Lee Laundry.
- Wang La Pong/male/age 48/married/employee at Sing Lee Laundry.

1906: San Bernardino City Directory lists the following Chinese individuals and businesses living/operating on Third Street (1906:236):
- **251 Third St.,** Wong Chong, restaurant, residence same.
- **249 Third St.,** Wong Gee, manager, Quong Chin Chung (no separate listing).
- **213 Third St.,** Wong King Ching, Chinese herbs.
- **244 Third St.,** Wong Tong and Yee Yick Co., general merchandise.
- **252 Third St.,** Wong Yuen, barber, residence same.
- **599 Third St.,** Quong Woo, laundry (1906:179).

ca. 1910: Mary Bennett Goodcell spearheads a movement to clean up Squaw Flat (on the east side of Warm Creek) of garbage, vagrants, and shanties and turn the site into a city park. In the 1920s, a portion of the site is developed as a motor court/auto camp for tourists.

1910: Thirteenth Census of the United States lists the following:

212 Third St.
- Wong Poo Sai/Head/male/ age 62/married/physician/renter.
- Ng Hue(?)/wife/female/age 39/married/no occupation.
- Wing Poi Tong/son/age 10/single/no occupation.

213 Third St.
- Wong Tung Si/Head/male/aged 45/married/retail grocer/renter.
- Wong [illegible]/lodger/male/aged 54/married/ranch laborer.

Wong Yen/lodger/male/aged 48/married/no occupation

215 Third St.

Wong Sang/Head/male/age 39/married/proprietor of retail drug store/renter.

Wong Yon How (?)/hired man/male/age 50/single/cook in a restaurant.

228 Third St.

Wong Nim/Head/male/age 54/married/retail grocer/renter.

230 Third St.

Wong Chung/Head/age 55/married/retail grocer/renter.

Lee Won/lodger/age 60/married/barber.

Lee You/lodger/age 52/single/ranch laborer.

245 Third St.

Wong Hand/Head/ male/age 46/proprietor of retail grocery/renter.

Wong Tong Din/partner/male/age 44/proprietor of retail grocery/renter.

Wong Toy /lodger/male/age 58/married/ranch laborer.

Wong Tong /lodger/male/age 50/married/ranch laborer.

Wong Moi(?)/lodger/male/age 50/married/ranch laborer.

Wong Chin /lodger/male/age 35/married/occupation unknown.

Wong Lun /lodger/male/age 23/married/ranch laborer.

246 Third Street

Wong Tong/Head/male/aged 49/married/retail grocer/renter.

Wong Si Ku/hired man/male/aged 41/married/bookkeeper in retail store.

Wong Sing/partner/male/aged 40/married/retail grocer.

Ung Tong/lodger/male/aged 60/married/no occupation.

Wong Din/lodger/male/aged 53/married/cook in a railroad camp.

Wong Si You/lodger/male/aged 63/married/farm laborer.

249 Third St.

Wong Chin/Head/male/age 49/married/proprietor of retail grocery/renter.

Wong Gee/partner/male/age 39/married/worker in retail grocery.

293 Third St.

Emeline M. Davis/Head/female/age 53/widow/keeper of a rooming house.

Alice Davis/daughter/age 29/single/no occupation.

Charles H. Davis/son/age 20/single/student.

William Dangerfield/Head/age 44/married/boilermaker for railroad.

Lila R. Dangerfield/wife/age 25/no occupation.

Eloise Dangerfield/daughter/age 2.

Edward W. Dodge/Head/age 56/married/contractor for railroad.

Alice D. Dodge/wife/age 39/no occupation.

Isaac A. Windbigler/Head/age 38/married/teamster for ice company.

Alma B. Windbigler/wife/age 34/private nurse.

Virgil E. Windbigler/son/age 7.

Lawrence W. Windbigler/son/10 months.

Emily M. Sundell/Head/age 24/single/private nurse.

Anna W. Ray/lodger/age 24/married/no occupation.

San Bernardino City Directory lists the following Chinese individuals and businesses living and operating on Third St (1910:274):

213 Third St., Tie Yaw Co., Chinese merchandise

215 Third St., Wong Nim Co., Chinese merchandise

244 Third St., Wong Tong and Yee Yick Co., Chinese merchandise

245 Third St., Gee Chong & Co., Chinese merchandise

249 Third St., Quon Chin Chung Co., Chinese merchandise

254 Third St., That Kee Co., Chinese merchandise.

1911: February 12—Mah Wing, elderly caretaker of the Chinese temple is murdered in his quarters adjacent to the temple (San Bernardino Superior Court, Case No. 11942, People vs. Ike Wines).

June 6—The trial of Ike Wines for the murder of Mah Wing ends in a hung jury (seven to five for acquittal) (San Bernardino Superior Court, Case No. 11942, People vs. Ike Wines; Riverside Enterprise, 6 June 1911:5).

November 10—After a second trial, Ike Wines is convicted of second-degree murder and sentenced to 25 years at San Quentin (San Bernardino Superior Court, Case No. 11942, People vs. Ike Wines).

1913: San Bernardino City Directory (1913:310, 316) lists no occupants or addresses for either Arrowhead or Mountain View avenues in its householders section. The following are addresses on Second Street (between Mountain View and Arrowhead) and Third Street (between Mountain View and Arrowhead):

Second Street

266 Second St., Roswell Wilcox
270 Second St., C. W. Hayes
286 Second St., Gerald Morite
290 Second St., Becente [sic] Salas

Third Street

201 Third St., Wey Yuen Co., produce
225 Third St., Denocia Minjares
231 Third St., Velino Minjares
244 Third St., Quong Yick, general merchandise
245 Third St., Je Chong & Co., general merchandise and
[Dr.]Wong Poo Sai, Chinese herbs (formerly at 264 Third Street)
246 Third St., Yaw Lee Co., groceries
248 Third St., Han Lee Co., general merchandise and
Quong Di Tong Co., Chinese herbs
249 Third St., Wong Tong, general merchandise and
Quong Ching Tong Co., general merchandise
250 Third St., New China Restaurant
269 ½ Third St., Macario Ojeda
293 Third St., Hotel Pacific, (former French Hotel)
296 Third St., Frances Martinez, furnished rooms (former Starke Hotel)
298 Third St., Max Aron, junk dealer

1919: December—Wong Moi of 238 Third Street convicted of selling lottery tickets (San Bernardino Sun, 17 December 1919:2).

1920: Fourteenth Census of the United States lists the following:

201 Third St.
Wong Nim/Head/male/age 64/married/born California/merchant-general merchandise/owns home.

236 Third St.
John Wong Hing/Head/male/age 52/married/proprietor of a grocery/renter.
Quan Woo/lodger/male/age 54/married/peddler/vegetable wagon.

238 Third St.
Wong Moi/Head/male/age 46/married/proprietor retail dry goods and grocery/renter.

245 Third St.
Wong Hing/Head/male/age 56/married/merchant-general merchandise/renter.
Sam Wong/partner/male/age 45/married/merchant-general merchandise.
Wong Tong/?/male/age unknown/single/merchant-general merchandise.

246 Third St.
Yaw Lee /Head/male/age 53/married/proprietor of a retail shop/rented home.

248 Third St.
May Wong /Head/male/age 46/married/ proprietor of a retail shop/rented home.
Low Hing /lodger/male/age 50/married/restaurant cook.
__?__ Jung /lodger/male/age 60/married/proprietor of drug store.

296 ½ Third St.
Francisca Fortunis (?)/Head/female/age 41/single/landlady of a rooming house/rents.
Sylvia Ortis /ward/female/age 7.
Jesus Rameres[sic]/lodger/male/age 38/single/gardener/general.
Emiliano Cruz/lodger/male/age 25/single/gardener/tree trimmer.

San Bernardino City Directory (1920:283, 326) lists no occupants or addresses for either Arrowhead or Mountain View avenues in its crisscross section. The following are addresses on Second Street

(between Mountain View and Arrowhead) and Third Street (between Mountain View and Arrowhead):

Second Street (1920:333)

217 Second St., Marcellus Smith
280 Second St., Margarito Trujillo
290 Second St., Alex Reyes

Third Street (1920:343)

201 Third St., Chinese Joss House. ("Wong Nim, r[esidence] 201 3d"[1920:277]).
236 Third St., On Lee, Chinese merchandise.
238–40 Third St., Chung Lee, Chinese merchandise.
244 Third St., Juong Lick, merchandise.
245 Third St., Je Chong & Co., Chinese merchandise.
246 Third St., Yo Lee, Chinese merchandise.
248 Third St., Juong D. Tong Co., herbs.
249 Third St., Quong Chin Chong, merchandise.
250 Third St., Vacant.
270 Third St., County garage.
296 Third St., Mrs. Frances Martinez, furnished rooms.

1924: San Bernardino City Directory (1924:439, 492, 500) lists no occupants or addresses for either Arrowhead or Mountain View avenues, or Second Street in its crisscross section. The following are addresses on Third Street (between Mountain View and Arrowhead) (1924:513):

Third Street

201 Third St., Wey Yuen Co., Chinese merchandise.
229 Third St., Antonio Contreras (Contreras is a blacksmith with Pacific Electric. Railway Company. His wife is Cenobia [1924:102]).
240 Third St., Chong Lee Co., Chinese merchandise.
244 Third St., Quong Yick, Chinese merchandise.
245 Third St., J. E. Chong & Co., grocer.
246 Third St., Yaw Lee Co., Chinese merchandise.
248 Third St., Quong De Tone[sic] Co., Chinese merchandise.
249 Third St., Quong Chong and Nong Tong (no occupations).
296 Third St., Max Aron, junk dealer.
298 Third St., Frances Martinez, furnished rooms (Park House, furnished rooms [1920:262, 303, 656]).

California Division of Highways purchases portion of the north half of Block 15 for $10,000. Site is to be used for District 8 office building (California Highways 4(2) 1927:8–9).

1926–1927: Construction of new County Courthouse on Block 18 (north across Third Street from project area) provides an impetus for much of remaining Chinese population living/working on the north side of Third Street to leave Chinatown section of the city. Several Chinese merchants, however, remain active into 1940s.

1926: California Division of Highways office building completed (California Highways 4(2) 1927:8–9).

San Bernardino and Colton City Directory lists the following are addresses in its householders directory on Second Street (between Mountain View and Arrowhead), Third Street (between Mountain View and Arrowhead), and Arrowhead Avenue between Second and Third streets:

Arrowhead Avenue (1926:369)

245 Arrowhead Ave., Max Aron, junk dealer.

Second Street (1926:427)

208 Second St., Clyde Brown.
272 Second St., California Highway Commission Shop.

Third Street (1926:428)

229 Third St., Antonio Contreras (no occupation shown, wife Senovia [1926:100]).
240 Third St., Lee Chong, Chinese merchandise.
244 Third St., Quong Yick, Chinese merchandise.
246 Third St., Yaw Lee, Chinese merchandise.
248 Third St., Quong Di Tong, Chinese merchandise.
275 Third St., Guadalupe Casas (no occupation shown, wife Refugia [1926:88]).

1928: San Bernardino and Colton City Directory lists the following addresses in its householders directory on Second Street (between Mountain View and Arrowhead), Third Street (between Mountain View and Arrowhead), and Arrowhead Avenue between Second and Third streets. It is reasonably clear by 1928 that odd-numbered addresses on Third Street are on the south side—in the project area. Likewise, odd-numbered addresses are on the east side of Arrowhead Avenue, and even-numbered addresses on the north side of Second Street.

Arrowhead Avenue (1928:423)

239–247 Arrowhead Ave., Max Aron, junk dealer/ San Bernardino Auto Wrecking.

Second Street (1928:511)

272 Second St., California Highway Commission Shop.

Third Street (1928:513)

201 Third St., Wey Yuen & Co., Chinese merchandise.
240 Third St., Wong Moi, Chinese merchandise.
245 Third St., Gee Chung & Co., Chinese merchandise.
246 Third St., Yaw Lee Co., Chinese merchandise.
247 Third St., California State Highway Commission.
248 Third St., Quong Di Tong, Chinese merchandise.
250 Third St., Wong Tong, no occupation.
295 Third St., Bronson and Lange, Inc. (Chevrolet sales and service [1928:97]).

1933: San Bernardino City Directory lists the following addresses in its householders directory on Arrowhead Avenue (between Second and Third streets), Mountain View (between Second and Third streets: this is the first time residences have been noted on Mountain View; given the pattern of numbering, they are thought to be on the west side of Mountain View), and Third Street (between Mountain View and Arrowhead). (Addresses shown on Second Street were for south side only and, thus are not included below.)

Arrowhead Ave. (1933:378)

239–247 Arrowhead, San Bernardino Auto Wrecking Co. (William Becker, President [1933:300]).

Mountain View Avenue (1933:410)

203 Mountain View Ave., Mrs. Francesca Martines [sic].
208 Mountain View Ave., Mrs. I. W. Shockley.
212 Mountain View Ave., J. S. Story.

Third Street (1933:426)

201 Third St., Wey Yuen & Co., Oriental goods.
232 Third St., Man Lee Co., Oriental goods.
236 Third St., Sang Lee Co., Oriental goods.
240 Third St., Wong Moi , Oriental goods.
242 Third St., Chinese Free Masons.
244 Third St., Kong Wo Co., Oriental goods.
245 Third St., Gee Chong & Co., Oriental goods.
247 Third St., State Highway Commission.
248 Third St., Yaw Lee Co., Oriental goods.
250 Third St., Wong Tong, Oriental goods.
252 Third St., New China Co., Oriental goods.
253 Third St., R. F. Uyeda, no occupation shown.
255 Third St., State District Court of Appeal.
257 Third St., State Department of Motor Vehicles.
263 Third St., California Highway Patrol.
295 Third St., Pearson Chevrolet Co.

1936: San Bernardino City Directory lists the following addresses in its householders directory on Arrowhead Avenue (between Second and Third streets) and Third Street (between Mountain View and Arrowhead). (Addresses shown on Second Street were for south side only and, thus, are not included below.) The residences noted on Mountain View in the 1933 directory do not appear in 1936—only Meadowbrook Park is noted.

Arrowhead Avenue (1936:426)

247 Arrowhead Ave., San Bernardino Auto Wrecking Co., William Becker (1936:338).
250 Arrowhead Ave., Southern California Gas Company plant.

263 Arrowhead Ave., George P. Wells & Son, wholesale paper.
267 Arrowhead Ave., Levi Simon Co., Ltd., wholesale grocers.

Third Street (1936:484)
201 Third St., Wey Yuen & Co., Oriental goods, (Wong Nim, secretary [1936:406]).
232 Third St., Mun Lee Co., Oriental goods.
236 Third St., Sang Lee, Oriental goods.
240 Third St., Wong Mee, Oriental goods.
242 Third St., Chinese Free Masons.
244 Third St., Kong Wo Co., Oriental goods.
245 Third St., Gee Chong & Co., Oriental goods.
246 Third St., Vacant.
247 Third St., State Division of Highways.
248 Third St., Yaw Lee & Co., Oriental goods.
250 Third St., Wong Tong, Oriental goods.
252 Third St., New China Co., Oriental goods.
255 Third St., State District Court of Appeals, 4th District.
257 Third St., State Department of Motor Vehicles.
263 Third St., California Highway Patrol.
295 Third St., Pearson Chevrolet.

1942: San Bernardino City Directory lists the following addresses in its householders directory on Arrowhead Avenue (between Second and Third streets) and Third Street (between Mountain View and Arrowhead). (Addresses shown on Second Street were for south side only and, thus are not included below.) Two of the residences noted on Mountain View in the 1933 directory, but not in 1936, have reappeared.

Arrowhead Avenue (1942:451)
245 Arrowhead Ave., San Bernardino Auto Wrecking.
267 Arrowhead Ave., Levi Simon Co., wholesale grocers.

Mountain View Avenue (1942:495)
208 Mountain View Ave., L. A. Lawson.
210 Mountain View Ave., S. J. Story.

Third Street (1942:516)
201 Third St., Wong Nim (information for the directory was probably gathered prior to Wong Nim's death in 1941).
232 Third St., Mun Lee Co., Oriental goods.
236 Third St., Vacant.
240 Third St., Vacant.
242 Third St., Chinese Free Masons.
244 Third St., Jim Wo Co., Oriental goods.
245 ½ Third St., Gee Chung & Co., Oriental goods.
246 Third St., J. W. Wing, no occupation shown.
247 Third St., State Division of Highways.
248 Third St., You Lee, no occupation shown.
250 Third St., Roy Wong, no occupation shown.
252 Third St., New China Co., Oriental goods.
255 Third St., State District Court of Appeal.
257 Third St., State Department of Motor Vehicles.
295 Third St., Mid-Valley Chevrolet.

1944: San Bernardino City Directory lists the following addresses in its householders directory on Arrowhead Avenue (between Second and Third streets), Third Street (between Mountain View and Arrowhead) and Mountain View (between Second and Third streets).

Arrowhead Avenue (1944:515).
245 Arrowhead Ave., San Bernardino Auto Wrecking Co.
267 Arrowhead Ave., Levi Simon Co., wholesale grocers.

Third Street (1944:588)
201 Third St., Vacant.
234 Third St., California State Guard.

236 Third St., California State Water Council.
240 Third St., Vacant.
242 Third St., Vacant.
244 Third St., Vacant.
245 Third St., Vacant.
246 Third St., Vacant.
247 Third St., State Division of Highways.
248 Third St., Vacant.
250 Third St., Vacant.
252 Third St., Vacant.
255 Third St., State District Court of Appeals.
257 Third St., State Department of Motor Vehicles/California Highway Patrol.
295 Third St., Mid-Valley Chevrolet.

Mountain View Avenue (1944:564)
208 Mountain View Ave., L. A. Lawson.
210 Mountain View Ave., S. J. Story.

1949: San Bernardino City Directory lists the following addresses in its householders directory on Arrowhead Avenue (between Second and Third streets), Third Street (between Mountain View and Arrowhead) and Mountain View (between Second and Third streets).

Arrowhead Avenue (1949:679).
239 Arrowhead Ave., San Bernardino Auto Wrecking Co. (L. H. Becker [1949:530]).
245 Arrowhead Ave., San Bernardino Iron and Metal (J. J. Becker [1949:532]).
267 Arrowhead Ave., Levi Simon, wholesale grocer.

Third Street (1949:785)
234 Third St., County Welfare Annex.
240 Third St., San Bernardino County Veterans.
242 Third St., San Bernardino County Department of Personnel.
244 Third St., State Department of Veterans Affairs.
246 Third St., San Bernardino County Planning Commissioner.
247 Third St., California Division of Highways.
248 Third St., San Bernardino County Building and Safety Department.
250 Third St., Vacant.
257 Third St., State Department of Motor Vehicles/California Highway Patrol.
263 Third St., State District Court of Appeals.
295 Third St., Mid Valley Chevrolet Co.

Mountain View Avenue (1949:751)
208 Mountain View Ave., O. L. Brooks.
210 Mountain View Ave., Joseph Page.

1951: Luskey's San Bernardino Directory lists the following addresses in its householders directory on Arrowhead Avenue (between Second and Third streets), Third Street (between Mountain View and Arrowhead) and Mountain View Avenue (between Second and Third streets).

Arrowhead Avenue (1951:28)
239 Arrowhead Ave., San Bernardino Auto Wrecking Co.
245 Arrowhead Ave., Vacant.
267 Arrowhead Ave., Levi Simon Co., wholesale liquor.

Third Street (1951)
236 Third St., County Department of Civil Service and Personnel.
240 Third St., County Department of Veterans Affairs.
242 Third St., County Department of Planning Commission.
247 Third St., State Division of Highways.
250 Third St., Vacant.
257 Third St., State Department of Motor Vehicles.
263 Third St., State District Court of Appeals.
295 Third St., Mid-Valley Chevrolet Co./Kenyon Finance Co.
296 Third St., County Department of Building and Safety.

Mountain View Avenue (1951)
208 Mountain View Ave., Joel Thompson.
210 Mountain View Ave., Mary Watkins.

1955: Luskey's San Bernardino Directory lists the following addresses in its householders directory on Arrowhead Avenue (between Second and Third streets), Third Street (between Mountain View and Arrowhead) and Mountain View Avenue (between Second and Third streets).

Arrowhead Avenue (1955)
239 Arrowhead Ave., San Bernardino Auto Wrecking Co.
267 Arrowhead Ave., Levi Simon Co., wholesale liquor.

Third Street (1955)
236 Third St., County Department of Civil Service and Personnel.
242–244 Third St., County Planning Commission.
246–248 Third St., County Department of Building and Safety.
247 Third St., State Division of Highways.
250 Third St., County Purchasing Department, stock room.
257 Third St., State Department of Motor Vehicles.
263 Third St., State District Court of Appeals.
295 Third St., Jack Coyle Chevrolet Co.

Mountain View Avenue (1955)
208 Mountain View Ave., W. L. Bell.
210 Mountain View Ave., Mrs. Mary Watkins.

1961: Luskey's San Bernardino Directory lists the following addresses in its householders directory on Arrowhead Avenue (between Second and Third streets), Third Street (between Mountain View and Arrowhead) and Mountain View Avenue (between Second and Third streets).

Arrowhead Avenue (1961)
239 Arrowhead Ave., San Bernardino Auto Wrecking Co.

Third Street (1961)
No addresses shown.

Mountain View Avenue (1961)
208 Mountain View Ave., L. Anderson.
210 Mountain View Ave., L. Pierce.

1964: Luskey's San Bernardino Directory lists the following in its householders directory on Arrowhead Avenue (between Second and Third streets), Third Street (between Mountain View and Arrowhead) and Mountain View Avenue (between Second and Third streets).

Arrowhead Avenue (1964:3)
No addresses in the 200 block shown. Addresses on Arrowhead jump from 100 block (south of Second Street) to 300 block (north of Third Street).

Third Street (1964:103)
247 Third St., State Division of Highways. No other addresses shown.

LOT 1

1878: Lot sold by Starkes. Alley and Cochrane (a commercial livery) assessed for $200 for Lots 1 through 4 and improvements thereon ($25), as well as Lots 6 through 8 ($8) and improvements ($75). The improvements are not categorized, nor is the specific lot number given (City of San Bernardino 1878 Assessment Roll 79:2). At the same time they are assessed for property north in Block 18, Lot 2 ("166 3/12 feet front on 3rd"), improvements on which include their stable.

1880: Most of lot taken up by Warm Creek, small structure on southeast corner on east side of creek.

1887–1888: Sanborn maps have no exposure of Lot 1.

1889–1890: Sarah C. Wilson assessed for all of Lots 1, 2, and 3: land value $1,450; no improvements. Also assessed for an interest in property of D. M. Bradford—Lots 6, 7, 8—created by mortgage to secure debt incurred in 1885 (probably) on all of Lots 1, 2, and 3. No improvements to lots (City of San Bernardino 1889 Assessment Book 90:21).

1890: March—Sarah C. Wilson loses her interest in Lot 1 to foreclosure by city tax collector E. H. Thomas for nonpayment of taxes owed in the amount of $17.32. The unpaid amount was the total for all of

Wilson's holdings in Block 15, including Lots 1, 2, 3, 6, 7, and 8. D. M. Bradford had held the mortgage on the property since 1885. On March 14, 1890, tax collector Thomas auctioned the property to P. Ferguson for $28.52 (San Bernardino County Recorder, Deed Book 171:146–150).

1891: Sanborn map has no exposure of Lot 1.

1894: Sanborn map shows the bed and waters of Warm Creek entering from the northeast portion of Lot 1 and moving south-southwest through Lots 2 and 3. At the southwest corner, not fully exposed, are a dwelling and two barns, or perhaps a barn and a hay barn.

1895: Assessed to D. M. Bradford and P. Ferguson ($400—no breakdown for lot or improvements) (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1896–1899: Assessed to D. M. Bradford. No amounts shown for 1896 or 1897. In 1898, Bradford assessed $300 for land, $50 for improvements. In 1899, Bradford assessed $240 for land, and $50 for improvements (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1900–1903: Lots 1 through 6 and portions of Lots 7 and 8 assessed to D. M. Bradford. ($8,289—no breakdown for lots or improvements) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1904: Lots 1 through 6 and portions of Lot 7 and 8 assessed to heirs of D. M. Bradford (Emeline and Charles Davis) ($8,289—no breakdown for lots or improvements.) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1905–1906: Portion of lot, except for Thomas Whitney portion, assessed to heirs of D. M. Bradford (no amounts shown) (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1906: Sanborn map—No exposure of Lot 1 (1906:41).

1905–1907: **Parcel 504**. Portion of lot assessed to Thomas Whitney [West 60 feet, East 115 feet, South 100 feet] (no amounts shown) (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1907–1908: **Parcel 504**. Whitney portion assessed to C. R. Long (no amounts shown) (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1907: **Parcel 504**. Bradford portion assessed to Emeline M. Davis (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: **Parcel 504**. Portion of Lot 1 assessed to John Flack (no dollar amount shown). Flack may have been assessed $100 for his portion of the land per notation on assessor's map and assessment for 1914–1918 (San Bernardino County Assessors Map Book No. 13:12 [ca. 1913]).

Parcel 505. Remainder of Lot 1 assessed $125 (?) to Emeline Davis (San Bernardino County Assessor, 1909–1913, Lot Book 13:27; San Bernardino County Assessors Map Book No. 13:12 [ca. 1913])). Either Flack or Davis may have also been assessed for improvements, though this is unclear (San Bernardino County Assessors Map Book No. 13:12 [ca. 1913])

1909: **Parcel 504**. John Flack buys C. R. Long portion (no amounts shown). Parcel is described as West 60 feet, East 115 feet, South 100 feet (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1914–1918: **Parcel 504** of Lot 1 (Parcel 504) assessed $100 to John Flack. (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

Parcel 505 of Lot 1 assessed $125 to Emeline Davis (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1919–1920: **Parcel 505** of Lot 1 assessed to Emeline Davis. Land $125/No improvements (San Bernardino County Assessor, 1918–1923, Lot Book 11:33).

1919–1923: **Parcel 504** John Flack of assessed for portion of Lot 1. Land $60/No improvements (San Bernardino County Assessor, 1918–1923, Lot Book 11:33).

1920–1923: **Parcel 505** of Lot 1 (Davis portion) sold to Ralph Swing. Assessed to him (San Bernardino County Assessor, 1918–1923, Lot Book 13:33).

1924–1929: **Parcel 505** of Lot 1 assessed to Ralph Swing.
1924—Land $200/no improvements.
1925—Land $200/no improvements.
1926—Land $200/$100.
1927—Land $200/no improvements.
1928—Land $300/no improvements.
1929—Land $300/no improvements.
(San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1930–1932: **Parcel 505** of Lot 1 assessed to Ralph Swing for $300 for portion of land (no improvements noted).

1930–1933: **Parcel 505** of Lot 1 assessed to Ralph Swing for $240 for portion of land (no improvements noted) (San Bernardino County Assessor's Lot Book 58, Book 2:19).

1930–1935: Ida Shockley assessed $100 for land and $100 for improvements. Parcel is described as "Com. at SE corner, th. N 100 feet, th. W 55 feet, th. S 100 feet to S li sd [?] Blk th. E to pob" (San Bernardino County Assessor's Lot Book 58, Book 2:19).

1939: Sanborn map—No exposure of Lot 1.

1951: Sanborn map—No exposure of Lot 1.

1972: Lot developed into parking lot for state facility.

Parcel 504—Portion of lot on east side of Warm Creek:

1894: At the south end of the lot at 63, 65, and 66 Second Street (noted as "impassable") are three elongated structures. Number 63 is a dwelling, though only a portion (the western side) is shown. [Number 64 is a vacant lot]. Number 65 is a stable, or possibly a hay barn, which for approximately half its length extends into Second Street. Likewise, Number 66 is also a stable/barn, but its entirety occupies Second Street (Sanborn map).

1905–1907: Portion of Lot 1 assessed to Thomas Whitney (West 60 feet, East 115 feet, South 100 feet). No amounts shown for lot or improvements (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1907–1908: Portion of Lot 1 assessed to C. R. Long (this is the same property as that listed in 1905–1907 to Thomas Whitney) (West 60 feet, East 115 feet, South 100 feet). No amount shown for lot or improvements (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: The Whitney/Long property (Parcel #504) assessed to John Flack (West 60 feet, East 115 feet, South 100 feet) (San Bernardino County Assessor, 1905–1909, Lot Book 13:27).

1914–1918: **Parcel 504** (of Lot 1) assessed $100 to John Flack (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1919–1923: **Parcel 504** (of Lot 1) assessed to John Flack. No improvements shown (San Bernardino County Assessor, 1919–1923, Lot Book 13:33).

1924–1929: **Parcel 504** Portion of Lot 1 assessed to Annie Flack. Assessed $100 for land; no improvements shown (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1930–1935: **Parcel 504** Annie Flack assessed $120 for portion of land (no improvements noted) (San Bernardino County Assessors Lot Book 58, Book 2:19).

1937: **Parcel 504** Annie Flack's portion of Lot 1 transferred to John Flack (no improvements) (San Bernardino County Assessor, 1936–1941, Lot Book 89A:18).

1938 **Parcel 504** Flack's portion transferred to Paul and Opal Kelly (no improvements) (San Bernardino County Assessor, 1930–1935, Lot Book 89A:18).

LOT 2

1878: Lot sold by Starkes. Alley and Cochrane (a livery) assessed (City of San Bernardino Assessment Roll, 1878–79:2). See Lot 1 (1878) above for details.

1880: Southern part of lot occupied by Warm Creek; upper part vacant, trees bordering Warm Creek; Second Street not cut through (Syme map).

1887–1888: Sanborn maps have no exposure of Lot 2.

1889–1890: Sarah C. Wilson assessed for all of lots 1, 2, and 3: land value $1,450; no improvements. Also assessed for an interest in property of D. M. Bradford—Lots 6, 7, 8— created by mortgage to secure debt incurred in 1885 (probably) on all of Lots 1, 2, and 3. No improvements to lots (City of San Bernardino Assessment Book, 1889–1890:21).

1890: March—Sarah C. Wilson loses her interest in Lot 2 to foreclosure by city tax collector E. H. Thomas for nonpayment of taxes owed in the amount of $17.32. The unpaid amount was the total for all of Wilson's holdings in Block 15, including Lost 1, 2, 3, 6, 7, and 8. D. M. Bradford had held the mortgage on the property since 1885. On March 14, 1890, tax collector Thomas auctioned the property to P. Ferguson for $28.52 (San Bernardino County recorder, Deed Book 171:146-150).

1891: Sanborn map has no exposure of Lot 2.

1894: Sanborn map shows no structures on Lot 2. Warm Creek and its bed occupy a substantial portion of the lot. The northern end of the lot is noted as "Swampy Land."

1895: Assessed to D. M. Bradford and P. Ferguson. ($400—no breakdown) (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1896–1899: Assessed to D. M. Bradford. No amounts are shown for 1896. For each year from 1887 to 1899, Bradford is assessed $600 for land and $125 for improvements (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1900–1903: Lots 1 through 6 and portions of Lots 7 and 8 assessed to D. M. Bradford ($8,289—no breakdown for lots or improvements) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1904: Lots 1 through 6 and portions of Lots 7 and 8 assessed to heirs of D. M. Bradford (Emeline and Charles Davis) ($8,289—no breakdown for lots or improvements) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1905–1906: Assessed to heirs of D. M. Bradford (Emeline and Charles Davis). No amounts for lot or improvements (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1906: Sanborn map—Complete view of lot was not obtained. Warm Creek continues its course through the southern portion.

1907–1908: Assessed to Emeline Davis (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: **Parcel 506** (Lot 2) assessed to Emeline Davis ($170). No amounts for land or improvements shown (San Bernardino County Assessor, 1909–1913, Lot Book 13:27; San Bernardino County Assessors Map Book No. 13:12 [ca. 1913]).

1914–1918: **Parcel 506** assessed $170 to Emeline Davis (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1919–1920: **Parcel 506** (Lot 2) assessed to Emeline Davis ($170 for land; no improvements shown) (San Bernardino County Assessor, 1909–1913, Lot Book 11:33).

1920–1923: **Parcel 506** Davis portion of Lot 2 passes to Ralph Swing. Assessed to him ($170 for land; no improvements shown) (San Bernardino County Assessor, 1918–1923, Lot Book 13:33).

1924–1929: **Parcel 506** Portion assessed to Ralph Swing ($100 each year; no improvements shown) (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1930–1935: **Parcel 506** Portion of Lot 2 assessed $200 (no improvements) to Ralph Swing (San Bernardino County Assessor, 1930–1935, Lot Book 58:19).

1936–1941: Portion of Lot 2 assessed to Ralph Swing (San Bernardino County Assessor, 1936–1941, Lot Book 89A:18).

1939: Sanborn map—Complete view of lot was not obtained. Portions of the 'California Highway Commission Garage and Repair Shop" occupy part of the central section of the lot.

1951: Sanborn map—no apparent changes since 1939.

1972: Developed with parking lot for California Department of Transportation facility.

LOT 3

1878: Lot sold by Starkes. Alley and Cochrane (a livery) assessed (City of San Bernardino Assessment Roll, 1878–1879:2). See Lot 1, 1878 above for details.

1880: Vacant, trees along eastern portion; Second Street not cut through (Syme map).

1887–1888: Sanborn maps show most or all of lot planted in "orchards."

1889–1890: Sarah C. Wilson assessed for all of Lots 1, 2, and 3: land value $1,450; no improvements. Also assessed for an interest in property of D. M. Bradford—Lots 6, 7, 8—created by mortgage to secure debt incurred in 1885 (probably) on all of Lots 1, 2, and 3. No improvements to lots (City of San Bernardino Assessment Book, 1889–1890:21).

1890: March—Sarah C. Wilson loses her interest in Lot 3 to foreclosure by city tax collector E. H. Thomas for nonpayment of taxes owed in the amount of $17.32. The unpaid amount was the total for all of Wilson's holdings in Block 15, including Lost 1, 2, 3, 6, 7, and 8. D. M. Bradford had held the mortgage on the property since 1885. On March 14, 1890, tax collector Thomas auctioned the property to P. Ferguson for $28.52 (San Bernardino County recorder, Deed Book 171:146–150).

1891: Sanborn map shows most or all of lot planted in "orchards."

1894: Sanborn map shows three structures in the southwest quarter of the lot. The northernmost is a vacant shed. A dwelling is at the extreme southwest corner of the lot at 78 Second Street. It is a single story with a shake roof. Behind the house is a smaller structure, possibly a privy, and further north a vacant shed. The northern half of the lot is noted as "Swampy Land."

1895: Assessed to D. M. Bradford and P. Ferguson. They are assessed $280 for lot and $300 for improvements (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1896–1899: Assessed to D. M. Bradford. For each year from 1896 to 1899 they are assessed $980 for the lot and $125 for improvements (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1900–1903: Lots 1 through 6 and portions of Lots 7 and 8 assessed to D. M. Bradford ($8,289) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1904: Lots 1 through 6 and portions of Lots 7 and 8 assessed to heirs of D. M. Bradford (Emeline and Charles Davis) ($8,289) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1905–1906: Assessed to heirs of D. M. Bradford (Emeline and Charles Davis). No amounts shown for lot or improvements (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1906: Sanborn map—Incomplete exposure of lot. Northern portion continues to be described as "Swampy Land."

1907–1908: Assessed to Emeline Davis. No amounts shown for lot or improvements (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: **Parcel 507/477** assessed to Emeline Davis ($200 Land/$120 improvements) (San Bernardino County Assessor, 1909–1913, Lot Book 13:27; San Bernardino County Assessors Map Book No. 13:12 [ca. 1913]).

1918: Pacific Electric Railway assessed by State of California for right-of-way (margin note, San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1919–1920: **Parcel 507/477** assessed to Emeline Davis ($170 Land/no improvements shown) (San Bernardino County Assessor, 1909–1913, Lot Book 11:33).

1919: Portion of **Parcel 507/477** passes to Vicente (Becente) Salas. Assessed to him $50 for land; $100 for improvements. Property is described as West 50 feet of South 150 feet (San Bernardino County Assessor, 1909–1913, Lot Book 11:33).

1921–1923: Davis portion of Lot 3 passes to Ralph Swing. Assessed to him $170 for land; no improvements shown (San Bernardino County Assessor, 1918–1923, Lot Book 11:33).

1924: Portion assessed to Ralph Swing ($50 for land; no improvements shown) (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1925: Swing's portion sold to Max Aron (see Lot 4).

1939: Sanborn map—The California Highway Commission's auto paint shop appears to occupy the northwestern corner of the lot with an L-shaped structure—one leg running north–south, one leg running east–west. Portions of the "California Highway Commission Garage and Repair Shop" occupy part of the central section of the lot.

ca. 1940: Lot 3 acquired by state of California (San Bernardino County Assessor, 1942–1947, Lot Book:18).

1972: Lot developed into parking facility for Caltrans.

House lot on SW corner

1909–1913: **Parcel 507 ½/477 ½** (West 50 feet, South 150 feet.) assessed $150 for land (?) and $100 for improvements (?) to Vicente and Nettie Salas (San Bernardino County Assessors Map Book No. 13:12 [ca. 1913]).

1914–1918: **Parcel 507½/477½** assessed to Vicente and Nettie Salas (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1918–1923: **Parcel 507½/477½** assessed to Vicente and Nettie Salas (San Bernardino County Assessor, 1918–1923, Lot Book 13:33).

1923–1924: Salas portion passes to Flora Ballestero. Assessed to her $50 for land; $100 for improvements in 1923; in 1924 she is assessed $100 for land and $150 for improvements (San Bernardino County Assessor, 1918–1923, Lot Book 11:33).

1924: Portion of Lot 3 sold by Flora Ballestero[sic] to Max Aron (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1926–1929: Max Aron assessed $140 for land in 1926; from 1927 through 1929 he is assessed $300 each year; no improvements shown (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1930–1931: Max Aron assessed $300 for land; no improvements shown (San Bernardino County Assessor, 1930–1935, Lot Book 58:19).

1932: Transfer of Max Aron portion to Arthur Newman (as trustee) (San Bernardino County Assessor, 1930–1935, Lot Book 58:19).

1932–1935: Arthur Newman, Trustee assessed $300 for land in 1932; $240 for land in 1933 and 1934; $230 for land in 1935. No improvements shown (San Bernardino County Assessor, 1930–1935, Lot Book 58:19).

1937: Arthur Newman (as trustee to Max Aron) sells to William Becker (San Bernardino County Assessor, 1936–1941, Lot Book 89A:18).

LOT 4

1878: Lot sold by Starkes. Alley and Cochrane (a livery) assessed (City of San Bernardino Assessment Roll, 1878–79:2). See Lot 1, 1878 above for details.

1880: Second Street not cut through, lot wooded (Syme map).

1887–1888: Sanborn maps show most or all of lot planted in "Orchard."

1889–1890: August Starke assessed for land ($5,250), property ($890), and improvements ($3,000) on Lots 4 and 5, including furniture, fixtures, piano, and sewing machine (City of San Bernardino Assessment Book, 1889–1890:93).

1891: Sanborn map shows most or all of lot planted in "Orchard."

1894: Sanborn map shows lot is fully vacant and that the area is "Swampy Land." There do not appear to be any orchards as in previous years.

1895–1897: Assessed to August Starke. Combined assessments for Lots 4 and 5 are:
1895—Land $2,500/Improvements $3,000.
1896—Land $2,000/Improvements $2,500.
1897—Land $1,200/Improvements $1,000.
(San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1896: July 3—San Bernardino County Tax Collector, Truman Reeves, forecloses on the Starke property—Lots 4 and 5—and sells it to the State of California for delinquent taxes and penalties. The tax amount owed is $164.93 (San Bernardino County Recorder, Certificate of Sale of Real Estate, Book 10:729).

1897: March 9—San Bernardino National Bank purchases the hotel property (Lots 4 and 5), subject to the redemption rights of the Starkes (San Bernardino Superior Court, Case No. 7794, Starkes vs. Bradford and Twogood).

March 13—Redlands *Citrograph* reports the Starke Hotel is sold under foreclosure to Wong Nim, a Chinese businessman (Redlands *Citrograph* 13 March 1897:8). Purchase is not indicated in county records, i.e., deeds, assessments, etc.

September 9—The Starkes and D. M. Bradford (apparently their representative) approach Louie M. Twogood (a woman according to documents) "to effect redemption" of the property and enter into an agreement for that purpose. The agreement gives the Starkes an option for the next two years (option expiring on September 9, 1899) to purchase from Twogood. August and Catherine Starke give Twogood a deed of conveyance for Lots 4 and 5. The agreement is subject to terms, including: that the Starkes shall pay to Twogood the sum required of her to redeem the property from San Bernardino National Bank, which held a certificate of sale after a decree of foreclosure issued by the Superior Court; the Starkes would also be liable for taxes paid and improvements made on the property by Twogood. If the Starkes did not exercise their option within the two years, the option would be voided and Twogood would retain the property and the price of the option—one dollar. Twogood would retain the property until option was exercised, with the additional stipulation that "in consideration of the premises [Twogood] hereby agrees not to let any of said premises to chinese [sic]" (San Bernardino County Recorder, Deed Book 241:210–212; San Bernardino Superior Court, Case No. 7794, Starkes vs. Bradford and Twogood).

September 10—Louie Twogood effects redemption of the property by paying $1,325 to the San Bernardino National Bank (San Bernardino Superior Court, Case No. 7794, Starkes vs. Bradford and Twogood).

September 18—Redlands *Citrograph* reports the Starkes redeemed the hotel from "Chinamen" (Redlands *Citrograph* 18 September 1897:7).

September 28—Louie M. Twogood delivers a "conveyance" to Lots 4 and 5 to D. M. Bradford. Bradford executes a mortgage to Twogood on the property to "secure the payment of the sum of $1,800 which represented said sum of $1,425 redemption money paid to the San Bernardino

National Bank, together with the further sums to pay taxes, insurance, and expenses for conveyance" This was apparently done with the knowledge and consent of the Starkes and was done "in performance of the original purpose of the parties, as the same was agreed at the time said redemption . . . was made." Bradford immediately takes possession of the hotel and surrounding property (San Bernardino Superior Court, Case No. 7794, Starkes vs. Bradford and Twogood; San Bernardino County Recorder, Deed Book 242:159).

October 14—A. J. Twogood pays San Bernardino County Treasurer (acting for the State Controller's Office) the sum of $386 for Lots 4 and 5. Transaction is made using two instruments—33140 ($245.33) and 33141 ($140.67) (San Bernardino County Recorder, Deed Book 247:44).

November—Bradford makes repairs and improvements such as: repairs to a chicken coop, moving out buildings, whitewashing fences and out buildings, building fence along railroad, "fencing lot below R.R.," and grading and cleaning grounds (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

1898–1899: Lot assessed to D. M. Bradford.
1898—Land $800/Improvements $700.
1899—Land $480/Improvements $600.
(San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1898: San Bernardino City Directory lists "The Bradford House" at 293 Third Street in classified section under "Lodging Houses" and again under "Hotels and Restaurants" (cited by Haenszel, n.d. "Southeast Corner").

January—Bradford makes repairs and improvements to hotel grounds, including: building a correll [sic] fence and setting fruit trees (San Bernardino Superior Court, Case No. 794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

March—Bradford makes repairs to the carriage shed (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

November—Bradford makes repairs and improvements, including: building and hanging gates, and building a stable roof (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

1899: January—Bradford builds a manger and stalls (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

For several months prior to the expiration of the Starke's option to redeem the hotel property for themselves they try to obtain an accounting from Bradford of the cost of taxes, improvements, and other expenses he has incurred while operating the hotel so as to know how much to pay him for the redemption. Bradford apparently "failed and refused" to come forth with an accounting until after September 9, the date of expiration of the option. (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

September 9—The Starkes, unable to get an accounting from Bradford for his expenses, tender to him the sum of $2,500, an amount equal to Louie Twogood's payment to the San Bernardino National Bank for redemption, plus taxes, improvements, and interest. Bradford claimed "for the first time to plaintiffs that he had paid taxes and made improvements upon the premises and paid for the same the sum of $777.15 while in fact he had neither made nor paid for improvements and taxes upon the premises any greater sum than $150.00." The Starkes claimed that any expenses beyond the $150 had not been paid for by Bradford, but "constituted ordinary repairs made by the labor of the occupant of said property" [probably C. H. Davis]. The Starkes did get an accounting finally on September 11 and attempted to pay him $2,600, but Bradford refused and instead demanded $2,927.86. The Starkes then took the matter to the courts, agreeing to abide by any figure the court deemed fair (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

September—Bradford plants a lawn. He notes charges for caring for it as well as for orange and fruit trees (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

1900: January 31—August and Catherine Starke enter into an agreement with Wong See of Riverside agreeing to "make, execute, and deliver" to him free of encumbrances the "property known as the Starke Hotel Property," and including all of Lots 4 and 5. "At such time as the said Wong See, his agent or attorney shall demand of us such deed and tender and pay to such sums of money as by decree of the Superior Court of the County of San Bernardino, State of California, in that certain case now pending in said court, entitled A. Starke and Catherine Starke vs. D. M. Bradford and Louie M. Twogood, shall be required to be by us paid to the said D. M. radford or Louie M. Twogood, or both of them in redemption of said property herein above described, from said D. M. Bradford and Louis [sic] M. Twogood, or either of them, said sum to be so applied."(San Bernardino County Recorder's Office, Deed Book 281:90–92. On file at San Bernardino County Archives).

February 3—Superior Court orders Bradford to deliver a deed of conveyance to the Starkes upon their "paying to the defendant Louie M. Twogood, whatever sum of money may remain unpaid to her upon her mortgage upon said property executed by D. M. Bradford, not exceeding $2,794.50, and that the overplus to make the total sum of $2,794.50 remaining after payment of the said mortgage shall be paid to the said defendant D. M. Bradford," payment to be made within 20 days of decree (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

May 18—August Starke dies in San Bernardino, age 76 (Haenszel, n.d., The Starkes, citing San Bernardino Pioneer Cemetery Sexton's Record). His death may have voided the agreement with Wong See. The Starkes were unable to redeem the hotel.

U. S. Census shows Catherine Satrke living alone in a rented room of the Bradford House hotel.

1900–1903: Lots 1 through 6 and portions of Lots 7 and 8 assessed to D. M. Bradford ($8,289—no breakdown for lots or improvements) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1901 Ad for the "The Bradford (formerly Starke's)" appears in the "Souvenir San Bernardino Fire Department" publication. The add claims sixty rooms and feed stables on C Street. C. H. Davis, Daniel M. Bradford's son-in-law, is listed as manager ("Souvenir San Bernardino Fire Department," San Bernardino, 1901).

1903 June 1—Catherine Starke dies in San Bernardino, age 62 (Haenszel, n.d., The Starkes, citing San Bernardino Pioneer Cemetery Sexton's Record).

October 9—D. M. Bradford dies in San Bernardino. He leaves his entire estate to his daughter, Emeline Davis, naming her husband Charles as executor.

1904: Lots 1 through 6 and portions of Lot 7 and 8 assessed to heirs of D. M. Bradford (Emeline and Charles Davis) ($8,289—no breakdown for lots or improvements) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1905–1906: Assessed to heirs of D. M. Bradford (Emeline and Charles Davis). No amounts for lots or improvements shown (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1906: Sanborn map—Complete view of lot was not obtained. Northern portion continues to be described as "swampy."

1907–1908: **Parcel 508** (all of Lot 4) assessed to Emeline Davis. No amounts shown for lots or improvements (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: **Parcel 508** assessed to Emeline Davis. No amounts for lots or improvements shown (San Bernardino County Assessor, 1909–1913, Lot Book 13:27).

1914–1918: **Parcel 508** assessed to Emeline Davis, except for railroad right-of-way (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1914: Railroad right-of-way taken by Pacific Electric Railway.

1918: Pacific Electric Railway assessed by State of California for right-of-way (margin note, San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1919–1920: **Parcel 508** assessed to Emeline Davis ($170 for land; no improvements shown), except for railroad right-of-way (San Bernardino County Assessor, 1919–1923, Lot Book 11:33).

1921–1923: **Parcel 508** Davis portion of Lot 4 sold to Ralph Swing. Assessed to him ($170 for land; no improvements shown) (San Bernardino County Assessor, 1918–1923, Lot Book 13:33).

1924–1925: **Parcel 508** Ralph Swing assessed $330 for land; no improvements shown (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1925: **Parcel 508** Swing portion of Lot 4 sold to Max Aron (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1926–1930: **Parcel 508** Max Aron assessed:
1926—Land $2,200/Improvements $2,500.
1927—Land $3,000/Improvements $2,500.
1928—Land $3,000/Improvements $3,500.
1929—Land $3,000/Improvements $3,500.
1930—Land $3,000/Improvements $3,500.
(San Bernardino County Assessor, 1924–1929, Lot Book 31B:33; San Bernardino County Assessor, 1930–1935, Lot Book 58, Book 2:19).

1930–1931: **Parcel 508** Max Aron assessed $4,600 for land, $3,500 for improvements. Parcel is transferred to Arthur Newman (as trustee) in 1931 (San Bernardino County Assessor, 1930–1935, Lot Book 58, Book 2:19).

1932–1935: **Parcel 508** Assessed to Arthur Newman as trustee to Max Aron:
1932—Land $4,600/Improvements $3,500.
1933—Land $3,680/Improvements $2,800.
1934—Land $3,680/Improvements $2,800.
1935—Land $3,330/Improvements $2,800.
(San Bernardino County Assessor, 1930–1935, Lot Book 58:19).

1937: Arthur Newman (as trustee to Max Aron) sells to William Becker (San Bernardino County Assessor, 1936–1941, Lot Book 89A:18).

1939: Sanborn map shows an auto wrecking yard and "junk storage" warehouse in the southern portion of the lot. The warehouse appears to abut the north–south division line between Lots 4 and 3. The address appears to be 215 Arrowhead Avenue. At 239A and 239B Arrowhead (at the curb) is and auto supply store and its office. At 245 Arrowhead is a building of undetermined function (pasteovers have obscured the function on working copy). This building abuts an alley presumed to be the trace remnant of the railroad right-of-way; no tracks show on this map edition.

1951: Sanborn map—No changes are noted from the 1939 edition, but the northern most structure (245 Arrowhead Avenue) whose function was undetermined from 1939 map is shown to be another "junk" warehouse.

LOT 5

1851: Portions of the eastern wall of the Mormon Stockade and some of the interior structures are erected in the northwest corner of what will become Lot 5 of Block 15 (the northwest corner of Project area on the southeast the corner of Third and Arrowhead streets). Four of the interior structures are occupied by Bishop William Crosby and Charles Crandel[l], and presumably their families and retainers.

1854: Mormon Bishop William Crosby buys from Lyman and Rich the entirety of Block 15 and begins operating a hostelry on the site out of his home (probably on Lot 5), possibly using the same building(s) that had been located within the stockade walls (San Bernardino County Deed Book A:15; Hayes 1929:104).

February 21—Judge Benjamin Hayes stayed the night at "the Bishop's tavern" (Hayes, Benjamin I. *Pioneer Notes from the Diaries of Judge Benjamin Hayes, 1849–1875*, edited by Marjorie Tisdale Wolcott. Privately printed, Los Angeles, 1929:104).

In September, Dr. A. S. St. Clair reports putting up at "Bishop Crosby's log cabin tavern" (Frazee 1876:83).

October—Judge Benjamin Hayes writes that a hundred new buildings had been erected in town since his previous visit four months earlier—most of them made of adobe. "We noticed particularly the . . . new hotel of our excellent host, Bishop Crosby" (Haenzsel 1985:3, citing Hayes 9 October 1854 in the *Southern Californian*, n.p.).

1856 July 30—E.O.C. Ord states that on July 30, 1856 he lodged at Crosby's for $12 on July 30, 1856. (Ord, E.O.C. *City of the Angels and the City of the Saints*. Huntington Library, San Marino, California, 1978:23.

October 16—Judge Benjamin Hayes stays the night at "the Hotel in San Bernardino" (Hayes 1929:147).

1857: With the Mormons recalled to Utah, Crosby sells all of Block 15 to John Lemon (San Bernardino County Recorder, Deed Book B:170). Within a year, Lemon leases or mortgages the block to Dudley and Elizabeth Pine.

1858: Dudley and Elizabeth Pine begin operating an inn on Lot 5 (formerly Bishop Crosby's tavern) known as Pine's Hotel (Ingersoll 1904:162). Soon after occupying the property, the Pines probably added a second story of adobe, or replaced the existing structure entirely with a two-story adobe (Haenszel 1985:4).

1867: April—Dudley and Elizabeth Pine retire from hotel business (San Bernardino *Guardian*, April 20, 1867:n.p.

May 18—Ad for Pines Hotel signed by August Starke appears in San Bernardino *Guardian* (18 May 1867:3.)

July 13—A "Notice of Application of Married Woman to Become Sole Trader" appears in the San Bernardino *Guardian* (13 July 1867:4). Catherine Starke intends to apply to District Court to allow her to carry on sole proprietorship of hotel.

September 18—Catherine Starke's application to be sole trader is approved by the court (San Bernardino County Archives, Sole Traders, Book 1:10–11).

October 19—Ad for Pines Hotel signed by Catherine Starke appears in San Bernardino *Guardian* (19 October 1867:3).

1868: August and Catherine Starke buy Block 15 from the Pines (San Bernardino County Recorder, Deed Book H:138).

1869: The Starkes continue the business as the "Pine's Hotel," possibly to capitalize on the reputations of the previous owners.

August—the *Guardian* reports numerous improvements planned for the hotel, including: the addition of 24 sleeping rooms; a new dining room (20 x 45 feet); new ladies parlor; and new kitchen. The sleeping rooms and parlor to be located on the second floor. An extant barroom to be altered. The old kitchen, dining room, and parlor to be converted to a single large hall for balls and meetings (San Bernardino *Guardian* 14 August 1869:2).

1870: April 10—First formal advertising for "Starke's Hotel" appears in the San Bernardino *Guardian* (10 April 1870:4).

1871: The Starkes add a bath house fed by an artesian well, which, given the proximity to nearby Warm Creek, may be thermally heated (San Bernardino *Guardian* 14 June 1871:3). The Starke Hotel appears on Augustus Koch's bird's-eye view of San Bernardino.

1875: Traveling with his tubercular son, D. L. Phillips stops at the Starke Hotel after being advised in Los Angeles that "it is the best hotel in town." He goes on to offer a description of the accommodation (Phillips, D. L. *Letters from California: Its Mountains, Valleys, Plains, Lakes, Rivers, Climate, and Productions; Also its Railroads, Cities, Towns, and People, as seen in 1876*. State Journal Company, Springfield, Illinois, 1876. Reprinted by Library of Congress, American Memory website [http://memory.loc.gov/cgi-bin/r?ammem/calbkbib]).

1878: In May, August Starke is assessed only for Lot 5 ($1,500), its improvements ($2,500), plus personal property ($1,635) including: one coach, one wagons, hogs, five horses, harness, and furniture (Town of San Bernardino Assessment Book 1878:59).

1879: March 26: Denis Kearney, prominent leader in the statewide anti-Chinese movement and founder of the California Workingmen's Party, speaks to a crowd of 2,000 from the steps of the Starke Hotel. Kearney, whose political slogan was "The Chinese must go!", refrained on this occasion from addressing the Chinese Question (San Bernardino *Daily Times*, 26 March 1879:2, 3).

March 31: An advertisement for the Starke Hotel proclaims "Only White Cooks Employed" (San Bernardino *Daily Times*, 31 March 1879:2). The following year, at the time of the U.S. Census, the Starkes were employing four Chinese. Two of these, Charlie Ho and Ah Sing, were working as cooks .

October: August Starke is assessed only for Lot 5 ($1,200) and its improvements ($3,000), plus personal property ($1,325), including a stage, hogs, hotel furniture, saloon fixtures and stock, and a piano (City of San Bernardino Assessment Book 1878 and 1879:105).

ca. 1880: Starkes demolish adobe hotel and rebuild with a two-story red brick hotel with 50 rooms. The Starke Hotel is shown on the Symes bird's-eye view of San Bernardino as a prominent L-shaped structure (labeled no. 26 on the illustration) located in Lot 5. Two smaller structures south of the hotel, but

still in Lot 5 are also shown. A barn or stable appears to straddle the division line between Lots 5 and 6 (Syme 1880).

1880: Tenth Census of the United States lists the following at the Starke Hotel.
August Starke/male/age 56/married/hotel keeper.
Kate Starke/female/wife/ age 42/married/housekeeper.
Augustus H. Starke/male/son/age 28/single/hotel clerk.
Kate Starke/ female/daughter/age 12/at school.
Thomas Starke/male/son/age 10/at school.
William Starke/male/son/age 5.
Frank Starke/male/son/age 3.
Anna Starke/female/step-daughter/single/age 18/at home.
Joseph S. Alley/male/age 40/boarder/single/miner.
Ah Jim/male/age 26/boarder/single/laundryman (probably at Starke's).
Charlie Ho/male/age 23/boarder/single/hotel cook (probably at Starke's).
Ah Ying/male/age 28/boarder/single/gardener (probably at Starke's).
Ah Sing/male/age 25/boarder/single/hotel cook (probably at Starke's).

1881: August Starke assessed for Lot 5 ($1,200), improvements ($2,500) and personal property ($1,826) including furniture, a piano, a sewing machine, liquor and cigars, 16 hogs, and lumber and bricks ($500) (Town of San Bernardino Assessment Book 1881–1882:57).

1885: Sanborn map shows the Starke hotel as a T-shaped structure with several outbuildings. The brick hotel is two stories with a shingle roof and ground-level porches on the north and west facades of the main building. The southern two-story frame extension has a two-story porch on the east side. On the ground floors are the office, reading room (parlor), dining room, and kitchen. Second floors are apparently guest rooms. Outbuildings: west of the kitchen, near the curb line of C Street (Arrowhead) is a shed. Southeast of the hotel is a one-story, L-shaped building whose function is indecipherable; a few feet north of the indeterminate structure is another smaller building divided in half by a partition wall, also of indeterminate function, although possibly a privy or the bathhouse built in 1871; due east (in Lot 6) of the indeterminate L-shaped building is a barn. An artesian well is situated just outside the southwest corner of the kitchen area.

1887: Sanborn map shows alterations to the wood shed near the C Street curb (a portion apparently jutting into the street). The privy or bathhouse is no longer separate by a partition, but is rather two separate buildings The L-shaped structure houses several rooms devoted to hotel laundry facilities, a hog house, storage room, water closet, and "Chinese sleeping rooms." The (barn in Lot 6) has been enlarged to a stable and has had a second story added to the central portion. A fence appears to have been added along the division line between Lots 5 and 6, apparently to block the hotel's view of a growing Chinese section to the east, as well as the hotel auxiliary building to the southeast (i.e., the barn, hog house, laundry, et al.). The presence of an orchard is noted south of the hotel in Lot 4, and possibly extending into Lot 5.

1888: Sanborn map shows no changes to hotel property.
February—San Bernardino Artificial Stone and Improvement Company awarded city contract for the laying of sewer pipe on C Street, including along Starke Hotel frontage. Work is completed by March 1889 (San Bernardino Superior Court, Case Nos. 3389 and 3391, San Bernardino Artificial Stone and Improvement Company vs. A. Starke).

1889–1890: August Starke assessed for land ($5,250), property ($890), and improvements ($3,000) on Lots 4 and 5, including furniture, fixtures, piano, and sewing machine (City of San Bernardino Assessment Book, 1889–90:93).
September—August Starke (and others) by refusing to pay assessments for the laying of sewer pipes on C Street are sued by the contractor, San Bernardino Artificial Stone and Improvement Company. Starke's assessment was $291.41. Court found in favor of Starke (San Bernardino Superior Court, Case Nos. 3389 and 3391, San Bernardino Artificial Stone and Improvement Company vs. A. Starke; San Bernardino Superior Court, Judgment Book 8:388).

ca. 1890: Railway line put through lot. The railroad tracks enter the lot on the west side, just north of the division line between Lots 5 and 4.

1891: Sanborn map shows no apparent changes to the hotel. The size of the wood shed has been reduced with the extension into C Street removed. The Chinese have been removed from the L-shaped

structure to a building of their own a few feet southwest of their previous quarters and nearer the street.

1894: The Sanborn map shows no apparent alterations to the hotel. The wood shed near C Street has been removed as have the Chinese quarters; a small addition has been made to the L-shaped structure; and the placement of the privy/bathhouse has been altered again. The fence/wall has been extended to enclose the hotel grounds on the east and south sides. The southern extension of the fence was apparently erected to block the hotel from the train, as the tracks of the railroad are noted entering near the southwest corner of Lot 5. The hotel address is noted as 233 Third Street.

1895–1899: Assessed to August Starke. Combined assessments for Lots 4 and 5(through 1897) and for Lot 5 (1898 and 1899) are:
1895—Land $2,500/Improvements $3,000.
1896—Land $2,000/Improvements $2,500.
1897—Land $1,200/Improvements $1,000.
1898—Land $1,200/Improvements $1,000.
1899—Land $1,200/Improvements $1,000.
(San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1896: July 3—San Bernardino County Tax Collector, Truman Reeves, sells the Starke Hotel property—Lots 4 and 5—to the State of California for delinquent taxes and penalties by the Starkes. The amount is $164.93 (San Bernardino County Recorder, Certificate of Sale of Real Estate, Book 10:729).

1897: March 9—San Bernardino National Bank purchases the hotel property (Lots 4 and 5), subject to the redemption rights of the Starkes (San Bernardino Superior Court, Case No. 7794, Starkes vs. Bradford and Twogood).

March 13—Wong Nim, a native of San Francisco, purchases the hotel at a foreclosure sale for $1,250 (Redlands *Citrograph*, 13 March 1897:8). Purchase is not verified by county records.

September 9—Louie M. Twogood, represented by her attorney, A. J. Twogood, enters into an agreement with August and Catherine Starke which give the Starkes an option for the next two years to purchase from Ms. Twogood all of Lots 4 and 5, Block 15. The agreement is subject to terms, including: that the Starkes shall pay to Twogood the sum required of her to redeem the property from San Bernardino National Bank, which held a certificate of sale after a decree of foreclosure issued by the Superior Court; the Starkes would also be liable for taxes paid and improvements made on the property by Twogood. If the Starkes did not exercise their option within the two years, the option would be voided and Twogood would retain the property and the price of the option—one dollar. Twogood would retain the property until option was exercised, with the additional stipulation that "in consideration of the premises [Twogood] hereby agrees not to let any of said premises to chinese [sic]" (San Bernardino County Recorder, Deed Book 241:210–212).

September 10—Louie Twogood effects redemption of the property by paying $1,325.00 to the San Bernardino National Bank (San Bernardino Superior Court, Case No. 7794, Starkes vs. Bradford and Twogood).

September 18—Starke buys back the hotel from Wong for $1,325 (Redlands *Citrograph*, 18 September 1897:7).

September 28—Louie M. Twogood, again represented by A. J. Twogood, sells Lots 4 and 5 to D. M. Bradford for $1,800. There is no mention of the pre-existing agreement in the deed (San Bernardino County Recorder, Deed Book 242:159).

October—Bradford makes repairs and improvements to hotel including repairs to steps, doors, locks, transoms, and windows; repairs to a tin roof; repairs to the annex roof; the papering of eight rooms; cleaning and topping chimney, etc. (San Bernardino Superior Court, Case No. 794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file, San Bernardino County Archives)

October 14—A. J. Twogood pays San Bernardino County Treasurer (acting for the State Controller's Office) the sum of $386.00 for Lots 4 and 5. Transaction is made using two instruments—33140 ($245.33) and 33141 ($140.67) (San Bernardino County Recorder, Deed Book 247:44).

November—Bradford makes repairs and improvements to hotel including: repairs to a chicken coop, painting a tin roof, moving out buildings, whitewashing fences and out buildings, building fence along railroad, "fencing lot below R.R.," and grading and cleaning grounds (San Bernardino

Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

1898: January—Bradford makes repairs and improvements to hotel including: building and arch in the laundry, building a correll [sic] fence, setting fruit trees, repairing brick [in] kitchen, and lengthening main sewer [line](San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives)

March—Bradford makes repairs and improvements to hotel including: building a lattice and wire fence at front of hotel and repairs[?] to the carriage shed (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

May—Bradford makes repairs and improvements to hotel including: repairs to closets, wash bowls, and sewers, and installation of two screen doors, thresholds and paint (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

September—Bradford makes changes to the "song room," making two rooms (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

October—Bradford makes repairs and improvements to hotel including: Building two chimneys, painting the tin roof, shingling the annex roof, etc. (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

November—Bradford makes repairs and improvements to hotel including: installing or repairing an electric bell, building and hanging gates, and building a stable roof (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

Hotel listed in San Bernardino County Directory (1898:110) as "Bradford House," corner of Third and C streets. C. H. Davis is the proprietor. Street address is given as 293 Third St. (1898:111).

1899: January—Bradford builds a manger and stalls (San Bernardino Superior Court, Case No. 1794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

April—Bradford installs or repair screen windows and doors (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

August—Bradford makes repairs and improvements to hotel including: changing discharge pipe, adding a spring lock to room 24, and noting "city water put in"(San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

For several months prior to the expiration of the Starke's option to redeem the hotel property for themselves they try to obtain an accounting from Bradford of the cost of taxes, improvements, and other expenses he has incurred while operating the hotel so as to know how much to pay him for the redemption. Bradford apparently "failed and refused" to come forth with an accounting until after September 9, the date of expiration of the option. (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

September 9—The Starkes, unable to get an accounting from Bradford for his expenses, tender to him the sum of $2,500, an amount equal to Louie Twogood's payment to the San Bernardino National Bank for redemption, plus taxes, improvements, and interest. Bradford claimed "for the first time to plaintiffs that he had paid taxes and made improvements upon the premises and paid for the same the sum of $777.15 while in fact he had neither made nor paid for improvements and taxes upon the premises any greater sum than $150.00." The Starkes claimed that any expenses beyond the $150.00 had not been paid for by Bradford, but "constituted ordinary repairs made by the labor of the occupant of said property" [probably C. H. Davis]. The Starkes did get an accounting finally on September 11 and attempted to pay him $2,600, but Bradford refused and instead demanded $2,927.86. The Starkes then took the matter to the courts, agreeing to abide by any figure the court

deemed fair (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

September—Bradford plants a lawn. They note charges for caring for it as well as for orange and fruit trees (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

1900: January 31—August and Catherine Starke enter into an agreement with Wong See of Riverside agreeing to "make, execute, and deliver" to him free of encumbrances the "property known as the Starke Hotel Property," and including all of Lots 4 and 5. "At such time as the said Wong See, his agent or attorney shall demand of us such deed and tender and pay to such sums of money as by decree of the Superior Court of the County of San Bernardino, State of California, in that certain case now pending in said court, entitled A. Starke and Catherine Starke vs. D. M. Bradford and Louie M. Twogood, shall be required to be by us paid to the said D. M. Bradford or Louie M. Twogood, or both of them in redemption of said property herein above described, from said D. M. Bradford and Louis [sic] M. Twogood, or either of them, said sum to be so applied."(San Bernardino County Recorder's Office, Deed Book 281:90-92. On file at San Bernardino County Archives).

February 3—Superior Court orders Bradford to deliver a deed of conveyance to the Starkes upon their "paying to the defendant Louie M. Twogood, whatever sum of money may remain unpaid to her upon her mortgage upon said property executed by D. M. Bradford, not exceeding $2,794.50, and that the overplus to make the total sum of $2,794.50 remaining after payment of the said mortgage shall be paid to the said defendant D. M. Bradford," payment to be made within twenty days of decree (San Bernardino Superior Court, Case No. 7794, August and Catherine Starke vs. D. M. Bradford and Louie M. Twogood. On file at San Bernardino County Archives).

May 18—August Starke dies in San Bernardino, age 76 (Haenszel, n.d., The Starkes, citing San Bernardino Pioneer Cemetery Sexton's Record). His death may have voided the agreement with Wong See. The Starkes were not able to redeem the hotel. Census indicates Catherine Starke is living alone in a rented room of the Bradford House hotel.

1900–1903: Lots 1 through 6 and portions of Lots 7 and 8 assessed to D. M. Bradford ($8,289—no breakdown of lots or improvements) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1901 Ad for the "The Bradford (formerly Starke's)" appears in the "Souvenir San Bernardino Fire Department" publication. The add claims sixty rooms and feed stables on C Street. C. H. Davis, Daniel M. Bradford's son-in-law, is listed as manager ("Souvenir San Bernardino Fire Department," San Bernardino, 1901).

1903 June 1—Catherine Starke dies in San Bernardino, age 62 (Haenszel, n.d., The Starkes, citing San Bernardino Pioneer Cemetery Sexton's Record).

October 9—D. M. Bradford dies in San Bernardino. His will leaves his entire estate to his daughter Emeline M. Davis; her husband Charles H. is named executor. Estate includes several real estate lots in the City of San Bernardino. Court documents also itemize Bradford's personal property, which appears to be an inventory of the hotel's stock:

8 Carpets, Tapestry	10 Carpets, Ing[illegible]
6 Mattings	25 Bedsteads
25 Matrasses [sic] and Springs	6 Cots
25 Cemfortables [sic]	25 Blankets
40 Pillows	100 Sheets
20 Rockers	50 Common Chairs
2 Settees	7 Heating Stoves
8 Gas Stoves	2 Gasoline Stoves
1 Oil Heater	27 Lamps
8 Dozen Towels	100 Pillow Slips
3 Dozen Curtains	18 Stands
18 Slop Jars	11 Tables
18 Washbowls and Pitchers	6 Dozen Plates
1 Dozen Frying Pans	2 Dozen Cups and Saucers
½ Dozen Stew Pans	1 Dozen Vegetable Dishes

(San Bernardino Superior Court, Book J of Wills:94–95; Probate Minutes, Book 33:76–78).

1904: Lots 1 through 6 and portions of Lot 7 and 8 assessed to heirs of D. M. Bradford (Emeline and Charles Davis) ($8,289—no breakdown of lots or improvements) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1905–1906: Assessed to heirs of D. M. Bradford (Emeline and Charles Davis) . No amounts shown for lot or improvements (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1906: January 6—Charles H. Davis dies, leaving his wife Emeline Davis all of his property and naming her his executrix. Real property included several lots in San Bernardino, including a half interest in Lots 4 an 5 of Block 15, and a lot in Laguna Beach, California. Personal property consisted of a piano and cash valued at $6,576.51 (San Bernardino Superior Court, Book J of Wills:207–208; Probate Minutes, Book 55:151–152).

Sanborn map shows no significant changes to the hotel, except its name is now "The Bradford." A single story, shake-roofed shed has been added adjacent to C Street in the southern end of the lot; the privy/bathhouse has been moved yet again, in a northerly direction; the L-shaped building has apparently been converted to a stable. The hotel's address is noted as 293 Third Street.

1907–1908: Assessed to Emeline Davis. No amounts shown for lot or improvements (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: **Parcel 504** (Lot 5), except for railroad right-of-way, assessed to Emeline Davis; no amounts shown (San Bernardino County Assessor, 1909–1913, Lot Book 13:27).

1910: **296 Third Street** listed as the "Bradford House" under the classified heading of "Furnished Rooms," suggesting it has become a boarding/rooming house. Mrs. Emmaline M. Davis (widow of C. H. Davis) is the proprietor. Living with her are Alice Davis and Charles H. Davis, Jr. (San Bernardino City Directory 1910:283; 62–63).

1913: **296 Third Street** listed as a boarding house ("furnished rooms") operated by Frances Martinez (San Bernardino City Directory 1913–1914:316).

1914–1918: **Parcel 508** assessed to Emeline Davis, except for railroad right-of-way (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1919–1920: **Parcel 508** assessed to Emeline Davis, except for railroad right-of-way. Assessed $830 for land $500 for improvements (San Bernardino County Assessor, 1918–1923, Lot Book 11:33).

1921–1923: **Parcel 508** Davis portion of Lot 5 sold to Ralph Swing. Assessed to him $830 each year; no improvements shown. Swing apparently had the Starke/Bradford hotel demolished soon after purchase (San Bernardino County Assessor, 1918–1923, Lot Book 13:33). Reminiscing in 1956, Swing reported finding a cache of gold coins at the hotel during the demolition (*San Bernardino Sun*, 8 June 1956, "Lions hear Swing reminisce about city's birth, colorful pioneers, historic growth":n.p.).

1924–1929: **Parcel 508** Portion north of railroad right-of-way assessed to Ralph Swing:
1924—Land $2,000/No improvements.
1925—Land $2,000/No improvements.
1926—Land $3,330/No improvements.
1927—Land $6,660/Improvements $5,500.
1928—Land $6,660/Improvements $5,500.
1929—Land $6,660/Improvements $7,500.
(San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1928: **295 Third St.**, Bronson and Lange, Inc., Chevrolet sales and service dealer operating on property (San Bernardino and Colton City Directory 1928:97).

1930: Jones Chevrolet operating on the property. Occupies approximately all of the northern half of the lot.

1930–1932: **Parcel 508** Assessed to Swing:
1930—Land $6,660/Improvements $7,500.
1931—Land $8,490/Improvements $7,500.
1932—Land $8,490/Improvements $7,500.
(San Bernardino County Assessor, 1930–1935, Lot Book 58:19).

1933–1934: **Parcel 508** passes to E. M. Mills (or Miller). Assessed for $7,590 for land; $6,000 for improvements (San Bernardino County Assessor, 1930–1935, Lot Book 58:19).

1935–1941: Portion north of railroad right-of-way assessed to Relvert and Company, Inc. (San Bernardino County Assessor, 1930–1935, Lot Book 58:19; San Bernardino County Assessor, 1936–1941, Lot Book 89A:18).

1937: Arthur Newman (as trustee to Max Aron) sells an unknown portion to William Becker (San Bernardino County Assessor, 1936–1941, Lot Book 89A:18).

1939: Sanborn map

295 Third Street: Map shows hotel has been replaced with an automobile dealership. Map copy is of poor quality and the only legible reference is to used auto sale and a body and paint shop. These occupy the northeastern quarter of the lot and part of the southeastern quarter as well. The southwestern quarter, though illegible, is occupied by a new car dealership. The two are presumed to operated as a single business as the only address shown.

263/267/273 C Street (Arrowhead Avenue). Another structure abuts the southern boundaries of the auto business, though its function is not legible. South of this building, a third structure at 263 Arrowhead Avenue houses a wholesale liquor dealer. The small structure to its rear, on Lot 6, may be associated with this business.

1949–1951: Lot 5 north of railroad right-of-way assessed to Everett Swing (Land $13,710/Improvements $11,250) (San Bernardino County Assessor, 1949–1951, Map Book 3:1).

1951: Sanborn map shows no substantial changes to auto dealership since 1939. The area at Arrowhead and Third that was not legible in the 1939 map shows the corner section is occupied by auto (presumably new cars) sales and service. The building at 273, 267, and 263 Arrowhead is a wholesale liquor distributor.

1959: Western addition to Department of Transportation's existing structure brings building to its current footprint, replacing the car dealership, and probably the other structures in Lot 5 (personal communication, Karen Swope; December 12, 1959 photograph, District 8 Surveys).

RAILROAD RIGHT-OF-WAY

ca. 1890: Railroad lines put through lot on easement.

1894: Sanborn map. The railroad tracks remain unchanged in the southern section of the lot.

1906: Sanborn map. The railroad tracks are not shown, though other sources confirm their presence.

1916–1917: 25 feet right-of-way through Lot 8 assessed portion $700 to Pacific Electric Railway (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1918: Pacific Electric Railway assessed by State of California for right-of-way (margin note, San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1939: No railway lines shown on Sanborn map.

LOT 6

1878: Starkes sell lot. Alley and Cochrane (a commercial livery) assessed (City of San Bernardino Assessment Roll, 1878–79:2). See Lot 1, 1878 above for details.

1879: Alley and Cochrane are assessed all of Lots 6, 7, and 8 ($1,000), improvements ($400), and six vehicles, nine horses, three Spanish horses, and harness ($1,160) (Town of San Bernardino Assessment Book, 1878–1879:79).

1880: Small building fronting Third Street; large barn at rear of lot (Syme map).

1885: Sanborn map shows laundry on north side of lot near Third Street.

1887: Sanborn map

6 Third Street. The laundry seen in 1885 Sanborn is enlarged by 1887. It is single-story clapboard ("CL.") with shake roof and has a brick chimney ("BC"). A few feet south of the rear of the building is a kettle. Southwest of the kettle's location is an artesian well, and east of the well is a circular pond with the notation "not serviceable for supplying engs./water low." To the rear of the lot is a large barn/stable thought to be used by the Starke Hotel (Lot 5).

12 Third Street. At the division line with Lot 7 is a "Chinese Wash Ho[use]." It abuts the curb line, the most westerly of the row of eight Chinese buildings.

13 Third Street. This building sits on the lot lines between Lots 6 and 7 and will be discussed with Lot 7.

1888: Sanborn map (May 1888)

5 Third Street: shows the addition of a "boarding and lodging house" in the northwest corner of the lot; a kitchen is attached at the southwest corner of the building. It is a single-story with shake roof. The eastern wall is shared with another structure (single story with shake roof) which is vacant.

1889–1890: D. M. Bradford assessed for all of Lots 6, 7, and 8 ($3,150) and improvements ($1,300) (not detailed) (City of San Bernardino Assessment Book, 1889–1890:20–21).

1889–1890: Sarah C. Wilson assessed for interest in property of D. M. Bradford—Lots 6, 7, 8—created by mortgage ($475) to secure debt incurred in 1885 (probably) on all of Lots 1, 2, and 3 ($1,450) (City of San Bernardino Assessment Book, 1889–1890:21).

March—Sarah C. Wilson loses her interest in Lot 6 to foreclosure by city tax collector E. H. Thomas for nonpayment of taxes owed in the amount of $17.32. The unpaid amount was the total for all of Wilson's holdings in Block 15, including Lost 1, 2, 3, 6, 7, and 8. D. M. Bradford had held the mortgage on the property since 1885. On March 14, 1890, tax collector Thomas auctioned the property to P. Ferguson for $28.52 (San Bernardino County recorder, Deed Book 171:146–150).

1891: Sanborn map shows no changes from 1888, except for addition of a second story and an extension on the south side (to the rear of the kitchen) of the lodging/boarding house, and an addition to the vacant structure (still vacant), both of which first appeared on the 1888 Sanborn. Also, at the southern end of the lot the tracks of the San Bernardino, Arrowhead, & Waterman Railroad appear.

1893: **291 Third**—The French Hotel, Pommier and Pernin, proprietors, "good French dinner-25 cents; rates per day $1, per week $5, rooms 25 cents per night" (San Bernardino County Directory 1893, 1894, 1895:146, 49).

Starke's Hotel (no street number), A. Starke, proprietor, corner Third and C streets (1893:146). Starke family members living at the hotel include Augustus H. Starke, city assessor, Frank Starke, clerk for John G. Eikelman, and Thomas Starke, hotel clerk (1893:107).

1894: Sanborn shows several changes from earlier years. [**NOTE**: The house numbering on this map is confusing. Some structures show a switch from single and double digits to three digits, while others apparently continue to retain the single or double digits.]

5/291 Third Street: The boarding house has added additional [guest?] rooms to rear of the building. A second story has been added to the western portion and an "oven" to the rear of the east portion. The barn/stable to the south has been replaced with a smaller one.

6 Third Street: The laundry has been converted into a dwelling.

129 Third Street: Another, larger dwelling has been added to the east.

12/263 Third Street: The Chinese laundry has been enlarged to the rear. This laundry shares a common wall with a dwelling (113 Third Street) which straddles the division line between Lots 6 and 7 (discussed in Lot 7). The dwellings and the laundry are all single storied with shake roofs. The pond has been moved northeast from its earlier location and has been substantially enlarged. It bears a notation stating it is filled by an artesian well.

263½ Third Street: South of the pond and straddling the division line between Lots 6 and 7 is a dwelling bearing the notation "old & vac[ant]." However, this dwelling has not appeared on earlier maps.

1895: Assessed to D. M. Bradford and P. Ferguson. Assessed value of land is illegible; value of improvements is $949 (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1896–1899: Assessed to D. M. Bradford. Assessed value of land is illegible; value of improvements is $949 (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1900–1903: Lots 1 through 6 and portions of Lots 7 and 8 assessed to D. M. Bradford ($8,289—no breakdown of lots and improvements shown) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1901: An advertisement for the "Allemand House" at 291 Third Street. Peter Allemand is noted as the proprietor. It is described as a "board and lodging" house offering reasonable rates by the day, week, or month. This is a later incarnation of the "French Hotel" (Tigner, Charles, Souvenir San Bernardino Fire Department, 1901:n.p. Facsimile edition by First Federal Savings and Loan, San Bernardino, n.d., on file at San Bernardino County Archives, San Bernardino).

1904: Lots 1 through 6 and portions of Lots 7 and 8 assessed to heirs of D. M. Bradford (Emeline and Charles Davis) ($8,289—no breakdown of lots and improvements shown) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1905–1906: Assessed to heirs of D. M. Bradford (Emeline and Charles Davis). No amounts for lots or improvements shown (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1906: Sanborn map shows only the barn/stable. No other structures or features are noted.

1907–1908: Assessed to Emeline Davis. No amounts for lots or improvements shown (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1918: **Parcel 510** (Lot 6 except for railroad right-of-way) assessed to Emeline Davis. No amounts shown (San Bernardino County Assessor, 1909–1913, Lot Book 13:27; San Bernardino County Assessor, 1914–1918, Lot Book 13:26; San Bernardino County Assessor, 1918–1923, Lot Book 11:33/Map Book 13:33).

1913–1914: **293 Third Street**—The French Hotel has become Hotel Pacific, K. Hirata, proprietor (San Bernardino City Directory 1913–1914:99, 102, 342).

1916–1917: **293 Third Street**—Hotel Pacific's name has been changed to "Sunrise Hotel," J. Iyemura, proprietor, residence same (San Bernardino City Directory 1916–1917:88, 157).

1921–1935: **Parcel 510**: Assessed to Ralph Swing (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1924–1929: Parcel 510 assessed to Ralph Swing:
1924—Land $1,440/Improvements $250.
1925—Land $1,440/Improvements $250.
1926—Land $1,190/No improvements.
1927—Land $2,860/No improvements.
1928—Land $2,860/No improvements.
1929—Land $2,860/No improvements.

1935: A portion of Swing parcel passes to State of California (San Bernardino County Assessor's Lot Book 58, Book 2:19). A portion of Swing parcel passes to Relvert and Company. Assessed value is $4,440 for land; no improvements shown (San Bernardino County Assessor's Lot Book 58, Book 2:19).

1939: Sanborn map—Working copy of this map shows structures (from other sources determined to be those of the California Highway Department facilities), but functions are obscured.
263 Third Street: One building in the north central portion is at 251/247 [Lot 5?] Third: Building straddles the division line between Lots 6 and 7. A portion of this building bears the notation "Off's." A small structure is noted in the southeast of number 263 and appears to be associated with the Levi Simon liquor wholesale business at 263/267/273 Arrowhead Avenue.

1949–1951: State of California (San Bernardino County Assessor, 1949–1951, Map Book 3:1).

1951: Sanborn map—No changes noted from 1939 edition. The building at 263 Third Street is identified as "State Offices."

1959: Caltrans' Western Addition.

RAILROAD RIGHT OF WAY

1916–1917: 25 feet right-of-way through Lot 6 assessed portion $700 to Pacific Electric Railway (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1918: Pacific Electric Railway assessed by State of California for right-of-way (margin note, San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

LOT 7

1878: Sold by Starkes. Alley and Cochrane (a commercial livery) assessed (City of San Bernardino Assessment Roll, 1878–79:2). See Lot 1, 1878 above for details.

1879: Alley and Cochrane are assessed all of Lots 6, 7, and 8 ($1,000), improvements ($400), and six vehicles, nine horses, three Spanish horses, and harness ($1,160) (Town of San Bernardino Assessment Book, 1878–1879:79).

1880: Row of at least six buildings fronting Third Street; fenced yard to rear (Syme: map).

1887–1888: Sanborn maps.
13 Third Street: a single-story clapboard structure with shingle roof and only the label Chinese." No use description is shown.

14 Third Street: Chinese Store, also single story, clapboard, and shingled. 13 and 14 share a common wall. The Sanborn map ends here but states "China Town/7 buildings in range/stove pipes/cloth ceilings."

1889–1890: D. M. Bradford assessed for all of Lots 6, 7, and 8 and improvements (not detailed) (City of San Bernardino Assessment Book, 1889–1890:20–21).

1890: March—Sarah C. Wilson loses her interest in Lot 7 to foreclosure by city tax collector E. H. Thomas for nonpayment of taxes owed in the amount of $17.32. The unpaid amount was the total for all of Wilson's holdings in Block 15, including Lost 1, 2, 3, 6, 7, and 8. D. M. Bradford had held the mortgage on the property since 1885. On March 14, 1890, tax collector Thomas auctioned the property to P. Ferguson for $28.52 (San Bernardino County recorder, Deed Book 171:146–150).

1891: Sanborn map shows no changes from 1888, except for the presence of the tracks of the San Bernardino, Arrowhead & Waterman railroad crossing the southern end of the lot moving slightly from southwest to northeast.

1894: Sanborn map shows a series of six complete buildings and portions of two others, all fronting on Third Street. From west to east they are:

113 Third (straddling the division line between Lots 6 and 7)—a one-story, shake-roofed dwelling;
14 Third—a one-story, shake-roofed dwelling;
15 Third—a one-story, shake-roofed dwelling;
16 Third—a one-story, shake-roofed dwelling;
249 Third—a two-story, noncombustible shingle-roofed store;
18 Third—a one-story, shake-roofed dwelling;
19 Third—a two-story, noncombustible shingle-roofed store;
20-21 Third—(straddling the division line between Lots 7 and 8)—a one-tory, shake-roofed dwelling.

1895: Assessed to D. M. Bradford and P. Ferguson. Land $4,800/Improvements $1,600 (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1896–1899: Assessed to D. M. Bradford as follows:

1896—Land $4,800/Improvements $1,600.
1897—Land $3,650/Improvements $900.
1898—Land $1,865/Improvements $700.
1899—Land $1,565/Improvements $700.
(San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1900: April 2—D. M. Bradford sells portions of Lots 7 and 8 to Wong Sue for $1,000. Included in the sale was "the right to receive through the water pipes upon said premises water necessary for use thereon as the same is now piped thereon from the surplus appurtenant to said place." Bradford also reserved the right to connect with and have the support of the west wall of an existing brick building upon the premises conveyed as a party wall (San Bernardino County Recorder, Deed Book 285:121).

April 3—Wong Sue sells portions of Lots 7 and 8, bought from D. M. Bradford the day before, to Wong Nim for one dollar (San Bernardino County Recorder, Deed Book 281:382).

1900–1903: Lots 1 through 6 and portions of Lots 7 and 8, except those belonging to Wong Nim [North 100 feet] , assessed to D. M. Bradford ($8,289) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23.

1904: Lots 1 through 6 and portions of Lots 7 and 8, except those belonging to Wong Nim [East 68 feet, North 100 feet], assessed to heirs of D. M. Bradford (Emeline and Charles Davis) ($8,289—no breakdown of value of lots or improvements) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1905–1906: Assessed to heirs of D. M. Bradford (Emeline and Charles Davis) except for Wong Nim property. No amounts for lot or improvements shown (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1906: Sanborn map shows several changes from 1894. From west to east, they are:

16 Third—the length of building (north-south) has been shortened on the southern end, but a small addition has been built in the area left vacant by the larger removal;
249 Third has added a small addition to the southern end of the building;
18 Third has apparently been widened (to the west) so as to share a common wall with number 249 and lengthened on the south end: one of the southern extensions features a second story;

19 Third has made a one-story addition to the south end of the building. The fence beginning in Lot 8 continues a westerly line behind the buildings of Lot 7. Information on the remaining structures of Lot 7 (i.e., numbers 113, 14, and 15) was not available.

1907–1908: Assessed to Emeline Davis except for Wong Nim property. No amounts for lot or improvements shown (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: **Parcel 511** (All of Lot 7) assessed to Emeline Davis, except for Wong Nim property (West 18 feet, East 68 feet 5 in., North 100 feet). No amounts shown (San Bernardino County Assessor, 1909–1913, Lot Book 13:27).

1914–1918: **Parcel 511** assessed to Emeline Davis, except for railroad right-of-way and Wong Nim portion (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1919–1920: **Parcel 511** assessed to Emeline Davis, except for railroad right-of-way and Wong Nim portion. Amount is $370 for land; no improvements shown (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1920–1923: **Parcel 511** Davis portion of Lot 7 sold to Ralph Swing. Assessed to him ($370 for land; no improvements shown) (San Bernardino County Assessor, 1918–1923, Lot Book 13:33).

1924–1929: **Parcel 511** Swing portion of Lot 7 in possession of State of California. The assessment value is for the state's property in Lots 7 and 8. No amounts are shown for 1924 or 1925; in 1926 the values are $3,330 for land, $10,000 for improvements; in 1927 through 1929 the values are $3,330 for land and $12,000 for improvements (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1926: California Division of Highways builds first structures (Anonymous, *California Highways* 4(2):8–9).

1927: California Division of Highways builds office complex in Mission Revival-style architecture (Anonymous, *California Highways* 4(2):8–9).

1929: **Parcel 510**—Swing portion passes to State of California (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1930–1935: Owned by State of California, except for railroad right-of-way and Wong Nim portion (San Bernardino County Assessor, 1930–1935, Lot Book 58:19).

1936–1941: Owned by State of California, except for railroad right-of-way and Wong Nim portion (San Bernardino County Assessor, 1936–1941, Lot Book 89A:18).

1939: Sanborn map—251 Third Street is a portion of the California Division of Highways facility. A complete view of the structure is not contained on the map, but it may extend to the west to adjoin another structure not shown. A few feet east, separated by an alleyway is another smaller rectangular building with a north-south orientation. Its function is not noted.

1949–1951: State of California (San Bernardino County Assessor, 1949–1951, Map Book 3:1).

1951: Sanborn map—Only minor changes noted in structures present in 1939, namely an addition on the south side of 251 Third Street. Structure is identified as "Cal. State Highway Commission, San Bernardino Off."

1959: Western addition of Caltrans (personal communication, Karen Swope; Dec. 12, 1959 photograph, District 8 Surveys).

WONG NIM PROPERTY

1903: Wong Nim sold a plot, West 18 feet, East 68 feet 5 in., North 100 feet to Wong Sing (San Bernardino County Assessor, 1900–1904, Lot Book 13:22).

1905–1908: Assessed to Wong Nim, West 18 feet, East 68 feet 5 inches, North 100 feet. No amounts for lot or improvements shown (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: Remainder of Lot 7 (Parcel 512) assessed to Wong Nim. No amounts shown (San Bernardino County Assessor, 1909–1913, Lot Book 13:27).

1914–1918: Remainder of Lot 7 (Parcel 512) assessed to Wong Nim for $180 (San Bernardino County Assessor, 1909–1913, Lot Book 13:26).

1919–1923: Remainder of Lot 7 (Parcel 512) assessed to Wong Nim. Amount is $50 for land; no improvements shown (San Bernardino County Assessor's Book 11, 1919–1923, Lot Book 13:26).

1930–1935: Wong Nim property measured at West 19.37 feet, East 69.97 feet, North 100 feet, to point of beginning. From 1930 through 1935 it is assessed at $900 for land; no improvements shown (City of San Bernardino, Utilities Assessment 1930–1935; San Bernardino County Assessor's Lot Book 58, Book 2:19).

1930–1932: Land is assessed at $320; improvements at $250 (City of San Bernardino, Utilities Assessment 1930–1935:253).

1933–1935: Land is assessed at $260; improvements at $200 (City of San Bernardino, Utilities Assessment 1930–1935:253).

1941: December 10—Wong Nim, the "Mayor of Chinatown," dies in a rest home at age 89, less than a year after leaving Chinatown because of ill health.

1943: In December, Wong Nim's property in Lots 7 and 8 auctioned by his executor, Harry L. Allison, to the State of California for $10,800. Property described in court documents as "the North 100 feet of Lot 8, and the east 69.97 feet of the north 100 feet of Lot 7, all in Block 15 . . .excepting that portion thereof lying within the right of way of the Pacific Electric Company" (Superior Court Document No. 14312—In the Matter of the Estate of Wong Nim, Deceased—Order Confirming Sale and Directing Conveyances).

1944: In March, Wong Nim's portion of lot is noted as sold to State of California by Estate of Wong Nim for use of Division of Transportation (San Bernardino County Assessor, 1942–1947, Lot Book 124:18). Probate documents describe the property as "the east 69.97 feet of the north 100 feet of Lot 7" (Executor's Deed, Petition for Probate of Will 14312, 1943). Wong Nim's structure(s) demolished.

RAILROAD RIGHT OF WAY

1916–1917: 25 feet right-of-way through Lot 7 assessed (portion of $700) to Pacific Electric Railway (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1918: Pacific Electric Railway assessed by State of California for right-of-way (margin note, San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

LOT 8

1878: Starkes sell lot. Alley and Cochrane (a commercial livery) assessed (City of San Bernardino Assessment Roll, 1878–79:2). See Lot 1, 1878 above for details.

1879: Alley and Cochrane are assessed all of Lots 6, 7, and 8 ($1,000), improvements ($400), and six vehicles, nine horses, three Spanish horses, and harness ($1,160) (Town of San Bernardino Assessment Book, 1878–1879:79).

1880: Most of lot vacant, row of structures along Third Street may extend into western portion of lot, fenced yards to rear (Syme map).

1887–1888: Sanborn maps have no exposure into Lot 8, but bears the notation "China Town/7 buildings in range/stove pipes/cloth ceilings."

1889–1890: D. M. Bradford assessed for all of Lots 6, 7, and 8 ($3,150) and improvements ($1,300). Sarah G. Wilson is assessed for interest in the property of D. M. Bradford in Lots 6, 7, 8 "created by mortgage to secure a debt given by D. M. Bradford to Sarah [sic] G. Wilson, August 25, 1885. Amount of mortgage $475 [possibly on] Lots 1, 2, 3, Block 15. Value of land $1,450 [no improvements noted] (City of San Bernardino Assessment Book, 1889–90:20–21).

1890: March—Sarah C. Wilson loses her interest in Lot 8 to foreclosure by city tax collector E. H. Thomas for nonpayment of taxes owed in the amount of $17.32. The unpaid amount was the total for all of Wilson's holdings in Block 15, including Lost 1, 2, 3, 6, 7, and 8. D. M. Bradford had held the mortgage on the property since 1885. On March 14, 1890, tax collector Thomas auctioned the property to P. Ferguson for $28.52 (San Bernardino County recorder, Deed Book 171:146–150).

December—Wong Nim moves his temple to Kuan Yin to a space at the back of his shop at 201 Third Street on the southwest corner of Third and B streets (Lot 8, Block 15) (San Bernardino *Daily Courier*, 20 December 1890:3; Anderson and Lawton 1987:41).

1891: Sanborn map shows no changes from 1888.

1894: Wong Nim's shop appears as No. 28 on Sanborn map. Chinese from throughout southern California make pilgrimages to the temple.

Sanborn map shows a series of six complete buildings and portions of two others, all fronting on Third Street. From west to east they are:

20–21 Third (straddling the division line between Lots 7 and 8)—a one-story, shake-roofed dwelling. (This appears to be the single largest dwelling east of the boarding house at 291 Third);

22 Third—an alleyway;
23 Third—a one-story, shake-roofed dwelling: a fence runs south from the dwelling several feet to a small one-story, shake-roofed structure, possibly a privy;
24 Third—a one-story, shake-roofed dwelling;
25 Third—vacant lot;
26 Third—a one-story, shake-roofed dwelling: south of 26 Third is a barn/stable with a small attached structure, possibly a shed or privy;
27 Third—vacant lot;
28 Third—vacant lot, or possibly the address for Wong Nim's "Joss Ho[use};" [32] B Street—Possibly the address for Wong Nim's "Joss Ho[use]," as it appears on the map. The building actually fronts on B Street (Mountain View Avenue), but is not numbered.

1895: Assessed to D. M. Bradford and P. Ferguson. No amounts for lot or improvements shown (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1896–1899: Assessed to D. M. Bradford. For each year from 1896 to 1899 they were assessed $3,750 for land and $1,500 for improvements (San Bernardino County Assessor, 1895–1899, Lot Book 13:20).

1900–1903: Lots 1 through 6 and portions of Lot 7 and 8 (excepting those belonging to Wong Nim [North 100 feet, East 68 feet 5 in of Lot 7; North 100 feet of Lot 8] , assessed to D. M. Bradford ($8,289) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1904: Lots 1 through 6 and portions of Lots 7 and 8 [excepting those belonging to Wong Nim [North 100 feet, East 68 feet 5 in of Lot 7; North 100 feet of Lot 8] , assessed to heirs of D. M. Bradford ($8,289—no breakdown of lots or improvements) (San Bernardino County Assessor, 1900–1904, Lot Book 13:23).

1906: Sanborn map shows only minor alterations from 1894 edition.
26 Third Street has expanded to include part of the vacant lot at number 25, and two small additions have been built, one on the south end of 26 is shown, and a second on the north east side of 26. From the rear of 26 Third Street, a fence or wall has been built running south (probably) to near the railroad right-of-way, and then west in a straight line behind the other buildings of "China Town" (which words appear within the fence line).
28 Third: The "Joss Ho[use]" remains unchanged except for a fence or wall around the building. The building actually juts into B Street which is impassable because of the course of Warm Creek.

1907–1908: Emeline Davis (Bradford's daughter) inherits Bradford portion of lot [South 197 feet]. No amounts for value of lot or improvements shown (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: Portion of Lot 8 assessed to Emeline Davis. No amounts for lot or improvements shown (San Bernardino County Assessor, 1909–1913, Lot Book 13:24).

1918–1920: Parcel # ? assessed to Emeline Davis, except for Wong Nim's portion and the railroad right-of-way. Amount is $125 for land; no improvements shown (San Bernardino County Assessor, 1914–1918, Lot Book 11:33).

1920–1923: Davis portion of Lot 8 sold to Ralph Swing. Assessed to him $125 for land; no improvements shown (San Bernardino County Assessor, 1918–1923, Lot Book 13:33).

1924–1929: Owned by State of California, except for railroad right-of-way and Wong Nim portion (San Bernardino County Assessor, 1924–1929, Lot Book 31B:33).

1925: California Division of Highways builds first structures (Anonymous, *California Highways* 4(2):8–9).

1927: California Division of Highways builds office complex in Mission Revival-style. Architect is Howard E. Jones, contractor is George Herz and Company, both local (Anonymous, *California Highways* 4(2):8–9).

1930–1935: Wong Nim assessed:
1930—Land $2,700/Improvements $500.
1931—Land $2,700/Improvements $500.
1932—Land $2,700/Improvements $500.
1933—Land $2,160/Improvements $400.
1934—Land $2,160/Improvements $400.
1935—Land $2,160/Improvements $400.
(San Bernardino County Assessor's Lot Book 58, Book 2:19).

1936–1941: Owned by State of California, except for railroad right-of-way and Wong Nim portion (San Bernardino County Assessor, 1936–1941, Lot Book 89A:18).

1939: Sanborn map—Lot 8 appears to be vacant along the northern frontage on Third Street. Wong Nim's shop/Chinese temple is not shown, but may be obscured by an overlay map of an unassociated section of San Bernardino.

1944: Wong Nim's structures demolished.

1949–1951: State of California (San Bernardino County Assessor, 1949–1951, Map Book 3:1).

1951: Sanborn map

225 Third, a long building with an east–west orientation extends along the frontage for most of the width of the lot. It is labeled as "County Off's." and is probably the same building that is extant on the property today. A further notation states it was built in 1951. Two smaller rectangular, structures occupy the area south of the main structure (mostly on Lot 7). The southeastern portion of the lot is obscured by an overlay map of an unassociated section of San Bernardino.

1951–1952: California Department of Transportation expands by building two-story reinforced concrete office wing to east of existing structure.

PARCEL 513: WONG NIM PROPERTY

1890: Wong Nim moves his temple to Kuan Yin to a space at the back of his shop at 28/201 Third Street on the southwest corner of Third and B streets (Lot 8, Block 15) (San Bernardino *Daily Courier*, 20 December 1890:3; Anderson and Lawton 1987:41).

1894: Wong Nim's shop appears on Sanborn map as No. 28 (1894:26), just south of the northeast corner of Lot 8. It is labeled "Joss Ho." Chinese from throughout southern California make pilgrimages to the temple.

1900–1905: Wong Nim assessed for lot and improvements:

1900—Land $465/Improvements $400.
1901—Land $465/Improvements $400.
1902—no amounts shown.
1903—no amounts shown.
1905—no amounts shown.
(San Bernardino County Assessor, Lot Book 13, 1900–1905).

1905–1908: Assessed to Wong Nim, East 50 feet, North 100 feet. No amounts for lot or improvements shown. (San Bernardino County Assessor, 1905–1909, Lot Book 13:24).

1909–1913: Portion of Lot 8 (Parcel #513) assessed to Wong Nim. No amounts for land or improvements shown (San Bernardino County Assessor, 1909–1913, Lot Book 13:24).

1911: February 12—Mah Wing, elderly caretaker of the Chinese temple is murdered in his quarters adjacent to the temple (San Bernardino Superior Court, Case No. 11942, People vs. Ike Wines).

June—The trial of Ike Wines for the murder of Mah Wing ends in a hung jury (seven to five for acquittal) (San Bernardino Superior Court, Case No. 11942, People vs. Ike Wines; Riverside *Enterprise*, 6 June 1911:5).

November 10—After a second trial, Ike Wines is convicted of second-degree murder and sentenced to 25 years at San Quentin (San Bernardino Superior Court, Case No. 11942, People vs. Ike Wines).

1914–1918: Remainder of Lot 8 (Parcel #513) assessed to Wong Nim as follows:

1914—Land $2,500/Improvements $2,000.
1915—Land $2,500/Improvements $1,500.
1916—Land $1,000/Improvements $1,500.
1917—Land $500/Improvements $500/Personal property $500.
1918—Land $500/Improvements $500/Personal property $500.
(San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1930–1935: Wong Nim property measured at East 50.6 feet, North 100 feet, except for railroad right-of-way (City of San Bernardino, Utilities Assessment 1930–1935:257).

1930–1932: Land is assessed at $900/$2,700[?]; improvements at $500 (City of San Bernardino, Utilities Assessment 1930–1935:257).

1933–1935: Land is assessed at $720/2,160[?]; improvements at $400 (City of San Bernardino, Utilities Assessment 1930–1935:257).

1943: December—Wong Nim's property in Lots 7 and 8 auctioned by his executor, Harry L. Allison, to the State of California for $10,800. Property described in court documents as "the North 100 feet of

Lot 8 . . . excepting that portion thereof lying within the right of way of the Pacific Electric Company" (Executor's Deed, Petition for Probate of Will 14312, 1943).

1944: In March, Wong Nim's portion of lot is noted as sold to State of California by Estate of Wong Nim for use of Division of Highways (San Bernardino County Assessor, 1942–1947, Lot Book 124:18).

PACIFIC ELECTRIC RIGHT OF WAY

1916–1917: 25 feet right-of-way through Lot 8 assessed portion $700 to Pacific Electric Railway (San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

1918: Pacific Electric Railway assessed by State of California for right-of-way (margin note, San Bernardino County Assessor, 1914–1918, Lot Book 13:26).

STREETS AND GRADES

1885: The width of C Street is noted at 80 feet, according to Sanborn map.

1888: The widths of C and Third streets are noted as 82 feet. C Street's elevation rises from 10 feet in the southern third of Block 15 to 20 feet at the Starke Hotel.

1891: The widths of C and Third streets are noted as 82 feet. C Street's elevation rises from 10 feet in the southern third of Block 15 to 20 feet at the Starke Hotel.

1894: Arrowhead (C Street) and Mountain View (B Street) avenues are measured at 82.5 feet on the Sanborn. Second and Third streets are both measured at 82.5 feet wide on the Sanborn map.

A.2 CHINESE NAMES IN CENSUS REPORTS

A.2.1 KEY TO CENSUS TRANSCRIPTIONS

AFM – Age at first marriage
AGE – Age at last birthday
BTH – Place of birth of this person, naming State or Territory of U.S.; or the country, if of foreign birth
- CA - California
- CH – China
- CTN – Canton
- OH – Ohio
- OR - Oregon

CIVIL – Civil (Marital) Condition
- D - Divorced
- M – Married
- S – Single
- W – Widowed
- & - Unknown; this symbol, which appears to be an ampersand, was entered into this column on the 1900 census. The meaning of this symbol was not discovered.

COW – Class of Worker
- O – Owner
- W - Worker

CR – Cannot read
CT – Census taker's initials
- 1880: CH – Clarence C. Haskell
  - GH – George L. Hisom
  - SM – S.R. Magee
- 1900: JR – John C. Rollins
  - KC – K.W. Clark
  - LA – Legau Allen
  - TP – Thomas Phillips
  - WL – W.J. Lawrence
- 1920: EB – Effye Bonman
  - IB – Irene H. Breeze
- 1930: GO – Grace Olds

CW – Cannot write
DIS – Permanent disabilities
- B – Blind
- DD – Deaf and Dumb
- I – Idiotic
- IN – Insane
- M – Maimed, crippled, bedridden or otherwise disabled

ED – Enumeration District

EMP – Whether actually employeed
EN – Whether able to speak English
FA – Place of Birth of the Father of this person, naming the State or Territory of United States or the Country, if of foreign birth (see BTH for abbreviations used)
FMT – Mother tongue of the father of person being enumerated
CSE– Chinese
H/F – Type of dwelling; house or farm
F – Farm
H - House
HM – Home owned or rented
O – owned
R – rented
UNK - Unknown
IM – Year of immigration to the United States
IND – Industry
LG – Language spoken in home before coming to the United States
C - Chinese
LINE – Line number of entry on page
LOC – Location of residence within San Bernardino
CG – China Gardens (agricultural area east of Waterman Ave., beyond city limits)
CH – County Hospital
CN – Chinatown on (3rd St. between Arrowhead and Mountain View)
DH – Downtown, hospital
DT – Downtown San Bernardino; central business district
GEN – General location / no specific locale; within boundaries of study area
ND – Northern area of enumeration district; no specific locale
SD – Southern area of enumeration district; no specific locale
WD – Western area of enumeration district; no specific locale
RR – Railroad camp at San Timoteo
MO - Place of Birth of the Mother of this person, naming the State or Territory of United States or the Country, if of foreign birth (see BTH for abbreviations used)
MMT – Mother tongue of the mother of person being enumerated
CSE– Chinese
MT – Mother tongue of person being enumerated
CSE– Chinese
NA – Whether or not person being enumerated has been naturalized
AL - Alien
NA – Naturalized
NA YR – If naturalized, year of naturalization
NAME - Name of every person whose usual place of abode was in this family on a certain date within the census year. Various dates apply based on the year of census:
1880 – June 1, 1880
1900 – June 1, 1900
1920 – January 1, 1920 (children born on or after this date were omitted from enumeration)

1930 – April 1, 1930
NOB – Nature of business, industry, or establishment in which this person works
OCC – Occupation
OM – If home is owned, is it free or mortgaged
O – owned free
M - mortgaged
PG – Page number of federal census
RD – Whether able to read
REL – Relationship of each person to the head of this family whether wife, son, daughter servants, boarder, or other
HH – Head of household
RS – Is there a radio set in the home
RW – Whether able to read and write
SC – Did person being enumerated attend school in census year:
1920: Attended school anytime since September 1, 1919
1930: Attended school anytime since September 1, 1929
ST – Status of Employment; whether an employee, employer, or working on own Account
W – Worker / Employee
EM – Employer
OA – Working on own account
SX – Sex of person being enumerated
F –Female
M – Male
UEMP – Months not employed during census year
US – Number of years in the United States
Un – Unknown
VET – Whether a Veteran of the U.S. Military or Naval forces mobilized for any war or Expedition.
VH – Value of home if owned, or monthly rental if rented
WRT – Whether able to write
YM – Number of years married

A.2.2: Chinese Population Enumerated on 1880 San Bernardino Census

	ED	LOC	PG	LINE	CT	NAME	SX	AGE	REL	CIVIL	OCC	UEMP	DIS	CR	CW	BTH	FA	MO
1	112	CN	470A	10	SM	Jim, Ah	M	26	boarder	S	laundryman	6		X	X	CH	CH	CH
2	112	CN	470A	11	SM	Ho, Charlee	M	23	boarder	S	hotel cook			X	X	CH	CH	CH
3	112	CN	470A	12	SM	Ying, Ah	M	28	boarder	S	gardner			X	X	CH	CH	CH
4	112	CN	470A	13	SM	Sing, Ah	M	25	boarder	S	hotel cook					CH	CH	CH
5	112	CN	470A	14	SM	Lee, Tome	M	17	boarder	S	laundryman					CH	CH	CH
6	112	CN	470A	15	SM	Wong, Yo	M	23	boarder	S	washerman			X	X	CH	CH	CH
7	112	CN	470A	16	SM	Wong, Yang	M	20	boarder	M	ironer presser			X	X	CH	CH	CH
8	112	CN	470A	17	SM	Wong, Lee Long	M	22	boarder	M	washerman			X	X	CH	CH	CH
9	112	CN	470A	18	SM	Wong, Quay	M	20	boarder	M	washerman			X	X	CH	CH	CH
10	112	CN	470A	19	SM	Wong, Song	M	23	boarder	S	washerman			X	X	CH	CH	CH
11	112	CN	470A	20	SM	Yee, Ah	M	24	boarder	S	washerman			X	X	CH	CH	CH
12	112	CN	470A	22	SM	Yee, Kee	M	40	HH	M	merchant					CH	CH	CH
13	112	CN	470A	23	SM	Mrs. Yee Kee	F	30	wife	M	housekeeper			X	X	CH	CH	CH
14	112	CN	470A	24	SM	Soo, Ah	M	42	boarder	S		12		X	X	CH	CH	CH
15	112	CN	470A	25	SM	Yen, Ah	M	30	boarder	S	barber			X	X	CH	CH	CH
16	64	CN	501D	23	GH	Wong, Kong	M	20	HH	S	cook					CH	CH	CH
17	64	CN	501D	24	GH	Nim	M	25	boarder	S	agent					CH	CH	CH
18	64	CN	501D	25	GH	3 Chinamen	M	30	boarder	S	ironing					CH	CH	CH
19	64	CN	501D	26	GH	(Will not Give	M	35	boarder	S	washerman					CH	CH	CH
20	64	CN	501D	27	GH	Name)	M	35	boarder	S	washerman					CH	CH	CH
21	64	CG	512A	26	GH	Wong, Ung	M	19	HH	S	gardner					CH	CH	CH
22	64	CG	512A	27	GH	Wong, Wala	M	62	uncle	M	gardner		DD			CH	CH	CH
23	64	CG	512A	28	GH	Wong, Guay	M	18	cousin	S	gardner					CH	CH	CH
24	64	CG	512A	29	GH	Wong, Hong	M	15	cousin	S	gardner					CH	CH	CH
25	64	CG	512A	30	GH	John	M	19	boarder	S	gardner					CH	CH	CH
26	64	CG	512A	31	GH	John	M	21	cousin	S	gardner					CH	CH	CH
27	64	CG	512A	49	GH	Dooner, Charlie	M	20	HH	S	gardner					CH	CH	CH
28	64	CG	512A	50	GH	Ah Toy	M	20	boarder	S	gardner					CH	CH	CH
29	64	CG	512A	51	GH	Ah Tom	M	18	boarder	S	gardner					CH	CH	CH
30	64	CG	512B	1	GH	John	M	21	boarder	S	gardner			X	X	CH	CH	CH
31	64	CG	512B	2	GH	Lau	M	23	boarder	S	gardner			X	X	CH	CH	CH
32	64	CG	512B	3	GH	Ah Sam	M	24	boarder	S	gardner			X	X	CH	CH	CH
33	64	CG	512B	4	GH	Ah Jim	M	22	boarder	S	gardner			X	X	CH	CH	CH
34	64	CG	512B	5	GH	Wong	M	17	boarder	S	gardner			X	X	CH	CH	CH
35	64	CG	515D	33	GH	Quong, Fong	M	20	HH	S	gardner					CH	CH	CH
36	64	CG	515D	34	GH	John (a Chinaman	M	18	boarder	S	gardner					CH	CH	CH
37	64	CG	515D	35	GH	John	M	21	boarder	S	gardner					CH	CH	CH
38	64	CG	515D	36	GH	John	M	30	boarder	S	gardner					CH	CH	CH

A.2.2: Chinese Population Enumerated on 1880 San Bernardino Census

	ED	LOC	PG	LINE	CT	NAME	SX	AGE	REL	CIVIL	OCC	UEMP	DIS	CR	CW	BTH	FA	MO
39	64	CG	515D	37	GH	John	M	23	boarder	S	gardner					CH	CH	CH
40	63	DH	472A	10	SM	Yuen, Woo	M	31	HH	M	laundryman					CH	CH	CH
41	63	DH	472A	11	SM	Sing, Que	M	19	boarder	S	washerman					CH	CH	CH
42	63	DH	472A	12	SM	Sue, Ah	M	22	boarder	M	washerman					CH	CH	CH
43	63	DH	472A	13	SM	Moon, Ah	M	25	boarder	S	ironer					CH	CH	CH
44	63	DH	472A	14	SM	Chung, Ah	M	20	boarder	S	cook					CH	CH	CH
45	64	GEN	500A	10	GH	Hop, Jim	M	22	boarder	S	cook			X	X	CH	CH	CH
46	64	GEN	500A	11	GH	Hop, Sam	M	19	boarder	S	cook			X	X	CH	CH	CH
47	64	GEN	500A	16	GH	Heong	M	50	HH	M	gardner					CH	CH	CH
48	64	GEN	500A	17	GH	Wee	M	25	boarder	M	gardner					CH	CH	CH
49	64	GEN	500A	18	GH	Fong	M	40	boarder	M	gardner					CH	CH	CH
50	64	GEN	500A	19	GH	Yee	M	35	boarder	M	gardner					CH	CH	CH
51	64	GEN	502B	42	GH	John	M	14	boarder	S	servant			X	X	CH	CH	CH
52	64	GEN	503C	7	GH	John	M	25	servant	S	servant			X	X	CH	CH	CH
53	64	GEN	505C	12	GH	John (Ah Sin)	M	25	boarder	S	laborer					CH	CH	CH
54	64	GEN	518B	1	GH	Hoo Jim	M	20	servant		cook					CH	CH	CH
55	64	GEN	521C	44	GH	Ah Foy	M	24	servant	S	cook					CH	CH	CH
56	65	GEN	528A	38	CH	Lee	M	35	HH	S	washing					CH	CH	CH
57	65	GEN	528A	39	CH	Ching Gow	M	30	other	S	washing					CH	CH	CH
58	65	GEN	528A	40	CH	Hop Lee	M	25	other	S	washing					CH	CH	CH
59	65	RR	528A	31	CH	Ho	M	30	HH	S	railroad worker					CH	CH	CH
60	65	RR	528A	32	CH	Wan	M	37	other	M	railroad worker					CH	CH	CH
61	65	RR	528A	33	CH	Kee	M	31	other	M	railroad worker					CH	CH	CH
62	65	RR	528A	34	CH	Pete	M	20	other	M	railroad worker					CH	CH	CH
63	65	RR	528A	35	CH	Sam	M	32	other	M	railroad worker					CH	CH	CH
64	65	RR	528A	36	CH	Woan	M	34	other	M	railroad worker					CH	CH	CH
65	65	RR	528A	41	CH	Ah Sam	M	30	HH	M	railroad worker			X	X	CTN	CTN	CTN
66	65	RR	528A	42	CH	Ah Slewy	M	25	other	S	railroad worker					CTN	CTN	CTN
67	65	RR	528A	43	CH	Ah Talk	M	45	other	M	railroad worker					CTN	CTN	CTN
68	65	RR	528A	44	CH	Ah Sah	M	45	other	M	railroad worker					CTN	CTN	CTN
69	63	UNK	471D	28	SM	Charley	M	25	servant	S	cook					CH	CH	CH
70	63	UNK	496A	50	SM	Too, Ah	M	21	other	S	servant					CH	CH	CH

A.2.3: Chinese Population Enumerated on 1900 San Bernardino Census

	ED	LOC	PG	LINE	CT	NAME	REL	SX	BRN	YR	AGE	CIVIL	YM	CH	BTH	FA	MO	IM	US	NA	OCC	UEMP	RD	WRT	EN	HM	H/F	FS
1	224	WD	10A	10	TP	Fong Wong	HH	M	Sept	1865	34	M			CH	CH	CH				merchant		yes	yes	yes		H	
2	224	WD	10A	11	TP	Sing La	lodger	M	Sept	1864	35	S			CH	CH	CH				servant		yes	yes	yes			
3	224	WD	10A	12	TP	Chow Jon	lodger	M			34	S			CH	CH	CH				day laborer		no	no	yes			
4	224	ND	7A	1	TP	Tom Wong	HH	M	Jan	1885	45	S			CH	CH	CH						no	no	yes		H	
5	224	CN	7A	33	TP	Wo Ming	HH	M	Oct	1861	38	S			CH	CH	CH	1874	26		laundry		no	no	yes		H	
6	224	CN	7A	34	TP	So Wo	boarder	M	Oct	1860	39	S			CH	CH	CH		19		laundryman		no	no	yes			
7	224	CN	7A	35	TP	Bo John	boarder	M	July	1858	41	S			CH	CH	CH		22		laundryman		no	no	yes			
8	224	CN	7A	36	TP	Chu Sah	boarder	M	Aug	1857	42	S			CH	CH	CH		24		laundryman		no	no	yes			
9	224	CN	7A	37	TP	Chow Wong	HH	M	Jan	1846	54	S			CH	CH	CH		20		priest		no	no	yes		H	
10	224	CN	7A	38	TP	Mak Chow	HH	M	July	1849	50	S			CH	CH	CH		26		cook		no	no	yes			
11	224	CN	7A	39	TP	Foo Wong		M	Nov	1864	35	S			CH	CH	CH		22		store keeper		no	no	no			
12	224	CN	7A	40	TP	Fay Wong	HH	M	May	1864	36	S			CH	CH	CH		20		doctor		yes	yes	yes			
13	224	CN	7A	41	TP	Chin Hing Wong	HH	M	June	1872	27	S			CH	CH	CH		7		salesman		no	no	yes			
14	224	CN	7A	42	TP	Nim Wong	HH	M	Apr	1855	45	S			CH	CH	CH		26		merchant		no	no	yes		H	
15	224	CN	7A	43	TP	Li Wong		M	Oct	1867	62	S			CH	CH	CH		20		day laborer		no	no	no			
16	224	CN	7A	44	TP	Ti Wong	boarder	M	Sept	1853	46	S			CH	CH	CH				day laborer							
17	224	CN	7A	45	TP	Hand Wong	boarder	M	Aug	1863	36	S			CH	CH	CH		21		merchant							
18	224	CN	7A	46	TP	Hing Wong	boarder	M	Nov	1834	65	S			CH	CH	CH		40		day laborer							
19	224	CN	7A	47	TP	Chung Gee	HH	M	Mar	1854	46	M			CH	CH	CH		6		merchant		yes	yes	yes			
20	224	CN	7A	48	TP	Shang Wong	boarder	M	May	1866	36	M			CH	CH	CH		20		day laborer		yes	yes	yes			
21	224	CN	7A	49	TP	Bong Lee	boarder	M	Nov	1854	45	M			CH	CH	CH		25		day laborer		no	no	no			
22	224	CN	7A	50	TP	Chow Wong	boarder	M	Apr	1866	34	S			CH	CH	CH		20		cook		no	no	yes			
23	224	CN	7B	51	TP	Chin Wong	HH	M	July	1860	39	M	5		CH	CH	CH		21		merchant		yes	yes	yes		H	
24	224	CN	7B	52	TP	Sun Wong	HH	M	Nov	1865	54	M			CH	CH	CH		20		merchant		no	no	no			
25	224	CN	7B	53	TP	Chin Yip	head wife	F	Feb	1878	22	M	5	0	CH	CH	CH		5				no	no	yes			
26	224	CN	7B	54	TP	You Wong	HH	M	June	1857	42	M	16		CH	CH	CH		16		laundryman		no	no	yes			
27	224	CN	7B	55	TP	Saing Wong	HH	M	Oct	1852	41	S			CH	CH	CH		25		butcher		no	no	yes			
28	224	CN	7B	56	TP	Ong Jow	HH	M	Aug	1860	39	M	4		CH	CH	CH		20		merchant		no	no	yes			
29	224	CN	7B	57	TP	Herbert Ming	boarder	M	Aug	1861	38	S			CH	CH	CH		19		day laborer		yes	yes	yes			
30	224	CN	7B	58	TP	Lam Wo	boarder	M	Mar	1865	55	S			CH	CH	CH		19		day laborer		no	no	yes			
31	224	CN	7B	59	TP	Fung Tong	boarder	M	Aug	1857	42	M	22		CH	CH	CH		20		cook		no	no	yes			
32	224	CN	7B	60	TP	Chin Ham	boarder	M	Sept	1842	57	S			CH	CH	CH		35		cook		no	no	yes			
33	224	CN	7B	61	TP	Sam Joe	boarder	M	June	1870	30	M	4		CH	CH	CH		16		merchant		yes	yes	yes			
34	224	CN	7B	62	TP	Si Wong Po	wife	F	Feb	1870	30	M	4	0	CH	CH	CH		10				no	no	no			
35	224	CN	7B	70	TP	Foy Wong	HH	M	Sept	1868	31	S			CH	CH	CH		18		laundryman		no	no	yes		H	
36	224	CN	7B	71	TP	Gow Wong	boarder	M	Sept	1870	29	S			CH	CH	CH		11		laundryman		no	no	yes			
37	224	CN	7B	72	TP	Minn Wong	boarder	M	Feb	1870	30	S			CH	CH	CH		18		laundryman		no	no	yes			
38	224	CN	7B	73	TP	Ling Wong	boarder	M	June	1846	53	M			CH	CH	CH		25		laundryman		no	no	yes			
39	224	CN	7B	74	TP	Wo Wong	HH	M	Jan	1854	46	S			CH	CH	CH		25		laundryman		no	no	yes			
40	224	DT	9B	100	TP	May Wong	HH	M	Oct	1847	52	S			CH	CH	CH				laundryman		no	no	yes		H	
41	225	DT	11A	22	LA	Gown Wong	employee	M	Oct	1864	35	S			CH	CH	CH	1880	20	AL	cook	0	yes	yes	yes			

A.2.3: Chinese Population Enumerated on 1900 San Bernardino Census

	ED	LOC	PG	LINE	CT	NAME	REL	SX	BRN	YR	AGE	CIVIL	YM	CH	BTH	FA	MO	IM	US	NA	OCC	UEMP	RD	WRT	EN	HM	H/F	FS
42	225	DT	11A	23	LA	Tan Wong	employee	M	Dec	1855	44	S			CH	CH	CH	1875	25	AL	cook	0	yes	yes	yes			
43	225	DT	11A	24	LA	Guy Wong	employee	M	May	1866	34	S			CH	CH	CH	1879	21	AL	cook	0	yes	yes	yes			
44	225	DT	2A	4	LA	Hung Wong	servant	M	May	1865	35	S			CH	CH	CH	1875	25	AL	cook	0	yes	yes	yes			
45	226	CH	10B	56	JR	Wong, May	inmate	M			42				CH	CH	CH			AL	cook	0	no	no	yes			
46	226	SD	1A	27	JR	Sam Wong	HH	M		1854	46	&			CH	CH	CH			AL	laundry	0	no	no	no	R	H	
47	226	SD	1A	28	JR	Tong Wong	servant	M		1861	39	&			CH	CH	CH			AL	laundry	0	no	no	no			
48	226	SD	1A	29	JR	Guy Wong	servant	M		1864	36	&			CH	CH	CH			AL	laundry	0	no	no	no			
49	226	SD	1A	30	JR	Wong Chin Sing	servant	M		1871	29	&			CH	CH	CH			AL	laundry	0	no	no	no			
50	226	SD	1A	31	JR	Wong Ang Chung	servant	M		1854	46	&			CH	CH	CH			AL	laundry	0	no	no	no			
51	226	SD	1A	32	JR	Wong Kim	servant	M		1851	49	&			CH	CH	CH			AL	laundry		no	no	no			
52	228	WD	11A	18	KC	Hang Wong	proprietor	M	Jan	1862	38	S			CH	CH	CH	1876	24	AL	Sing Lee Laundry	0	yes	yes	yes	R	H	
53	228	WD	11A	19	KC	See wong	partner	M	Aug	1865	34	M	15		CH	CH	CH	1881	19	AL	partner in laundry	0	yes	yes	yes			
54	228	WD	11A	20	KC	Wo Wong	employee	M	Oct	1866	33	S			CH	CH	CH	1880	20	AL	employee	0	no	no	no			
55	228	WD	11A	21	KC	Lin Ah	employee	M	Oct	1858	41	M	14		CH	CH	CH	1875	25	AL	employee	0	no	no	no			
56	228	WD	11A	22	KC	Lalong Wang	employee	M	Jan	1853	47	M	20		CH	CH	CH	1875	25	AL	employee	0	no	no	no			
57	234	CG	12B	56	WL	Yong Shin	HH	M	Sept	1868	31	S			CH	CH	CH		Un	AL	farmer		yes	yes	yes	R	F	256
58	234	CG	12B	57	WL	Gee Same	boarder	M	Nov	1847	53	S			CH	CH	CH		Un	AL	farm laborer		yes	yes	no			
59	234	CG	12B	58	WL	Tung Tang	boarder	M	Jan	1851	49	M			CH	CH	CH	1880	20	AL	farm laborer		no	no	no			
60	234	CG	12B	59	WL	Me Yong Sin	boarder	M	June	1854	45	M			CH	CH	CH		Un	AL	farm laborer		yes	yes	no			
61	234	CG	12B	60	WL	Ting Doy Ye	boarder	M	Oct	1846	53	M			CH	CH	CH		Un	AL	farm laborer		yes	yes	no			
62	234	CG	12B	61	WL	Ming Lee Nei	boarder	M	May	1857	43	M			CH	CH	CH	1881	19	AL	farm laborer		yes	yes	no			
63	234	CG	12B	62	WL	Gee Lee	boarder	M	Oct	1859	41	M			CH	CH	CH	1880	20	AL	farm laborer		no	no	no			
64	234	CG	12B	63	WL	Wang Shin	boarder	M	Feb	1863	37	M			CH	CH	CH	1880	20	AL	farm laborer		no	no	no			
65	234	CG	12B	64	WL	Wing Loy	boarder	M	Feb	1863	37	M			CH	CH	CH		Un	AL	farm laborer		no	no	no			
66	234	CG	12B	65	WL	Long Gee Hing	boarder	M	Jan	1861	39	S			CH	CH	CH		Un	AL	farm laborer		no	no	no			
67	234	CG	12B	66	WL	Tuoy Thin	boarder	M	Jan	1861	39	S			CH	CH	CH		Un	AL	farm laborer		no	no	no			
68	234	CG	12B	67	WL	Wing Lee Key	boarder	M		1855	45	M			CH	CH	CH		Un	AL	farm laborer		yes	yes	no			
69	234	CG	12B	83	WL	Yum Lung	HH	M		1861	39				CH	CH	CH		Un		vegetable gardener		yes	yes	no	R	F	262
70	234	CG	12B	84	WL	Hew Wong Sue	boarder	M		1840	60	M	1		CH	CH	CH	1879	21	AL	laborer		yes	yes	no			
71	234	CG	12B	85	WL	Bui Gok	boarder	M		1845	55	M	1		CH	CH	CH	1861	34	AL	vegetable gardener		yes	yes	no			
72	234	CG	12B	86	WL	Hew Wong	boarder	M		1854	46	M	1		CH	CH	CH	1884	16	AL	farm laborer		yes	yes	no			
73	234	CG	12B	87	WL	Li Lou	boarder	M		1849	51	M	1		CH	CH	CH	1894	6	AL	farm laborer		no	no	no			
74	234	CG	12B	88	WL	Lou Wong	boarder	M		1849	51	M	1		CH	CH	CH	1886	14	AL	farm laborer		no	no	no			
75	234	CG	12B	89	WL	Hay Wong	boarder	M	July	1841	59	S			CH	CH	CH	1885	15	AL	farm laborer		no	no	yes			
76	234	CG	12B	90	WL	Sing Yong	boarder	M	Oct	1870	30	S			CH	CH	CH	1880	20	AL	farm laborer		yes	yes	no			
77	234	CG	12B	91	WL	Hah Long	boarder	M	Oct	1868	32	S			CH	CH	CH	1876	14	AL	farm laborer		yes	yes	no			
78	234	CG	13A	39	WL	Sing Lee	HH	M	Aug	1855	44	S			CH	CH	CH	1881	19	AL	farmer		yes	yes	yes	R	F	277
79	234	CG	13A	40	WL	Fak Hung	boarder	M	Sept	1868	31	S			CH	CH	CH	1879	21	AL	farm laborer		yes	yes	yes			
80	234	CG	13A	41	WL	Long Lee	boarder	M	Aug	1857	42	S			CH	CH	CH	1879	21	AL	farm laborer		yes	yes	yes			
81	234	CG	13A	42	WL	Ling Gow	boarder	M	May	1852	48	M	20		CH	CH	CH	1876	24	AL	farm laborer		yes	yes	yes			
82	234	CG	13A	43	WL	Kee Lee	boarder	M	Jan	1862	38	M	13		CH	CH	CH	1881	19	AL	farm laborer		yes	yes	yes			

A.2.3: Chinese Population Enumerated on 1900 San Bernardino Census

	ED	LOC	PG	LINE	CT	NAME	REL	SX	BRN	YR	AGE	CIVIL	YM	CH	BTH	FA	MO	IM	US	NA	OCC	UEMP	RD	WRT	EN	HM	H/F	FS
83	234	CG	13A	44	WL	Gook Lee	boarder	M	July	1863	37	S			CH	CH	CH	1880	20	AL	farm laborer		yes	yes	no			
84	234	CG	13A	45	WL	Wong Gin	boarder	M	July	1849	50	M	30		CH	CH	CH	1876	24	AL	farm laborer		yes	yes	no			
85	234	CG	13A	46	WL	Lee Wah	boarder	M	Sept	1856	43	S			CH	CH	CH	1876	24	AL	farm laborer		yes	yes	yes			
86	234	CG	13A	47	WL	Teong Wong	boarder	M	Aug	1848	51	M	20		CH	CH	CH	1881	19	AL	farm laborer		yes	yes	no			
87	234	CG	13A	48	WL	Fong Ah	boarder	M	July	1856	43	M	17		CH	CH	CH	1876	24	AL	farm laborer		yes	yes	no			
88	234	CG	13A	49	WL	Gong Hong	boarder	M	Nov	1853	46	S			CH	CH	CH	1880	20	AL	farm laborer		yes	yes	no			
89	234	CG	13A	50	WL	Pok Ah	boarder	M	June	1860	39	S			CH	CH	CH	1880	20	AL	farm laborer		yes	yes	no			
90	234	CG	15A	46	WL	Sam Wong	HH	M	Sept	1861	38	M			CH	CH	CH	1881	19		vegetable gardener		yes	yes	yes		F	314
91	234	CG	15A	47	WL	Toy Dong	boarder	M		1850	50	M			CH	CH	CH		28		farm laborer		yes	yes	yes			
92	234	CG	15A	48	WL	Sam Wong	boarder	M		1849	51	M			CH	CH	CH		22		farm laborer		yes	yes	yes			
93	234	CG	15A	49	WL	Hin Wong	boarder	M		1852	48	M			CH	CH	CH		19		farm laborer		yes	yes	no			
94	234	CG	15A	50	WL	Ling Hong	boarder	M		1856	44	M			CH	CH	CH		18		farm laborer		yes	yes	yes			
95	234	CG	15B	51	WL	Gong Wong	boarder	M		1857	43	M			CH	CH	CH		18		farm laborer		yes	yes	no			
96	234	CG	15B	52	WL	Wah Wong	boarder	M		1859	41	M			CH	CH	CH		20		farm laborer		yes	yes	no			
97	234	CG	15B	53	WL	Pong Ah	boarder	M		1846	54	M			CH	CH	CH		30		farm laborer		yes	yes	no			
98	234	CG	15B	54	WL	Sing Wong Chi	boarder	M		1843	57	M			CH	CH	CH		20		farm laborer		yes	yes	no			
99	234	CG	15B	55	WL	Wong Long	boarder	M		1862	38	M			CH	CH	CH		19		farm laborer		yes	yes	no			

A.2.4: Chinese Population Enumerated on 1920 Census Living Within San Bernardino City Limits

	ED	LOC	PG	LINE	CT	NAME	REL	HM	OM	SX	AGE	CIVIL	IM	NA	NA YR	SC	RD	WRT	BTH	MT	FA	FMT	MO	MMT	EN	OCC	NOB	ST
1	199	DT	6A	12	IB	Yee Carrie	HH	R		F	31	M					no	no	CA		CH	CSE	CA		yes	manager	restaurant	EM
2	199	DT	6A	13	IB	Lee Francis	sister			F	19	S					yes	yes	CA		CH	CSE	CA		yes	dishwasher	restaurant	W
3	199	DT	6A	14	IB	Vin Jim Yet	lodger			M	16	S		AL		yes	yes	yes	CH	CSE	CA		CH	CSE	yes	cook	restaurant	W
4	199	DT	6A	15	IB	Hoi Suen	lodger			M	15	S		AL		yes	yes	yes	CH	CSE	CA		CH	CSE	yes	waiter	restaurant	W
5	199	CN	6B	92	IB	Wong Joe	HH	R		M	34	M					yes	yes	CA		CH		CH	CSE	yes	peddler	vegetable wagon	OA
6	199	CN	6B	93	IB	Wong Chow	lodger			M	48	S		AL			no	no	CH	CSE	CH		CH	CSE	yes	peddler	vegetable wagon	OA
7	199	CN	6B	94	IB	Wong Hee	lodger			M	54	M		AL			yes	yes	CH	CSE	CH	CSE	CH	CSE	yes	peddler	vegetable wagon	OA
8	199	CN	6B	95	IB	Wong Foo	lodger			M	50	S		AL			no	no	CH	CSE	CH	CSE	CH	CSE	yes	peddler	vegetable wagon	OA
9	199	CN	6B	96	IB	Chinn Low	lodger			M	58	M	1880	NA	1890		no	no	CH	CSE	CH	CSE	CH	CSE	yes	cook	restaurant	W
10	199	CN	6B	97	IB	Lee Han	lodger			M	50	M	1882	NA	1895		yes	yes	CH	CSE	CH	CSE	CH	CSE	yes	proprietor	retail notions	OA
11	199	CN	6B	98	IB	Wong Hing John	HH	R		M	52	M	1887	AL			yes	yes	CH	CSE	CH	CSE	CH	CSE	yes	proprietor	retail ivory	OA
12	199	CN	6B	99	IB	Wu Luin	lodger			M	54	M	1887	AL			yes	yes	CH	CSE	CH	CSE	CH	CSE	yes	peddler	vegetable wagon	OA
13	199	CN	6B	100	IB	Wong Moi	HH	R		M	46	M	1887	AL			yes	yes	CH	CSE	CH	CSE	CH	CSE	yes	proprietor	retail dry goods ivory	EM
14	199	CN	7A	1	IB	Hing Low	lodger			M	46	M	1895	AL			yes	yes	CH	CSE	CH	CSE	CH	CSE	no	cook	restaurant	W
15	199	CN	7A	2	IB	Wong May	HH	R		M	50	M		AL			yes	yes	CH	CSE	CH	CSE	CH	CSE	yes	proprietor	retail merchandise	OA
16	199	CN	7A	3	IB	Jung 1	lodger			M	60	M		AL			yes	yes	CH	CSE	CH	CSE	CH	CSE	no	proprietor	drug store	OA
17	199	CN	7A	4	IB	Yaw Lee	HH	R		M	53	M		AL			yes	yes	CH	CSE	CH	CSE	CH	CSE	no	proprietor	retail merchandise	OA
18	200	CN	3A	14	EB	Sing Hee	HH	R		M	48	M	1901	AL			no	no	CH	CSE	CH	CSE	CH	CSE	no	laundryman	own service	OA
19	200	CN	3A	15	EB	Heng Wong	HH	R		M	56	M	1880	AL			no	no	CH	CSE	CH	CSE	CH	CSE	no	merchant	general merchandise	OA
20	200	CN	3A	16	EB	Sam Wong	partner			M	49	M	1882	AL			no	no	CH	CSE	CH	CSE	CH	CSE	no	merchant	general merchandise	OA
21	200	CN	3A	17	EB	Tony Wong				M		S		AL			no	no	CH	CSE	CH	CSE	CH	CSE	no	merchant	general merchandise	OA
22	200	CN	3A	18	EB	Nim Wong	HH	O	F	M	64	M					no	no	CA		CH	CSE	CH	CSE	no	merchant	general merchandise	OA

A.2.5: Chinese Population Enumerated on 1930 San Bernardino Census

	ED	LOC	PG	LINE	CT	NAME	REL	HM	VH	RS	SX	AGE	CIVIL	AFM	AS	RW	BTH	FA	MO	LG	IM	NA	EN	OCC	IND	COW	EMP	VET
1	77	CN	13A	36	GO	Wong, Poy	HH	R	$35.00	No	M	26	M	25	No	Yes	CH	CH	CH	C	1919	AL	Yes	Retail Merchant	Merchandise	O	Yes	No
2	77	CN	13A	37	GO	, Sam	Mother				M	67	M	30	No	Yes	CH	CH	CH	C	1881	AL	Yes	Retail Merchant	Merchandise	O	Yes	No
3	77	CN	13A	38	GO	Lee, Charlie	HH	R	$30.00	No	M	33	M	18	No	Yes	CH	CA	CA	C	1909	NA	Yes	Retail Merchant	Merchandise	O	Yes	No
4	77	CN	13A	39	GO	Wong, Ray	HH	R	$30.00	No	M	28	M	20	No	Yes	CH	CH	CH	C	1916	NA	Yes	Retail Merchant	Merchandise	O	Yes	No
5	77	CN	13A	40	GO	Wong, Roy	Cousin				M	26	M	22	No	Yes	CH	CH	CH	C	1919	NA	Yes	Retail Merchant	Merchandise	W	Yes	No
6	77	CN	13A	41	GO	Choy, Soon	HH		Unk	No	M	26	S		No	Yes	CH	CA	CA	C	1916	NA	Yes	Waiter	Restaurant	W	No	No
7	77	CN	13A	42	GO	Wong, Lun	Lodger				M	24	S		No	Yes	CH	Ca	CH	C	1921	AL	Yes	Truck Driver	Veg. Produce Co.	W	No	No
8	77	CN	13A	43	GO	Lon, Woo	Lodger				M	28	S		No	Yes	CH	CH	CH	C	1917	AL	Yes	Waiter	Restaurant	W	No	No
9	77	CN	13A	44	GO	Soo, Wonglow	HH	R	$40.00	No	M	67	M	47	No	Yes	CH	CH	CH	C	1876	AL	Yes	Cook	Hotel	W	No	No
10	77	CN	13A	45	GO	Loo, Hing	Lodger				M	56	M		No	Yes	CH	CH	CH	C	1905	AL	Yes	None				No
11	77	CN	13A	46	GO	Wong, Kong	Lodger				M	83	M	33	No	Yes	CH	CH	CH	C	1880	AL	No	None				No
12	77	CN	13A	47	GO	Sing, ?	HH	R	$30.00	No	M	60	M	20	No	Yes	CH	CH	CH	C	1898	AL	No	None				No
13	77	CN	13A	48	GO	Fong, Wong	Lodger				M	48	S		No	Yes	CH	CH	CH	C	1908	AL	No	Retail Merchant	Merchandise	O		No
14	77	CN	13A	49	GO	Loy, Louie	Lodger				M	45	M	25	No	Yes	CH	CH	CH	C	1910	AL	No	None				No
15	77	CN	13A	50	GO	Sing, Du Wa	Lodger				M	56	M	25	No	Yes	CA	CH	CH	C			No	None				No
16	77	CN	13B	51	GO	Wong, Mongai	HH	R	$40.00	No	M	45	M	25	No	Yes	CH	CH	CH	C	1906	AL	Yes	Merchant	Merchandise	O	Yes	No
17	77	CN	13B	52	GO	Jang, Loy	Lodger				M	40	M	20	No	Yes	CH	CH	CH	C	1914	AL	Yes	Retail Merchant	Merchandise	O	Yes	No
18	77	CN	13B	53	GO	Lee, Kong	Srvnt Cook				M	50	S		No	Yes	CH	CH	CH	C	1902	AL	Yes	Cook	Restaurant	W	Yes	No
19	77	CN	13B	54	GO	Fong, Monglee	Srvnt Cook				M	53	S		No	Yes	CA	CH	CH			NA	Yes	Cook	Restaurant	W	Yes	No
20	77	CN	13B	55	GO	Hinchong, Wong	HH	R	$35.00	No	M	32	M	28	No	Yes	CH	CH	CH	C	1914	AL	Yes	Retail Merchant	Merchandise	O	Yes	No
21	77	CN	13B	56	GO	Hone Chong Wong	Lodger				M	31	M	26	No	Yes	CH	CH	CH	C	1915	AL	Yes	Retail Merchant	Merchandise	W	Yes	No
22	77	CN	13B	57	GO	Wong, Lenora	Lodger				M	20	M	18	No	Yes	OR	OH	CA				Yes	None				No
23	77	CN	13B	58	GO	Wong, Lai	Lodger				M	40	M	39	No	Yes	OR	CH	CH				Yes	Retail Merchant	Merchandise	O	Yes	No
24	77	CN	13B	59	GO	Nimg, Wong	HH	O	$10,000.00	No	M	75	M	36	No	Yes	CA	CH	CH				Yes	Retail Merchant	Merchandise	O	Yes	No
25	77	CN	13B	60	GO	Hoo, George	Lodger				M	35	S		No	Yes	CH	CA	CH	C	1916	AL	Yes	Cook	Restaurant	W	Yes	No
26	77	CN	13B	61	GO	Yot, Wong	Lodger				M	65	M	20	No	Yes	CH	CH	CH	C	1885	AL	Yes	None				No
27	77	CN	13B	62	GO	Dau, Lim	Lodger				M	17	S		No	Yes	CH	CA	CA	C	1903	AL	Yes	None				No
28	77	CN	13B	63	GO	Song, Wong	HH	R	$20.00	No	M	61	M	30	No	Yes	CH	CH	CH	C	1878	AL	Yes	Retail Merchant	Vegetables	O	Yes	No
29	77	CN	13B	64	GO	Chin, H.E.	HH	R	$20.00	No	M	36	M	33	No	Yes	CH	CH	CH	C	1913	AL	Yes	Retail Merchant	Groceries	O	Yes	No
30	77	CN	13B	65	GO	Kee, Wong	HH	R	$20.00	No	M	41	M	21	No	Yes	CH	CH	CH	C	1909	AL	Yes	Manufacturer	Chairs	O	Yes	No

Appendix B

LIST OF ARCHAEOLOGICAL FEATURES

Caltrans District 8 San Bernardino Headquarters Demolition Project Archaeological Features				
Cut	**Type**	**Lot**	**Description**	**QIVA* Evaluation**
1000	Privy	3	Shallow privy; low recovery	Tested/Rejected
1001	Roasting Oven	Wong Nim	Red brick walls, rock lined-floor	Testd/Recovered
1002	Drain	Wong Nim	Chinatown back yard water drain	Tested/Recovered
1003	Footing	Wong Nim	Temple, red brick and mortar	Tested/Recovered
1004	Utility Trench	Wong Nim	Unexcavated modern trench	Field rejection
1005	Dog Burial	8	Small pet burial	Tested/Recovered
1006	Bricks	6	Brickwork in pond area	Field rejection
1007	Rail Road Spur	5, 6	Trench, ties, and base for railroad	Tested/Rejected
1008	Pit	Wong Nim	Need info	Field rejection
1009	Privy	5	Hotel privy	Tested/Recovered
1010	Pit	6	Need info	Field rejection
1011	Utility Trench	6	Unexcavated modern trench	Field rejection
1012	Wall	6	Need info	Field rejection
1013	Light Pole Base	3	Modern	Field rejection
1014	Pit	6	Refuse pit	Tested/Rejected
1015	Utility Trench	6	Modern	Field rejection
1016	Pit	6	Unexcavated	Field rejection
1017	Pit	6	Refuse pit	Field rejection
1018	Pit	6	Unexcavated	Field rejection
1019	Pit	6	Unexcavated	Field rejection
1020	Pit	6	Unexcavated	Field rejection
1021	Utility Trench	5, 6	Modern	Field rejection
1022	Pit	5	Hotel refuse pit	Tested/Recovered
1023	Privy	5	Hotel privy	Tested/Recovered
1024	Pond	6	No archaeological evidence	Field rejection
1025	Privy	5	Hotel privy	Tested/Recovered
1026	Utility Trench	5, 6	Modern	Field rejection
1027	Utility Casing	5	Modern	Field rejection
1028	Utility Trench	5	Modern	Field rejection
1029	Footing	5	Circa 1930s concrete	Field rejection
1030	Pit	Wong Nim	1950s refuse pit	Tested/Rejected
1031	Drain	Wong Nim	Chinatown back yard water drain	Tested/Recovered

Caltrans District 8 San Bernardino Headquarters Demolition Project Archaeological Features				
Cut	**Type**	**Lot**	**Description**	**QIVA* Evaluation**
1032	Pit	Wong Nim	Chinatown refuse pit	Tested/Recovered
1033	Cook feature?	Wong Nim	Red brick walls	Tested/Recovered
1034	Unassigned			
1035	Privy	Wong Nim	Chinatown privy	Tested/Recovered
1036	Roasting Oven	Wong Nim	Red brick walls; near temple	Tested/Recovered
1037	Brick Feature	Wong Nim	Brick surface in temple area	Field rejection
1038	Utility Trench	Wong Nim	Modern	Field rejection
1039	Pit	Wong Nim	Unexcavated refuse pit	Field rejection
1040	Trench	Wong Nim	Modern	Field rejection
1041	Trench	7	Modern	Field rejection
1042	Pit	7	Sterile pit	Tested/Rejected
1043	Pit	7	Sterile pit	Tested/Rejected
1044	Pit	7	Sterile pit	Tested/Rejected
1045	Pit	7	Sterile pit	Tested/Rejected
1046	Brick Feature	Wong Nim	Linear brick feature; post Chinatown	Field rejected
1047	Pit	Wong Nim	Pit containing steer skull	Teted/Rejected
1048	Pit	Wong Nim	Pit containing steer skull	Tested/Rejected
1049	Pit	Wong Nim	Pit containing steer skull	Tested/Rejected
1050	Pit	Wong Nim	Pit containing steer skull	Tested/Rejected
1051	Pit	3	Refuse pit	Tested/Rejected
1052	Pit	3	Refuse pit	Tested/Rejected
1053	Pit	3	Refuse pit	Tested/Rejected
1054	Pit	3	Refuse pit	Tested/Rejected
1055	Pit	3	Refuse pit	See Appendix C
1056	Pit	Wong Nim	Small Chinatown pit	Tested/Recovered
1057	Sheet refuse	Wong Nim	Chinatown refuse deposit	Tested/Recovered
1058	Privy	Wong Nim	Chinatown privy	Tested/Recovered
1059	Pit	7	Modern disturbance	Tested/Rejected
1060	Drain	Wong Nim, 7	Chinatown backyard water drain	Tested/Recovered

*Features evaluated for: Q = Quantity—Feature lacks sufficient material for substantive analysis.
I = Integrity—Feature is disturbed by or contains modern elements.
V = Variety—Feature lacks a suitable variety of material types for substantive analysis.
A = Association—Feature lacks historic context.

Appendix C

CUT EVALUATION SHEETS FOR TESTED ARCHAEOLOGICAL FEATURES

Appendix D

SPECIALISTS REPORTS

Faunal Analysis
Pollen Analysis
Macrobotanical Analysis
Conservation of Chinese Artifacts

D.1 FAUNAL ANALYSIS

Animal Bones from San Bernardino: Chinatown, a Late Nineteenth Century Hotel, and a Californio Rancho

by Sherri M. Gust and Peter D. Schulz

INTRODUCTION

Animal bones were recovered from three very different contexts in the course of this project. The oldest faunal remains are from the 1840s and may represent a Mexican Period rancho. Animal bones were also recovered from late nineteenth century Euro-American hotel contexts. Finally, abundant faunal remains were associated with Chinatown features dating from the 1880s to the 1940s.

METHODS

Faunal assemblages are impacted by factors that affect the survival of bone, factors that affect recovery and factors that affect the choice of foodstuffs (Reitz 1987). The nineteenth and early twentieth-century faunal bone recovered from sites in California to date has generally been well preserved and the techniques used for excavation have been similar, both factors making the assemblages analytically comparable.

DATA COLLECTION METHODS

Taxon, element, and other data were recorded for all faunal specimens. The comparative collections of the analysts, the California Academy of Sciences, the Museum of Anthropology of the University of California at Davis, the George C. Page Museum and the Natural History Museum of Los Angeles County were used for identification. Mammals and chickens were identified by Sherri Gust of Cogstone Resource Management Inc. Daniel Guthrie of the William Keck Science Center at the Claremont Colleges identified all other birds. Fishes were identified by Peter D. Schulz of Brienes, West & Schulz. Christopher Shaw of the George C. Page Museum assisted Gust in identifying the amphibians and reptiles.

CALCULATION OF BUTCHERING UNITS AND MEAT WEIGHTS

The appropriate parameter for historical faunal studies is the unit of consumer acquisition (Huelsbeck 1991). There are some forms of meat such as sausage, bacon, liver, etc. that do not contain bones and are thus "invisible" in the archaeological record. These do not appear to have been major sources of meat for most consumers (Strickert 1856). Bones of cattle, mutton and pigs were quantified using the steak-equivalents method (Gust 2001). Each cut unit of bone was measured in inches from cut surface to cut surface. The number of steak-equivalents for each retail meat cut was then multiplied by a calculated factor to determine the amount of meat weight represented. The calculated factor was determined by taking the average carcass weight for each

type of animal, dividing it by proportional percentages for each retail cut, then dividing each retail cut by the potential number of steaks for each retail cut. Weights of average, good-grade carcasses were used as proxies for the undeveloped livestock of the nineteenth century. Percentage of meat weight of wholesale and retail cuts and the usual number of steaks in a cut were taken from meat science and farming sources.

For small mammals, birds, and reptiles the minimum number of individuals present were calculated. The minimum number of individuals is the appropriate unit of consumer acquisition of these animals since they were only available as whole carcasses, whether hunted or purchased (until about 1920 in California). Meat weights were calculated by multiplying the number of individuals times an average dressed weight. The meat weights were obtained from a variety of sources (New Mexico Wildlife Federation [NMWF] n.d.; White 1953). Weight estimations for the fish were derived either from bone-dimension to live-weight regressions provided by Casteel (1972) or by extrapolation from known-weight museum specimens (Schulz 1997). Fresh fish was generally offered to the consumer whole for home processing, although larger fish might be processed by the fish market. The most common salt fish (cod and salmon) were gutted, decapitated, and sometimes processed further before salting. For small mammals, birds, reptiles, and fishes, the live weights obtained were then reduced by half to approximate dressed meat weight.

PRICES OF DOMESTIC MEAT ANIMALS

Rankings of retail prices for domestic meat animals were developed (Gust 2001) following the methodology of Schulz and Gust (1983). A summary of the results is provided below.

For beef, the rankings indicate the highest-priced meat section to be the short loin until relatively recently when flank became number one. Sirloin and rib rankings indicate some differences of opinion by various authors as to which was preferred, but both are relatively expensive. Round, rump, and chuck were ranked about equal and are moderately priced cuts. Inexpensive cuts were plate/brisket/navel, shanks, and neck.

Mutton, while rare today, was a common meat in the nineteenth century. Lambs were relatively rare in markets before 1900, but from that time until the 1920s increased in popularity until lamb constituted almost 90 percent of sheep meat. This fact is reflected in the data for the rankings, as no price data for mutton could be found after about 1920.

The mutton rankings indicate that leg was the most expensive cut into the early twentieth century. Loin and rib were generally second and third in price, but there was considerable waffling between these two. In the same time period in which mutton was declining in popularity, there was a definite shift in the price rankings that brought rib to number 1, followed by loin and then leg. Shoulder was moderately priced, followed by breast, and then neck.

Pork rankings are based only on data for fresh pork which is fairly limited, with very little nineteenth-century data available. Almost all cuts of pork were available cured and were ranked in the same order seen for fresh pork, but were slightly more expensive. Loin was the highest ranked cut overall, followed by ham. The shoulder, picnic ham, and spareribs were moderately priced and rank together. Jowls and feet were least expensive.

RESULTS

ANIMAL BONES FROM THE RANCHO

In the sandy banks of Warm Creek, bordering Chinatown, four deposits of cattle bones were uncovered: Features 1047, 1048, 1049, and 1050. A minimum of three cattle skulls were recovered along with a few associated long bones. The animals were approximately 5 years old and no butchering marks were visible. The size and shape of the skulls as well as the long bones distinguished these cattle as the breed typical of Spanish and Mexican California herds.

The vast herds of cattle that roamed early California under Spanish and Mexican rule were small and long-horned (Burcham 1957). Their body weight was about half as much as a modern steer—only 600 pounds. The posterior of the skull exhibits a large boss (bony projection in center) that develops as the cattle mature. It develops partly in response to the increasing weight of the horns laterally and partly in response to the pull of neck muscles that attach on the back of the skull. Such cattle are common in Californio sites, and are discussed in detail in the report on the Ontiveros Adobe (Gust 1982). The skulls and the long bones are much smaller than "improved" livestock of the late nineteenth and early twentieth centuries. The lack of butchering marks is typical of the California style of butchering where muscles are pulled away from the bone, rather than being cross-cut as in the Euro-American style.

These features are located near the sites of the Lúgo brothers' adobe homes and are probably related to their occupation. The bones may be from the 4,000 head of cattle brought to the ranch by the Lúgos in 1839. Individual cattle were regularly butchered to support the Lúgo household, and the waste was thrown into the creek. Natural processes of the creek's sediment distribution buried these particular bones, leaving us a small glimpse of San Bernardino's Rancho past.

ANIMAL BONES FROM THE HOTEL

Hotel Refuse Features

There were four features associated with the Euro-American Starke's Hotel/Bradford Hotel bordering Chinatown. Feature 1022 was a filled pit. Features 1009 and 1023 were privies filled with trash after they were abandoned for use as outhouses. Feature 1025 was a privy that had trash, including food items, thrown in while it was an actively used outhouse—a rarity. All of the hotel features date to the 1890s.

Animal bones represented in the hotel features indicate a strong reliance on domestic meat sources and minimal use of wild game and fish (Table D.1-1). Beef and chicken bones are numerically prominent. A tiny component of wild game is shown by presence of jackrabbit, rabbit, and quail bones as well a single surf perch bone.

The butchering style and marks present on the hotel mammal bones were standard commercial cuts. Steaks, roasts, and soup bones were all utilized. In Feature 1022, the nature of the beef bone is unusual. Fully adult cows and bulls are represented in the sample, rather than the typical subadult steers. The very large stewing/braising cuts of meat are in contrast to the other three hotel deposits.

Table D.1-1
Animals Represented by NISP in Hotel Deposits

Common Name	Scientific Name	1009	1022	1023	1025
Mammals					
Major Meat Mammals					
Cow	*Bos Taurus*	82	243	24	253
Sheep	*Ovis aries*	52	81	0	108
Pig	*Sus scrofa*	38	52	19	55
Minor Meat Mammals					
Cottontail rabbit	*Sylvilagus* sp.	2	0	0	0
Jackrabbit	*Lepus californicus*	7	0	0	0
Incidental Mammals					
Cat	*Felis catus*	0	0	4	29
Rat	*Rattus rattus*	9	0	0	54
Ground squirrel	*Spermophilus beecheyi*	0	0	0	0
Pocket gopher	*Thomomys* sp.	0	0	1	16
Mole	*Scapanus latimanus*	1	0	0	0
Mammals Total		*191*	*376*	*48*	*515*
Birds					
Domestic Poultry					
Chicken	*Gallus gallus*	31	3	136	468
Turkey	*Meleagris gallopavo*	4	2	4	1
Pigeon	*Columba livia*	0	0	18	0
Duck	*Anas platyrhyncha*	4	0	5	10
Goose	*Anser anser*	0	0	1	0
Wild Game Birds					
Duck, type unknown	Anatidae	0	1	1	15
Quail	*Callipepla* sp.	0	0	6	17
Birds Total		*39*	*6*	*171*	*511*
Amphibians					
Red-spotted toad	*Bufo punctatus*	0	0	28	0
California Fish					
Bony fishes	Teleostei	0	1	0	0
Total		***230***	***383***	***247***	***1,026***

The meat weights of the hotel deposits were calculated along with the percents of high, moderate, and low-priced cuts. Feature 1023 has less than 50 pounds of meat represented and moderately priced cuts of beef make up most of that meat (Table D.1-2). Feature 1009 has only 85 pounds of meat represented (Table D.1-3). Most of the cuts are from high-priced meats. Almost 800 pounds of meat are present in Feature 1022 (Table D.1-4). The meats are most moderately-to-low-priced. Privy 1025 has more than 300 pounds of meat represented (Table D.1-5). Distinctive half-inch thick porterhouse steaks, lamb and pork chops were present. Most of the meats were from high-priced cuts.

Table D.1-2
Feature 1023 Meat Weight by Economics

Meat Type	Price Group/Cut	Meat Weight (lb)	Percent within Type	Percent within Price Group	Percent of Total
Beef	High			41	
	Porterhouse	16.9	17.7		
	Sirloin	8.6	9.0		
	Prime rib	13.3	13.9		
	Moderate			47	
	Round	12.6	13.2		
	Rump	10.6	11.0		
	Chuck	14.0	14.6		
	Rib	8.1	8.5		
	Low			12	
	Hindshank	4.1	4.3		
	Brisket	4.8	5.0		
	Neck	2.8	2.9		
	Beef Total	*95.8*	*100.0*	100	60
Pork	High			28	
	Sirloin	6.9	10.8		
	Loin	7.6	11.9		
	Ham	3.2	5.1		
	Moderate			45	
	Rump	3.4	5.3		
	Shoulder butt	6.4	10.1		
	Picnic	19.1	30.0		
	Low			27	
	Belly		0.0		
	Neck	0.8	1.2		
	Hindshank	8.3	13.1		
	Foreshank	4.1	6.4		
	Feet	4.0	6.2		
	Pork Total	*63.7*	*100.0*	100	40
All Meat Types Total		***159.5***			
High Price Group Total		35%			
Moderate Price Group Total		46%			
Low Price Group Total		18%			

Table D.1-3
Feature 1009 Meat Weight by Economics

Meat Type	Price Group/Cut	Meat Weight (lb)	Percent within Type	Percent within Price Group	Percent of Total
Beef	High			96	
	Porterhouse	35.1	66.9		
	Sirloin	5.4	10.3		
	Prime rib	10.1	19.2		
	Moderate			—	
	Low			4	
	Foreshank	1.9	3.6		
	Beef Total	*52.5*	*100.0*	100	62
Mutton	High			69	
	Loin	3.6	28.3		
	Sirloin	1.3	10.2		
	Leg	3.8	29.9		
	Moderate			26	
	Rib	1.4	11.0		
	Shoulder	1.9	15.0		
	Low			6	
	Hindshank	0.5	3.9		
	Foreshank	0.2	1.6		
	Neck	0.0	0.0		
	Mutton Total	*12.7*	*100.0*	100	15
Pork	High			20	
	Sirloin	2.8	14.2		
	Loin	1.1	5.6		
	Moderate			53	
	Rump	6.0	30.4		
	Shoulder butt	1.4	7.1		
	Picnic	3.0	15.2		
	Low			27	
	Belly	1.4	7.1		
	Neck	0.3	1.5		
	Hindshank	3.0	15.2		
	Foreshank	0.3	1.3		
	Jowl	0.5	2.4		
	Pork Total	*19.7*	*100.0*	100	23
All Meat Types Total		***84.9***			
High Price Group Total			74%		
Moderate Price Group Total			16%		
Low Price Group Total			9%		

Table D.1-4
Feature 1022 Meat Weight by Economics

Meat Type	Price Group/Cut	Meat Weight (lb)	Percent within Type	Percent within Price Group	Percent of Total
Beef	High			21	
	Porterhouse	64.8	10.0		
	Sirloin	17.6	2.7		
	Prime rib	51.8	8.0		
	Moderate			26	
	Round	81.9	12.6		
	Rump	31.2	4.8		
	Chuck	39.0	6.0		
	Rib	15.6	2.4		
	Low			53	
	Hindshank	158.9	24.5		
	Brisket	3.5	0.5		
	Foreshank	77.7	12.0		
	Neck	106.8	16.5		
	Beef Total	*648.8*	*100.0*	100	85
Mutton	High			76	
	Loin	4.4	8.3		
	Leg	35.9	67.9		
	Moderate			7	
	Rib	0.5	0.9		
	Shoulder	3.2	6.0		
	Low			17	
	Hindshank	4.5	8.5		
	Foreshank	3.1	5.9		
	Neck	1.3	2.5		
	Mutton Total	*52.9*	*100.0*	100	7
Pork	High			15	
	Sirloin	0.7	1.1		
	Loin	3.9	6.3		
	Ham	4.6	7.6		
	Moderate			71	
	Rump	39.0	64.1		
	Shoulder butt	4.2	6.9		
	Low			14	
	Neck	0.5	0.8		
	Hindshank	8.1	13.2		
	Pork Total	*60.9*	*100.0*	100	8
All Meat Types Total		***762.6***			
High Price Group Total		24			
Moderate Price Group Total		28			
Low Price Group Total		48			

Table D.1-5
Feature 1025 Meat Weight by Economics

Meat Type	Price Group/Cut	Meat Weight (lb)	Percent within Type	Percent within Price Group	Percent of Total
Beef	High			77	
	Porterhouse	168.3	65.2		
	Sirloin	12.8	5.0		
	Prime rib	18.0	7.0		
	Moderate			16	
	Round	2.6	1.0		
	Rump	9.6	3.7		
	Chuck	4.4	1.7		
	Rib	24.2	9.4		
	Low			7	
	Hindshank	9.1	3.5		
	Brisket	4.7	1.8		
	Foreshank	4.3	1.7		
	Beef Total	*258.0*	*100.0*	100	83
Mutton	High			67	
	Loin	10.6	36.1		
	Sirloin	1.0	3.4		
	Leg	8.2	27.9		
	Moderate			26	
	Rib	5.6	19.0		
	Shoulder	2.1	7.1		
	Low			6	
	Hindshank	0.5	1.7		
	Brisket	0.8	2.7		
	Foreshank	0.2	0.7		
	Neck	0.4	1.4		
	Mutton Total	*29.4*	*100.0*	100	9
Pork	High			67	
	Sirloin	4.4	18.3		
	Loin	7.4	30.5		
	Ham	4.4	18.3		
	Moderate			23	
	Rump	2.5	10.4		
	Picnic	3.0	12.5		
	Low			10	
	Neck	0.1	0.5		
	Hindshank	2.3	9.6		
	Pork Total	*24.1*	*100.0*	100	8
All Meat Types Total		***311.5***			
High Price Group Total		75%			
Moderate Price Group Total		17%			
Low Price Group Total		7%			

Comparison

The meat weights from each of the hotel features were compared to meat weights for other Euro-American hotel, boardinghouse and saloon deposits (Figure D.1-1 [top]). The percentages of beef, pork, and mutton vary with each feature. Feature 1023 lacks mutton and has the highest percentage of beef. Features 1022 and 1025 are similar in their percentages. Feature 1009 has the least percentage of beef and the highest percentage of pork. Features 1022, 1023, and 1025 are similar overall and compare well to the Patterson and Fallon Hotel deposits and the Hannon's Saloon deposit. Feature 1009 is most similar to the Golden Eagle Hotel.

Using meat weight economics, the hotel features cluster into two groups of two (Figure D.1-1 [bottom]). Feature 1022 and Feature 1023 are unified by about 25 percent high-cost meats. These two deposits are most similar to deposits from the Patterson and Fallon Hotels. Feature 1009 and Feature 1025 each have about 75 percent high cost meats. This is substantially higher than deposits from the Golden Eagle Hotel in Sacramento (the premier hotel of its day) or the Fallon Hotel in Columbia. The possibility that the economics of Features 1009 and 1025 were being overestimated due to the very small amount of low-priced cuts they contain was explored by calculating the ratio of high to moderately priced meats using pounds of meat represented (not percentages). Identical groupings and magnitudes were obtained.

Perhaps Feature 1009 represents meals from the hotel's owners. Feature 1025 is more difficult to comprehend. This feature had copious amounts of expensive food refuse thrown into an active privy—apparently hiding it to avoid discovery. Does this deposit represent meals that a cook sneaked out of the kitchen, ate in secret and then dumped into the privy early in the morning on the way back to the kitchen? We can only speculate.

ANIMAL BONES FROM THE CHINATOWN

Cooking Features

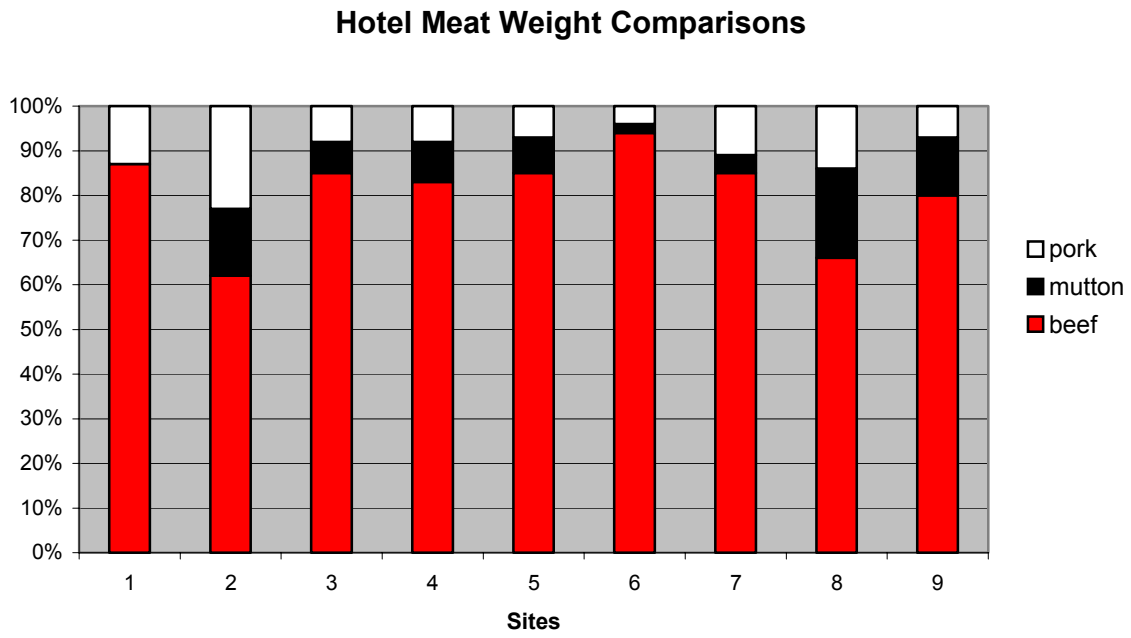
Very few animal bones were recovered in association with the roasting ovens and backyard wok (Features 1001, 1036, and 1033). Most of the bones appear to postdate use of the cooking features. The total sample consists of two chicken bones, two rabbit bones, skeletons of one adult and one juvenile cat, and two rat bones.

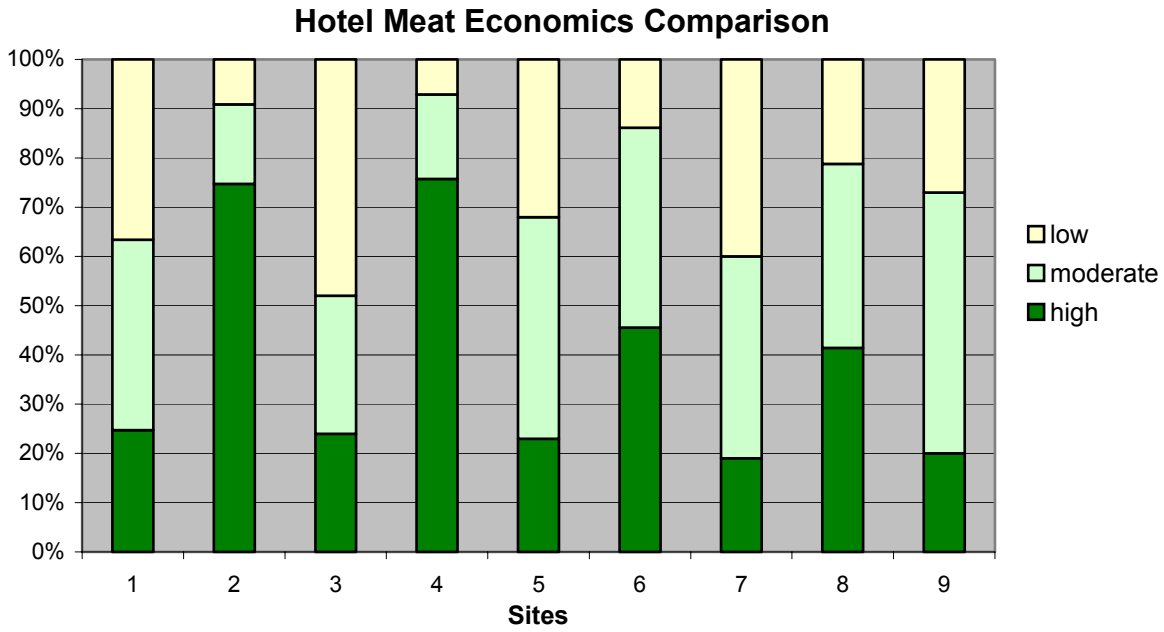
Dog Burial

A complete skeleton of an older puppy (about 6–9 months old) was recovered from the area where it had been deliberately buried. The grave was shielded from scavengers by a piece of corrugated metal sheeting. There was no visible trauma that might have caused death. By laying out the bones of the forelimb, it was determined that the dog was about 12 inches high at the shoulder. This is about the size of a terrier or other small breed. The skull did not show any specializations like a short face that might indicate a specific breed.

Chinese Store Footing

A few miscellaneous bones were recovered from the footing (Feature 1003) of the Chinese Store. They included a portion of a sheep pelvis, sheep ribs, and a bone from the undershell of a softshell turtle.





KEY: 1 = Privy 1023, Starke's Hotel/Bradford House, San Bernardino (this report)
2 = Privy 1009, Starke's Hotel/Bradford House, San Bernardino (this report)
3 = Pit 1022, Starke's Hotel/Bradford House, San Bernardino (this report)
4 = Privy 1025, Starke's Hotel/Bradford House, San Bernardino (this report)
5 = Patterson Hotel (employees trash), Folsom (Gust n.d.)
6 = Fallon Hotel (hotel deposits), Columbia (Gust 1998)
7 = Fallon Hotel (boardinghouse deposits), Columbia (Gust 1998)
8 = Golden Eagle Hotel, Sacramento (Gust 1999; recalculated from original data [Gust 1980])
9 = Hannon's Saloon, Sacramento (Gust 1999)

Figure D.1-1 Comparisons of meat weight (top) and meat economics (bottom) for four hotel features at the project site and for other hotel sites in California.

Feature 1032: Chinatown Refuse Pit from 1920s

This feature contained a small sample of bone. Three beef bones, 22 pork bones, 16 chicken bones, one goose bone, and nine fish bones (including one puffer bone) were recovered. This sample was deemed too small to warrant further analysis.

Chinatown Refuse Features

Six features associated with San Bernardino Chinatown had faunal sample sizes sufficient for analysis. Three are privies that were filled with trash after they were abandoned as outhouses. Feature 1056 was filled with trash around the turn of the century and Feature 1058 was filled about ten years later. The final privy, Feature 1035, postdates the other two and was filled with trash in the 1940s. Feature 1057 consists of a "sheet" of refuse strewn across the backyards of Chinatown properties. In those yards, there were several drains including Features 1002 and 1031, into which refuse from the "sheet" fell or was blown by wind. Since the drains were inadvertently and not purposely filled with trash, their contents are grouped with those of the sheet and referred to as the Backyard Refuse. Artifacts indicate the backyard refuse dates from the 1910s–1930s.

Animal bones represented in each feature, plus totals for all the privies and for the Backyard Refuse, indicate a diet of both domestic and imported food animals (Table D.1-6). Pork, chicken, and other domestic meat sources are numerically dominant. There was a component of wild game as represented by deer, jackrabbit, rabbit, turtle, and a variety of marine fishes. In addition, foods imported from China were represented by Chinese fishes and softshell turtle.

Table D.1-6
Animals Represented by NISP in San Bernardino Chinatown

		Privies			Backyard Refuse[a]
Common Name	**Scientific Name**	**1035**	**1056**	**1058**	
Mammals					
Major Meat Mammals					
Cow	*Bos taurus*	75	17	29	81
Sheep	*Ovis aries*	6	0	1	6
Pig	*Sus scrofa*	290	88	117	534
Minor Meat Mammals					
Deer	*Odocoileus hemionus*	5	0	2	0
Cottontail rabbit	*Sylvilagus* sp.	1	0	0	2
Jackrabbit	*Lepus californicus*	0	0	0	1
Incidental Mammals					
Cat	*Felis catus*	0	2	4	8
Rat	*Rattus rattus*	57	8	2	1
Ground squirrel	*Spermophilus beecheyi*	0	1	0	0
Pocket gopher	*Thomomys* sp.	0	1	0	0
Mole	*Scapanus latimanus*	1	0	0	1
Mammals Total		*435*	*117*	*155*	*634*

Table D.1-6 (continued)
Animals Represented by NISP in San Bernardino Chinatown

Common Name	Scientific Name	Privies 1035	Privies 1056	Privies 1058	Backyard Refuse[a]
Birds					
Domestic Poultry					
Chicken	*Gallus gallus*	605	0	0	211
Turkey	*Meleagris gallopavo*	61	0	0	6
Pigeon	*Columba livia*	1	0	0	1
Duck	*Anas platyrhyncha*	32	0	0	23
Goose	*Anser anser*	2	0	0	0
Duck, type unknown	Anatidae	2	0	0	3
Birds Total		*703*	*0*	*0*	*244*
Amphibians/Reptiles					
Amphibians					
Red-spotted Toad	*Bufo punctatus*	3	9	0	0
Reptiles					
Rattlesnake	*Crotalus atrox*	1	0	0	0
Western pond turtle	*Clemmys marmorata*	6	1	2	6
Softshell turtle	*Trionyx* sp.	0	1	0	0
Eastern box turtle	*Emydoidea* sp.	0	0	1	0
Amphibians/Reptiles Total		*10*	*11*	*3*	*6*
Fish					
California Fishes					
Yellowtail	*Seriola lalandi*	1	0	0	0
Rockfish	*Sebastes* sp.	2	0	0	1
Seabasses	Serranidae	0	0	0	11
Sandbass	*Paralabrax* sp.	0	0	0	1
Wrasse	Labridae	2	0	0	29
White seabass	*Atractoscion nobilis*	2	0	0	0
White croaker	*Genyonemus lineatus*	1	0	0	0
Ocean whitefish	*Caulolatilus princeps*	1	0	0	1
California barracuda	*Sphyraena argentea*	0	0	0	3
Petrale sole	*Eopsetta jordani*	1	0	0	0
Starry flounder	*Platichthys stellatus*	0	0	0	1
Flatfishes	Pleuronectiformes	2	0	0	4
Chinese Fishes (imported)					
White herring	*Ilisha elongata*	0	0	0	2
Snapper	*Lutjanus* sp.	1	0	0	0
Threadfin bream	*Nemipterus* sp.	0	0	1	3
Yellow croaker	*Larimichthys crocea*	0	0	1	1
Puffers	Tetraodontidae	6	0	0	7
Indeterminate Fishes					
Croaker, type unknown	Sciaenidae	4	0	3	5
Bony fishes	Teleostei	64	0	6	89
Scales	Teleostei	41	0	0	100
Fish Total		*128*	*0*	*11*	*258*
Animals Total		***1,276***	***128***	***169***	***1,142***

a - Includes material from Drains 1002 and 1031 as well as sheet refuse.

The butchering style and marks present on the Chinatown mammal bones were standard commercial cuts. The beef bones present were mostly steaks and soup bones rather than roasts, and the pork bones varied from whole to steaks. The meat weights of the pork and beef present in Feature 1035, combined Features 1056/58, and the backyard were calculated along with the percentages of high, moderate, and low-priced cuts (Tables D.1-7–D.1-9). The privies show consistent ratios of about 60 percent beef to 40 percent pork, while the backyard shows a ratio closer to fifty-fifty.

Table D.1-7
Feature 1035 Meat Weight by Economics

Meat Type	Price Group/Cut	Meat Weight (lb)	Percent within Type	Percent within Price Group	Percent of Total
Beef	High			41	
	Porterhouse	16.9	17.7		
	Sirloin	8.6	9.0		
	Prime rib	13.3	13.9		
	Moderate			47	
	Round	12.6	13.2		
	Rump	10.6	11.0		
	Chuck	14.0	14.6		
	Rib	8.1	8.5		
	Low			12	
	Hindshank	4.1	4.3		
	Brisket	4.8	5.0		
	Neck	2.8	2.9		
	Beef Total	*95.8*	*100.0*	100	60
Pork	High			28	
	Sirloin	6.9	10.8		
	Loin	7.6	11.9		
	Ham	3.2	5.1		
	Moderate			45	
	Rump	3.4	5.3		
	Shoulder butt	6.4	10.1		
	Picnic	19.1	30.0		
	Low			27	
	Neck	0.8	1.2		
	Hindshank	8.3	13.1		
	Foreshank	4.1	6.4		
	Feet	4.0	6.2		
	Pork Total	*63.7*	*100.0*	100	40
All Meat Types Total		***159.5***			
High Price Group Total		35%			
Moderate Price Group Total		46%			
Low Price Group Total		18%			

Table D.1-8
Features 1056 and 1058 Meat Weight by Economics

Meat Type	Price Group/Cut	Meat Weight (lb)	Percent within Type	Percent within Price Group	Percent of Total
Beef	High			27	
	Porterhouse	7.3	8.5		
	Sirloin	2.7	3.1		
	Prime rib	12.9	15.0		
	Moderate			63	
	Round	19.5	22.7		
	Rump	2.4	2.8		
	Chuck	14.9	17.3		
	Rib	17.6	20.5		
	Low			10	
	Hindshank	4.8	5.6		
	Brisket	0.0	0.0		
	Foreshank	3.8	4.4		
	Neck	0.0	0.0		
	Beef Total	*85.9*	*100.0*	*100*	63
Pork	High			33	
	Sirloin	1.4	2.8		
	Loin	13.0	25.7		
	Ham	2.4	4.7		
	Moderate			45	
	Rump	2.0	4.0		
	Shoulder butt	15.8	31.3		
	Picnic	4.8	9.4		
	Low			22	
	Belly	0.0	0.0		
	Neck	1.2	2.4		
	Hindshank	5.3	10.5		
	Foreshank	1.4	2.8		
	Jowl	0.0	0.0		
	Feet	3.3	6.5		
	Pork Total	*50.6*	*100*	*100*	*37*
All Meat Types Total		***136.5***			
High Price Group Total		29%			
Moderate Price Group Total		56%			
Low Price Group Total		15%			

Table D.1-9
Backyard Refuse Meat Weight by Economics

Meat Type	Price Group/Cut	Meat Weight (lb)	Percent within Type	Percent within Price Group	Percent of Total
Beef	High			20	
	Porterhouse	20.3	11.6		
	Sirloin	0.0	0.0		
	Prime rib	14.7	8.4		
	Moderate			62	
	Round	18.2	10.4		
	Rump	22.8	13.0		
	Chuck	58.3	33.3		
	Rib	9.5	5.4		
	Low			18	
	Hindshank	2.9	1.6		
	Brisket	2.9	1.6		
	Foreshank	15.8	9.0		
	Neck	9.6	5.5		
	Beef Total	*174.9*	*100.0*	100	52
Pork	High			25	
	Sirloin	6.0	3.8		
	Loin	20.2	12.7		
	Ham	13.0	8.2		
	Moderate			55	
	Rump	21.3	13.4		
	Shoulder butt	27.8	17.5		
	Picnic	38.3	24.0		
	Low			21	
	Belly	0.6	0.4		
	Neck	4.9	3.1		
	Hindshank	13.2	8.3		
	Foreshank	4.0	2.5		
	Jowl	3.3	2.1		
	Feet	6.7	4.2		
	Pork Total	*159.3*	*100*	100	48
All Meat Types Total		***334.2***			
High Price Group Total			22%		
Moderate Price Group Total			59%		
Low Price Group Total			19%		

The economics represented by the meat cuts show that the total percentages are most similar between the combined Features 1056/58 and the backyard. Feature 1035 has more high-priced cuts and less moderately priced ones overall. Questions must be asked about whether these market economics apply to the pork in particular. The results show all the privies are very similar with about 30 percent high-priced pork, about 45 percent moderately priced pork, and about 25 percent low-priced pork. The backyard deposits have 25 percent high-priced pork, 54 percent moderately priced pork, and about 21 percent low-priced pork.

Roasting Pigs: Model for Chinatown Roasting Oven Deposits

Historic accounts indicate that whole pigs were roasted in Chinatown community roasting ovens, the meat removed and the bones discarded (see page 6.70—Roasting Ovens). Meat references indicate that roasting pigs are young individuals with live weights between 50–130 pounds (Romans and Ziegler 1974; Vaughan 1946). The roasted pig depicted in Figure 6-27 appears to a pig of approximately 60 pounds. By contrast, hogs utilized for meat cuts have live weights of about 250 pounds (Romans and Ziegler 1974; Vaughan 1946). Roasting pig carcasses are gutted only—the feet and head are left on and no bones are split. Hog carcasses utilized for meat cuts are split along the midline (through the vertebrae, breastbone, and pelvis) and have the head and feet removed for separate sale. Roasting pigs are cooked and the meat removed without cross-cutting any bones. Hog carcasses utilized for meat cuts are subdivided into retail cuts by cross-cutting most bones.

Based on this information, we should be able to differentiate between bones of roasting pigs and bones of butcher shop pork. Bones from roasting pigs should be small, immature, and whole, having no butchering tool marks other than possible knife scores (from meat removal). Bones from butcher shop pork should be larger, more mature, and exhibit numerous butchering tool marks such as split vertebrae and cross-cut long bones.

In addition, a roasting pig carcass should produce different percents of high, moderate, and low-priced cuts than a group of bones from preferentially chosen meats. The percentages of high, moderate and low-priced cuts were calculated for a side of pork (the percents would be the same for a whole pig) for comparison. All of the Chinatown features are either higher or lower than the side (Table D.1-10). The pounds of meat (not the percents) from each economic category for the analytic groupings and the side were compared statistically using analysis of variance and were found to be significantly different ($p<.01$).

Table D.1-10
Comparison of Pork Economics in San Bernardino Chinatown

Price of Meat Cut	Complete Side of Pork	Privies		Backyard Refuse[a]
		1035	1056/1058	
High	29	28	33	25
Moderate	37	45	45	55
Low	33	27	22	21

a - Includes material from Drains 1002 and 1031 as well as sheet refuse.

However, the taphonomy of roasting oven deposits will have a significant impact on the ability to differentiate. Bones of smaller animals and those of younger animals are known to be more likely to be broken and even destroyed. In reviewing the San Bernardino Chinatown faunal data, it is obvious that very few bones survived intact. There are very few large whole bones. While there are many fragments of pig skulls and mandibles, all the relatively whole mandibles are commercially split along the midline and are from pigs too large to have been roasting pigs. Most of the noncranial bones are split vertebrae and cross-cut bones, not intact whole bones. Thus, even if whole pigs made up part of the San Bernardino Chinatown sample, but the bones have been extensively broken, pork cuts purchased at markets contribute the remainder.

The most similar known deposit, sheet refuse near roasting ovens, is Woolen Mills Chinatown. Review of that data indicates evidence for two whole young pigs that meet the criteria for roasting pigs. However, the vast majority of the bones were from long-cut picnic hams and long-cut hams. While these contain many mostly whole bones, the commercial butchering marks are obvious.

Poultry

Interesting aspects of the Chinatown fauna are the presence of cocks and laying hens in the food sample as well as subadult chickens. In addition, there was an almost exclusive use of domestic rather than wild ducks.

At least five adult male chickens were recovered from Privy 1035 and another five from the backyard refuse. Their presence is evident in the spur or sharp projection of bone from the rear upright portion of the chicken foot. The spur is used by the cock to perform battle displays for females. Since cocks are generally kept as breeders into maturity, their presence indicates that either home-raised or very inexpensive chickens were utilized for food. Three of the ten spurs recovered had the tip of the spur cut off. It is likely that this was done to prevent the cocks from physically damaging one another in chicken yard fights over females. All of the bones of these male chickens are from large adults and would have been suitable for stewing. While some of the bones were recovered from a privy feature, it is important to remember that the bones were secondarily deposited into that privy as part of a property cleanup.

Privy 1035 contained 14 percent subadult chickens, while the backyard refuse contained only 4 percent subadults. Subadults are not physically mature enough to successfully brood eggs. The backyard refuse also contained eight bones full of medullary bone tissue. Medullary bone tissue is a special deposit found only inside the bones of laying females. The tissue is reabsorbed by the female's body for use in production of eggs during the breeding season. Both of these items—killing chickens for food before they contributed any eggs and killing laying females—are considered to be indicators of economic stress. The numbers are so small, however, that they may be insignificant or may represent the dwindling years of Chinatown.

Virtually all of the ducks from San Bernardino Chinatown were of the largest domestic breed (Daniel Guthrie, personal communication 2002). This animal, known as the Pekin Duck, was imported from China in 1873 and quickly became the most popular meat duck for all markets (U.S. Department of Agriculture Food Safety and Inspection Service [USDA FSIS] 2003). It has an extremely fast growth rate (putting on a pound a week), produces about 200 eggs a season,

and is very hardy. It is a tribute to the popularity of the Pekin Duck that Donald Duck was modeled from this breed and accurately represents the creamy white feathers and bright yellow bill and feet that are characteristic.

Local and Imported Fishes

The great majority of the fish remains were found in Privy 1035 and the backyard. In each of these deposits, most of the remains were from Southern California species, but Chinese fishes were represented as well. At least five Chinese species are represented at the site. All of these bones are obviously from salt fish. In California's Asian markets today, only two of these fish—yellow croaker and snapper (*Lutjanus* sp.)—occur commonly as salt fish. Threadfin breams are still very common, although now in whole frozen form rather than as salt fish. White herring, a common and well-regarded salt fish in China, is seldom found in contemporary American markets. Puffers, once a readily available salt-dried product, are never seen in American markets and are probably not common in South China.

All of the local species were readily available food fishes. It may be noted that the remains classified here as wrass (family Labridae) almost certainly represent the California sheephead (*Semicossyphus pulcher*). They are listed with equivocation because two other wrasses occur along the coast, additional species are found in the Gulf of Mexico, and several more occur along the Chinese coast. Comparative specimens were not available for most of these fishes, and some of the Chinese wrasses are processed as salt fish. Nonetheless, these bones are from a relatively large species (larger than most of those listed above), and all the elements agree perfectly with the California sheephead and differ from other comparative material. Although now greatly reduced in numbers by overfishing, this fish once supported an important fishery in which "immense numbers" were taken by Chinese fishermen who salted and dried them (Lockington 1881:42; Stevenson 1899:417).

Cats and Rats

A number of animals are represented in the Chinatown refuse that are not food animals, but represent pets, local wildlife, and even vermin. The refuse deposited into the three privies once they were abandoned shows a small percentage of cat and dog chomp marks. It seems likely that this material must have been in another open location before deposition into the privies. The five individual rats present are introduced roof rats (brought to California from the Old World via ships). The few rodents, toads, snake, and mole all represent the natural fauna of the area. Their small presence probably indicates natural deaths in their chosen shelter location.

Comparisons

The bones from the combined Features 1056/58, Feature 1035, and the backyard were compared to those from a local Euro-American site and a series of other Chinatowns. The Chinatown food bones were contrasted with those from a San Bernardino Euro-American site—the Santa Fe Yards (Table D.1-11). The Euro-American refuse spans the same late nineteenth to early twentieth-century time period as the Chinatown deposits and is residential in nature (Swope et al 1997). The sample is relatively small and appears substantially less diverse than the Chinatown. However, this may be an effect of the small sample size.

Table D.1-11
Food Refuse Represented by NISP at San Bernardino Chinatown Compared to Local Euro-American Food Refuse

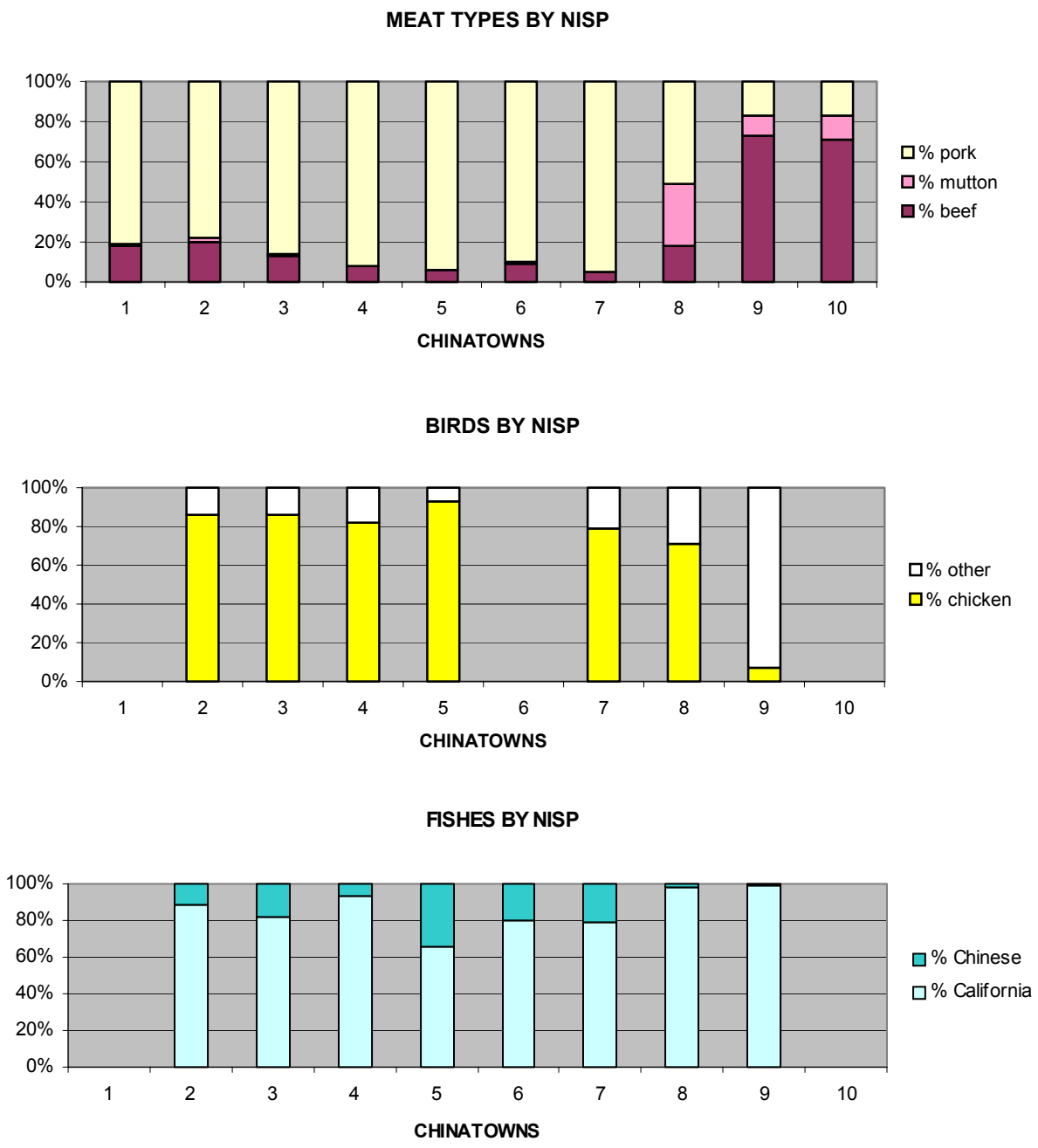
Common Name	Pit/Privy Refuse	Sheet Refuse	Santa Fe Yards Refuse
Domestic Meats			
Cow	121	81	47
Sheep	7	6	1
Pig	495	534	9
Chicken	605	211	133
Turkey	61	6	0
Pigeon	1	1	0
Duck	32	23	0
Goose	2	0	0
Domestic Meats Total	*1,324*	*862*	*190*
Wild Meats			
Deer	7	0	0
Cottontail rabbit	1	2	0
Jackrabbit		1	0
Duck, type unknown	2	3	0
Western pond turtle	9	6	0
Softshell turtle	1	0	0
Eastern box turtle	1	0	0
Yellowtail	1	0	1
Mackeral	0	0	2
Rockfish	2	1	1
Seabassess	0	11	0
Sandbass	0	1	0
Wrasse	2	29	0
White seabass	2	0	0
White croaker	1	0	0
Ocean whitefish	1	1	0
California barracuda	0	3	4
Petrale sole	1	0	0
Starry flounder	0	1	0
Flatfishes	2	4	0
White herring	0	2	0
Snapper	1	0	0
Threadfin bream	1	3	0
Yellow croaker	1	1	0
Puffers	7	7	0
Wild Meat Total	*43*	*76*	*8*
Total	***1,410***	***1,014***	***206***

Two different kinds of comparisons were made to other Chinatowns. First, Chinatowns were compared by frequency of identified specimens. This was the only comparative information available for most. Second, where comparable data were available, Chinatowns were compared using pounds of meat represented and meat weight economics.

The frequency comparisons show that the San Bernardino Chinatown features are very similar to one another and to the Chinatowns at Los Angeles, San Jose, Riverside, and Hayward (Figure D.1-2). San Diego Chinatown differs in having a large proportion of mutton and no imported Chinese fish. The samples from Sacramento and Lovelock differ in having high percentages of beef, perhaps due to the admixture of Euro-American deposits.

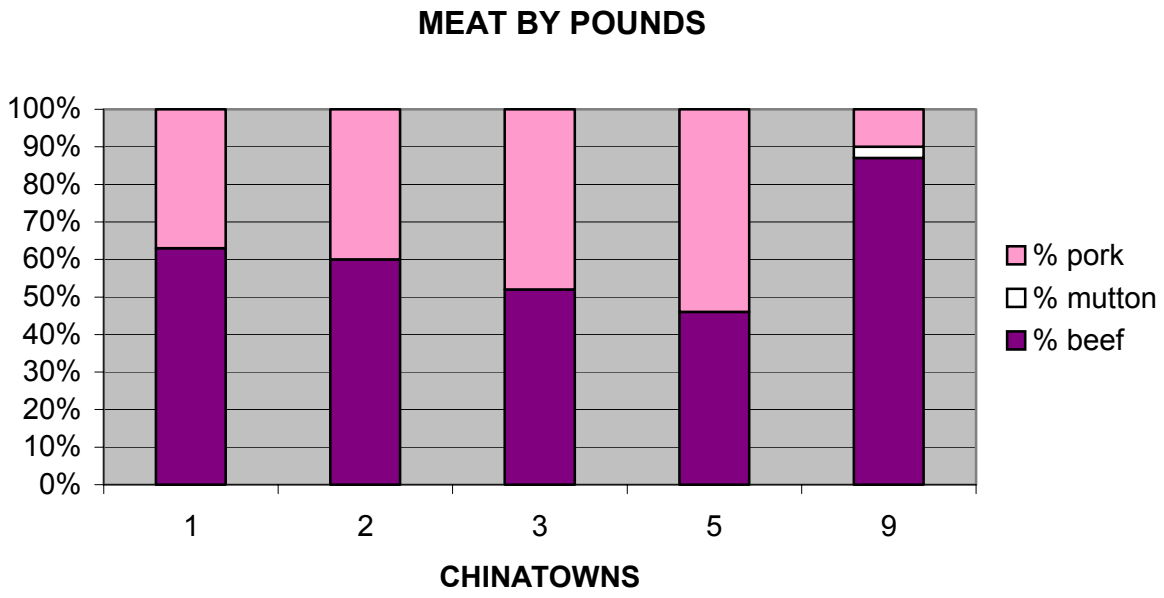
The meat weight proportion comparisons show that the proportion of pork is higher and the proportion of high-priced cuts is lower for the backyard midden than for the privies (Figure D.1-3). San Bernardino Chinatown deposits are very similar to those from San Jose's Woolen Mills Chinatown, and they differ dramatically from those for Sacramento. The similarities between San Bernardino Chinatown and the Woolen Mills Chinatown are very interesting as both represent community refuse deposits with nearby roasting ovens.

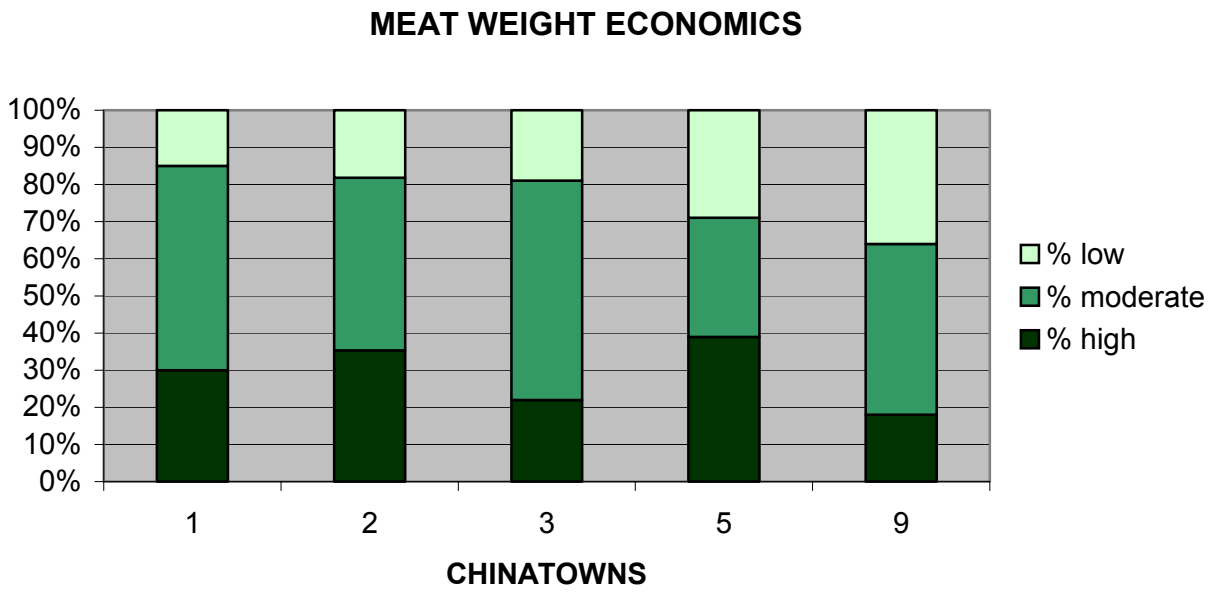
If all meat types are converted to meat weight, the relative importance of minor meat animals becomes more apparent. The combined sample for San Bernardino Chinatown was compared to Woolen Mills and Sacramento (Figure D.1-4). San Bernardino Chinatown has more utilization of chicken and other birds than does Woolen Mills Chinatown or Sacramento. This may be partially due to the later time period of San Bernardino. Woolen Mills has more fish than the other sites, possibly because it is closer to the coast. Nonetheless, the overall similarity of San Bernardino Chinatown and Woolen Mills Chinatown remains apparent.



KEY: 1 = San Bernardino Chinatown Privies 1056/1058 (this report).
2 = San Bernardino Chinatown Privy 1035 (this report).
3 = San Bernardino Chinatown Backyard Features (this report).
4 = Los Angeles Chinatown, all features (Greenwood 1996).
5 = San Jose Woolen Mills Chinatown Feature 501 (Gust 2002).
6 = Riverside Chinatown, all features (Langenwalter and Langenwalter 1987).
7 = Yema Po Work Camp, Hayward (Gill 1985).
8 = San Diego Chinatown, all features (Arter 1998).
9 = Sacramento Chinatown, HI56 Block, Feature 954 (Gust 1997).
10 = Lovelock Chinatown, Feature 44 (Dansie 1979).

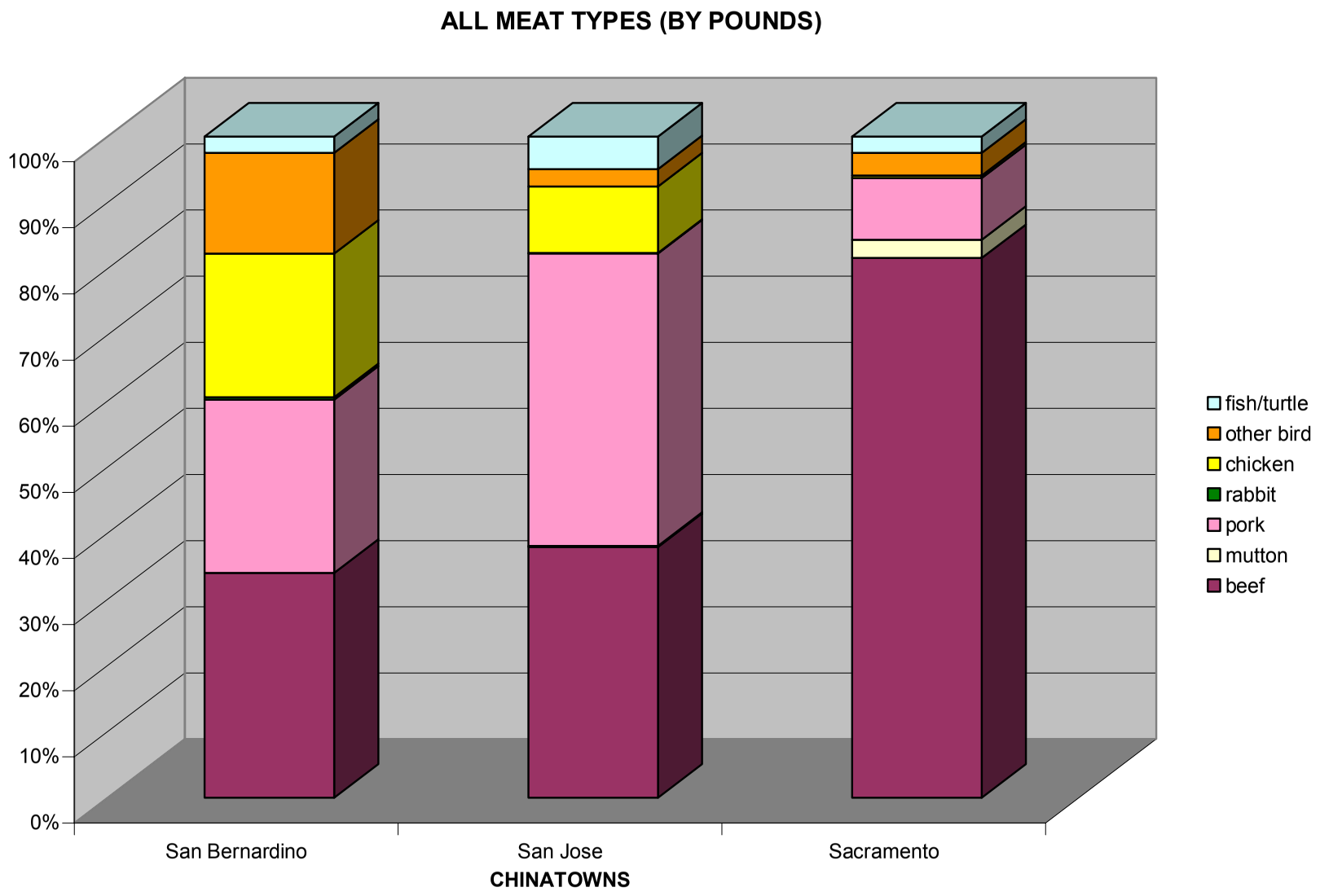
Figure D.1-2 Comparisons of meat types recovered from California Chinatowns by NISP (missing columns indicated that data were not available).





KEY: 1 = San Bernardino Chinatown Privies 1056/1058 (this report).
2 = San Bernardino Chinatown Privy 1035 (this report).
3 = San Bernardino Chinatown Backyard Features (this report).
5 = San Jose Woolen Mills Chinatown, Feature 501 (Gust 2002).
9 = Sacramento Chinatown, HI56 Block, Feature 954 (Gust 1997).

Figure D.1-3 Comparison of California Chinatown faunal assemblages by meat weight and meat economics.



KEY:

San Bernardino	All San Bernardino Chinatown features (this report).
San Jose	San Jose Woolen Mills Chinatown, Feature 501 (Gust 2002).
Sacramento	Sacramento Chinatown, HI56 Block, Feature 954 (Gust 1997).

Figure D.1-4 Comparison of all meat types in San Bernardino, San Jose, and Sacramento Chinatown deposits.

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D.2 POLLEN ANALYSIS

Pollen Analysis of Hotel and Chinatown Privies San Bernardino, California

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INTRODUCTION

Ten pollen samples were analyzed from four privies and one outdoor roasting oven, excavated from San Bernardino's Chinatown and adjacent Anglo-American Hotel. The privies dated from 1886 to approximately 1930. Descriptions of the features sampled and provenience information for each sample are listed in Table D.2-1. The main goal of the analysis was to contribute information about turn of the century Anglo and Asian diet and plant use in San Bernardino. There is an extensive literature dealing with the study of biological remains from human coprolites (see Reinhard and Bryant 1992), but latrine and privy deposits have been less explored, especially using pollen analysis. There are a handful of contract macrobotanical studies of Chinatown privies from central and southern California (e.g., Felton et al. 1984; Kent et al. 1987; Lawlor 1997). However, the pollen research reported here is the first pollen study known to the author from California Chinatown privies.

Table D.2-1
Pollen Samples Analyzed

Cut No.	Layer No.	Sample No.	Context
1001	2120	6029	Sediment from between rocks in rock-lined floor of an outdoor roasting oven in Chinatown backyard.
1025	2067	6010 6001 6007 6004	Anglo-American hotel privy adjacent several outbuildings (laundry, hog house, & employee residence); A.D. 1894 to 1897; Layer 2067 represents final use period and abandonment. Samples 6010, 6001, and 6007 clustered in same location; Sample 6004 separated by approximately 80 feet.
1035	2084 2085	6013 6016	Redwood-lined privy in Chinatown backyard; Layer 2084 secondary trash deposit (A.D. 1944) overlying Layer 2085 primary privy deposit (A.D. 1910–1930).
1056	2130 2132	6024 6021	Unlined privy in Chinatown backyard adjacent to several outdoor features (refuse pits, water ditches, middens, and cooking features). Layer 2130 secondary trash deposit overlying Layer 2132 primary privy deposit.
1058	2155	6027	Unlined privy (A.D. 1900–1910) in Chinatown backyard near several outdoor features (refuse pits, water ditches, middens, and cooking features). Sample from primary deposit at bottom of privy.

The pollen analysis was very productive, but there are problems interpreting the data that pivot on the question of *Where does the pollen come from?*. This report is organized to address this issue first with a discussion of the limitations of pollen data and how pollen might become incorporated in privy deposits. Sections describing methods and results follow and conclusions are presented in the last section. The pollen data are summarized in a diagram included in the results section, and all of the data are documented. Several pollen types remain unidentified, which is not unusual given the wide range of ecological and cultural variables in the setting and sample contexts.

LIMITATIONS OF POLLEN DATA—WHERE DOES PRIVY POLLEN COME FROM?

Pollen is a more difficult botanical artifact to interpret than macrobotanical remains for two reasons. A seed recovered from an archaeological context will have originated from plants at the site or been imported by people, but pollen can be transported long distances by a variety of vectors (Faegri and Iversen 1989). Pollen is a component in airborne dust and can be deposited in any type of deposit or on any surface. It even occurs in unfiltered surface and tap water. Airborne pollen can travel hundreds of kilometers; thus, an assemblage may incorporate a spectrum of source area scales, from regional to local plants within several kilometers to meters of the deposition site.

The second issue for interpreting archaeological pollen is the complexity of pollination ecology, exemplified by the conundrum that a plant resource could have been intensively utilized at a site and left no pollen record. Pollen signifies flowers. There is little empirical evidence that pollen persists past the flowering stage on fruits, nuts, berries, and seeds in adequate quantities to be recognized as evidence of cultural plant use. In fact, pollen would not be expected from certain harvested resources such as root and tuber crops. Smith and Geib (1999) have tested pollen recovery from seeds harvested from several weedy plants and grasses known to have been important Southwest food resources. They documented a progressive loss of pollen from harvest through each processing step (winnowing, parching, and grinding), and they also found pollen abundance to vary significantly between species. The variability is a function of each species' pollination ecology, the plant and seed or fruit architecture, and harvest and processing technologies.

Plants pollinate by two main strategies—insect or wind. There is a higher probability that wind-pollinated species will be detected in pollen investigations because these plants produce abundant pollen designed to travel. Pine (*Pinus*), sagebrush (*Artemisia*), and grass (Poaceae) are examples of wind-pollinated plants. Most plant species are insect-pollinated and produce a small amount of pollen designed to hitchhike short distances on bugs or remain on the parent plant. Examples of insect-pollinated plants are melons and squash (*Cucurbita*), beans (*Phaseolus*), several fruits and berries (peach, apricot, plum, blackberry, and strawberry), and most ornamental flowers. High values of insect-pollinated taxa in archaeological samples are often interpreted as evidence of cultural use. In this analysis of the Chinatown privy samples, insect-pollinated taxa (mustard family, Asteraceae, and Cheno-Am) were the dominant pollen types counted.

Another difficulty in interpreting pollen data is that pollen taxonomy is not as developed as plant taxonomy, and most pollen grains can be identified only to the family or genera level. For example, Cheno-Am is a pollen type that subsumes genera in the Chenopodiaceae family and all of the species in the *Amaranthus* genus. The broad Cheno-Am category represents several common weed and herb taxa, and some species were important subsistence resources. Goosefoot (*Chenopodium*), pigweed (*Amaranthus*), saltbush (*Atriplex* spp.), spinach (*Spinaceae*), and tumbleweed (*Salsola*), are just a few of the plants that could be represented by Cheno-Am pollen. Pollen taxonomy is especially prickly in this study, because of the potential for an oriental pollen flora from imported Asian plants.

Privies are a rare subset of the types of contexts typically investigated by archaeologists and palynologists. The results from macrobotanical materials and pollen from these features generally do not match, because, as discussed above, seeds and fruits may not retain pollen from the flowering stage. Pollen recovered from privies and human coprolites has been interpreted to reflect direct consumption of flowers or pollen, such as from cacti (Cactaceae), corn (*Zea*), squash (*Cucurbita*), yucca (*Yucca*), *Agave*, mesquite (*Prosopis*), cattail (*Typha*), and beeweed (*Cleome*) (Bryant 1974; Martin and Sharrock 1964; Reinhard et al. 1986; Sobolik 1988; Williams-Dean 1986). Another source of pollen in human feces is consumption of honey, and in privies, urine may be a significant source of pollen. Water, tea, beverages, and juices could contain pollen that would pass through the human digestive system and be deposited in urine. Pollen ingested by people could also be incidental derived from breathing airborne pollen or from atmospheric pollen rain deposited on produce anywhere between the garden and the kitchen.

Palynologists are keenly aware of the many vectors by which pollen can arrive at a deposition site. Other transport and deposition mechanisms that can be operating in privies include natural atmospheric pollen rain, sheetwash from rainstorms that may carry materials into privies, and insects that deliberately cache pollen or incidentally deposit pollen through foraging and nesting in privies.

METHODS

Subsamples (20 cubic centimeter volume) were taken from the sample bags and spiked with a known concentration (25,084 grains) of tracers (*Lycopodium* spores). Addition of tracers allows pollen concentrations to be calculated, which estimate the raw number of pollen grains in a sample. The samples were processed with acids (overnight hydrochloric and hydrofluoric), followed by a heavy liquid gravity separation (zinc bromide 1.9 specific gravity) and acetolysis, which reduces organics.

Pollen assemblages were documented by counting a minimum of 200 pollen grains on microscope slide transects at 400x magnification; pollen aggregates (clumps of grains of the same taxon) were included in the sum as one grain per occurrence. Numerous large aggregates are generally interpreted to represent flower anthers, which indicate taxon presence and can reflect the season of deposition. After the 400x magnification counts, entire slides were scanned at 100x magnification. If preservation is moderate, pollen grains larger than about 30 µm can be identified during the lower magnification scans. This size range includes cacti, pine, most cultigens, and some of the herb types. Pollen identifications were made to the lowest taxonomic

level possible using published keys (Faegri and Iversen 1989; Kapp et al. 2000; Moore et al. 1991) and the Northern Arizona University, Laboratory of Paleoecology, modern pollen reference collection, which includes approximately 2200 pollen specimens.

Four parameters were calculated from the pollen counts: taxa richness, spore richness, pollen concentration, and pollen percentages. Taxa richness is the number of different pollen types identified in each sample, and spore richness is the number of separate spore types observed in each sample. Pollen concentration is a measure of the absolute number of pollen grains per sample and was calculated by taking the ratio of the pollen count to the tracer count and multiplying by the initial tracer concentration. Dividing this result by the sample volume yields the number of pollen grains per cubic centimeter of sample sediment, abbreviated gr/cc. Pollen concentrations can be used to gauge several processes. In natural settings, concentrations can reflect sediment accumulation rates, and in cultural contexts, concentrations can relate to the amount of plant material handled. Concentrations are used here as the first level of analysis, followed by comparison of pollen percentages. Percentages represent the relative importance of each taxon in a sample ([pollen counted/pollen sum]*100).

RESULTS

All 10 pollen samples analyzed from the San Bernardino Chinatown privies produced significant counts of greater than 100 to greater than 300 pollen grains, and the variety of pollen types was high. Forty-two known types and nine distinct unknowns were documented. However, the overall diversity is still underrepresented because some distinct unknown grains were lumped into an undifferentiated unknowns category. All of the pollen data are documented in Table D.2.-2. In Table D.2-3, the pollen types are listed with scientific and common names, and, if known, the pollination season and mode (wind or insect) is indicated. The sample frequency of each pollen type is included in the last column of Table D.2-3. Collins (1987), Hickman (1993), and the U.S. Department of Agriculture (2001) are the primary references used for plant names and ecological information. The pollen data is also summarized in Figure D.2-1 which presents graphs of sample pollen concentrations and percentages for the dominant taxa and presence symbols for select taxa. The results are organized to first discuss the pollen types identified followed by a summary of results from individual features.

POLLEN TYPES IDENTIFIED

The great variety of pollen types were organized into logical groups in Table D.2-3 that reflect the interpretation of the source area for each category. The idea of source areas is important because the divisions have implications for whether pollen was derived from incidental background pollen rain or direct cultural use. The vegetation in the vicinity of the project site during the 1900s is not known, but probably included a wetland/riparian community along Warm Creek, native plants characteristic of coastal sage scrub (Barbour and Major 1988), and urban vegetable and ornamental gardens. Direct cultural use is defined here as pollen that may have come from plants manipulated near or in the privies and pollen that may have been derived from human feces and urine. There are no definitive criteria to recognize dietary pollen in feces. In one modern experiment, quantities of ingested pollen from several different plant species were recovered at high values in individual feces within 18 hours of consumption, but trace amounts

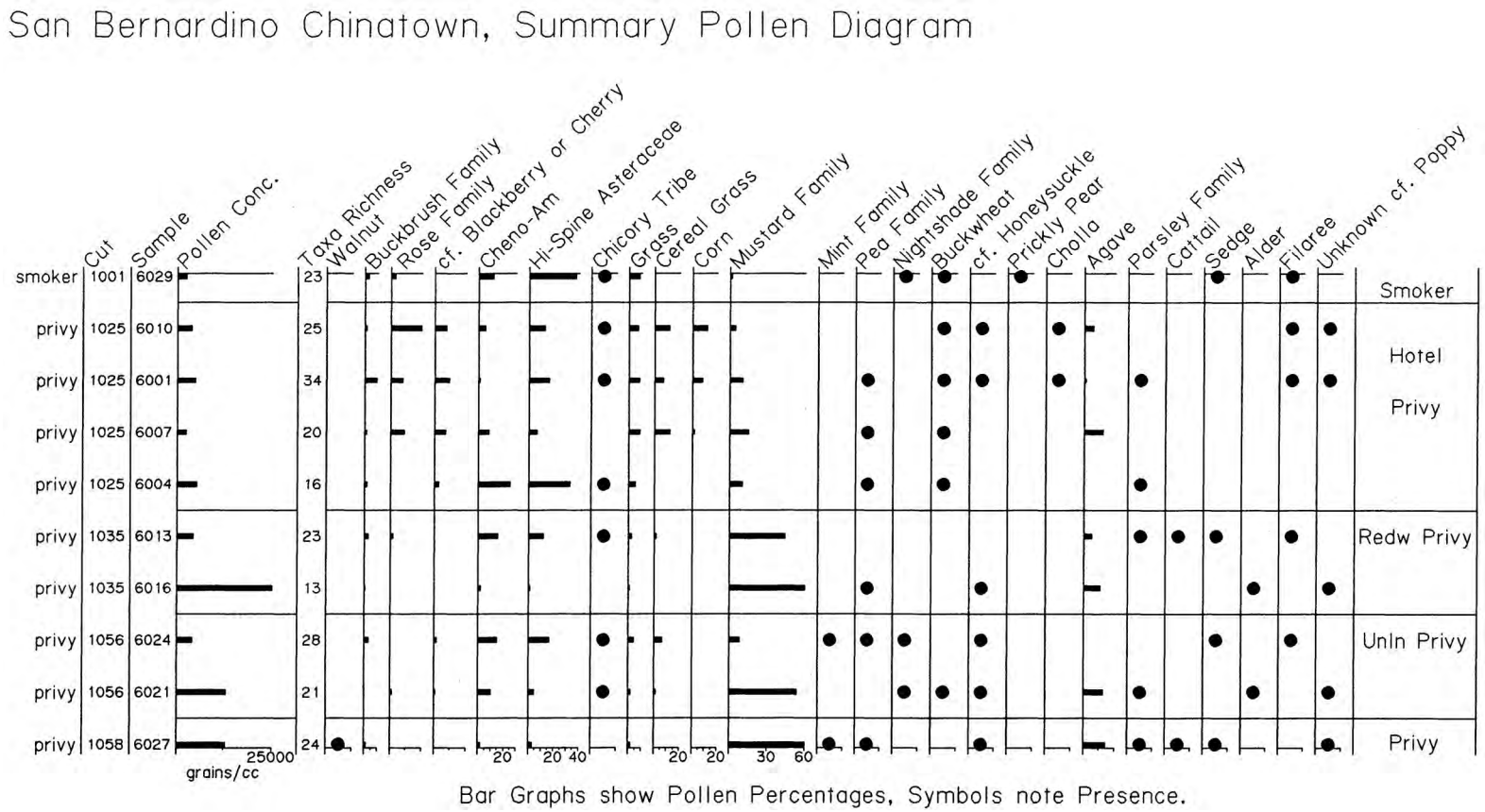

Figure D.1-1 Comparisons of meat weight (top) and meat economics (bottom) for four hotel features at the project site and for other hotel sites in California.

Table D.2-2
Results of the Pollen Analysis
(Summary parameters shown for each sample and pollen percentages shown for each pollen taxon identified.)

Cut	**1001**	**1025**	**1025**	**1025**	**1025**	**1035**	**1035**	**1056**	**1056**	**1058**
Layer	**2120**	**2067**	**2067**	**2067**	**2067**	**2084**	**2085**	**2130**	**2132**	**2155**
Sample	**6029**	**6010**	**6001**	**6007**	**6004**	**6013**	**6016**	**6024**	**6021**	**6027**
	between rocks of rock-lined floor of an outdoor smoker, Chinatown	privy, Euroamerican hotel				wood-lined privy in Chinatown		unlined privy in Chinatown		Chinatown privy
Pollen Concentration[a]	2475.0	4001.5	4904.8	2508.4	5419.1	4476.5	32051.8	4232.9	13147.5	12900.3
Taxa Richness[b]	23.0	25.0	34.0	20.0	16.0	23.0	13.0	28.0	21.0	24.0
Spore Richness[c]	4.0	3.0	3.0	3.0	3.0	3.0	4.0	2.0	5.0	3.0
Tracers	75	84	56	114	53	65	9	72	29	21
Pollen Sum	148	268	219	228	229	232	230	243	304	216
Degraded	16.9	10.4	8.7	13.2	12.2	9.5	1.7	17.3	7.9	4.6
Abies	0.0	X[d]	X	0.0	0.0	0.0	0.0	0.0	0.0	X
Tsuga	0.0	0.0	X	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pinus	2.0	2.2	0.9	5.3	0.9	2.2	0.4	1.2	3.0	0.9
Cupressaceae	1.4	2.2	0.5	1.8	3.5	0.9	0.0	0.8	0.7	X
Quercus	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Juglans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	X
Rhamnaceae	2.7	1.5	9.1	1.3	1.7	2.6	0.4	3.3	0.0	1.4
Rosaceae	1.4	9.7	3.7	4.4	0.0	0.9	0.0	0.0	0.7	0.0
Rosaceae, cf. *Rubus* or *Prunus*	0.0	3.7	4.6	3.5	1.3	0.0	0.0	0.8	0.3	0.0
Other Rosaceae	0.0	0.0	0.5	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Artemisia	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.4	0.0	0.0
Cheno-Am	11.5	5.2	0.9	7.9	24.9	15.5	1.7	14.8	9.9	1.9
Hi-Spine Asteraceae	37.2	12.7	16.0	6.1	32.8	11.6	0.9	16.5	4.3	2.8
Asteraceae, *Lactuca* type	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0
Asteraceae spiny type	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1
Asteraceae type C	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Ambrosia type	4.7	0.7	2.3	0.9	0.0	1.3	0.0	9.9	1.3	0.9
Poaceae	8.1	7.1	8.2	8.3	5.2	2.2	0.9	4.1	1.6	1.9
Large Poaceae	X	11.9	6.8	12.3	0.0	1.7	0.0	6.6	1.6	X

Table D.2-2 (continued)
Results of the Pollen Analysis
(Summary parameters shown for each sample and pollen percentages shown for each pollen taxon identified.)

Cut	**1001**	**1025**	**1025**	**1025**	**1025**	**1035**	**1035**	**1056**	**1056**	**1058**
Layer	**2120**	**2067**	**2067**	**2067**	**2067**	**2084**	**2085**	**2130**	**2132**	**2155**
Sample	**6029**	**6010**	**6001**	**6007**	**6004**	**6013**	**6016**	**6024**	**6021**	**6027**
Brassicaceae	1.4	4.5	10.5	14.9	10.5	44.0	87.0	8.2	53.6	75.0
Lamiaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.5
Fabaceae	0.0	0.0	1.8	0.9	0.4	0.0	0.4	1.6	0.0	0.5
Solanaceae	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.0
Nyctaginaceae	0.7	0.0	X	X	0.0	X	X	X	0.3	0.5
Malvaceae, cf. *Sphaeralcea*	X	X	X	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Onagraceae	0.0	X	X	0.4	0.0	X	X	0.8	0.3	0.0
Euphorbiaceae	0.0	0.0	0.5	0.0	0.9	0.0	0.0	0.0	0.0	0.0
Eriogonum	2.7	3.7	4.6	0.4	X	0.0	0.0	0.0	X	0.0
Polemoniaceae	0.0	0.0	0.0	X	0.0	0.0	0.0	0.0	0.0	0.0
Caryophyllaceae	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	X
Caprifoliaceae, cf. *Lonicera*	0.0	X	0.5	0.0	0.0	0.0	X	X	1.0	X
Prickly Pear	X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cholla	0.0	X	X	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agave	0.0	3.0	0.5	6.1	X	2.6	5.2	X	6.3	6.9
Liliaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.5
Zea	0.0	11.9	7.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0
cf. *Cephalanthus*	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apiaceae	0.0	0.0	0.9	0.0	0.9	0.4	0.0	0.0	1.0	0.5
Typha	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	X
Cyperaceae	1.4	0.0	0.0	0.0	0.0	1.3	0.0	4.9	0.0	0.5
Alnus	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.3	0.0
Erodium	0.7	X	0.9	0.0	0.0	X	0.0	X	0.0	0.0
Unknown 6029 cf. Capparaceae	2.7	0.7	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown 6029 C3T3, prolate, tectate, fine reticulate	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown 6027 cf. Papaveraceae, tricolpate	0.0	0.7	0.5	0.0	0.0	0.0	X	0.0	X	X
Unknown 6027b, tricolpate	0.0	0.4	0.5	0.0	0.0	0.0	X	0.0	0.0	X

Table D.2-2 (continued)
Results of the Pollen Analysis
(Summary parameters shown for each sample and pollen percentages shown for each pollen taxon identified.)

Cut	1001	1025	1025	1025	1025	1035	1035	1056	1056	1058
Layer	2120	2067	2067	2067	2067	2084	2085	2130	2132	2155
Sample	6029	6010	6001	6007	6004	6013	6016	6024	6021	6027
(tricolporate), prolate, perforate										
Unknown 6001 non-umbel	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.8	2.0	0.0
Unknown 6013 syncolpate	0.0	0.0	0.0	0.0	0.0	0.4	0.0	2.1	0.0	0.0
Unknown 6021 cf. Asteraceae or Malvaceae with large pore (foramen?)	0.0	0.0	0.0	0.0	0.0	0.0	X	0.0	0.3	0.0
Unknown 6021 cf. Fabaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Unknown 6021 P3	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.3	0.0
Unknowns Undifferentiated	2.0	7.5	3.7	8.8	4.4	1.3	0.4	1.2	1.3	0.9
Total Aggregates[e]	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	1.3	0.0
Brassicaceae Aggs.	0	0	0	0	0	X(>50)	X(>500)	0	4(>50)	0
Hi-Spine Asteraceae Aggs.	0	0	0	0	1(8)	0	0	0	0	0
SPORES[f]										
Root Hyphae	3	0	0	0	0	0	0	0	0	0
Small brown monoporate Spore	1	1	1	1	1	2	0	3	0	0
Trilete Spore, psilate, in perine	3	3	0	0	3	2	0	3	3	0
Trilete Spore, psilate	3	0	3	0	0	3	0	0	0	3
Trilete Spore, sculptured	0	0	0	0	0	3	3	3	0	3
Monolete Spore	0	0	3	0	0	0	0	3	3	0
Monolete Spore, sculptured	0	0	0	0	0	0	0	3	0	0
Bottle Spores	0	0	0	2	1	0	3	0	0	0
Diporate Cylinderical Spore	0	3	0	2	0	0	3	0	0	3

a. Concentration is an estimate of the number of pollen grains contained in a cubic centimeter of sample sediment (gr/cc), based on an initial tracer concentration of 25,084 *Lycopodium* spores and a sample size of 20 cc.
b. Taxa richness is the number of pollen types identified in a sample out of a total of 51 known pollen types.
c. Spore richness is the number of different spore types identified in a sample out of a total of 8 spores plus the root hyphae category.
d. X notes taxa identified during 100x scans or taxa presence in sterile samples.
e. Pollen aggregate notation shows the number of aggregates and the size of the largest aggregate in ( ).
f. Spore values assigned per the following subjective rating of abundance: 1 common, 2 present, 3 rare.

Table D.2-3
Pollen Types Identified, Possible Ecological Source Area and Cultural Use, Pollination Category, and Sample Frequency as a Percent of 10 Samples

Interpreted Source Areas		Scientific Pollen Name	Common Name	Pollination Mode and Season	% Sample Frequency
Regional natives and possible local garden and landscaping trees and shrubs	1	Abies	Fir	w, summer	30
	2	Tsuga	Mountain Hemlock	w, summer	10
	3	Pinus	Pine	w, summer	100
	4	Cupressaceae	Includes Juniper and Cypress	w, spring	90
	5	Quercus	Oak	w, summer	20
	6	Rhamnaceae	Includes Buckbrush (Ceanothus) and California Lilac (Rhamnus)	i, spring-summer	90
	7[a]	Rosaceae	Rose Family, includes several cultivated and native genera (e.g., peach, almond, apple, ornamental roses)	i, spring-fall	60
	8[a]	Rosaceae, cf. Rubus or Prunus	Possibly blackberry or cherry, grain structure tricolporate coarse striate (25 x 8 µm)	i, summer	60
	9[a]	Other Rosaceae	Other Rose Family	i	20
	10	Artemisia	Sagebrush	w, summer-fall	20
Local native weeds, herbs, possible ornamentals, and food plants	11[a]	Cheno-Am	Includes Saltbush (Atriplex) and weeds from Chenopodiaceae and Amaranthus (goosefoot, pigweed, and others). also spinach (Spinacea), chard, and beets (Beta spp.)	w and i	100
	12[a]	Hi-Spine Asteraceae	Sunflower Family, includes broad range of native shrubs, herbs, and weeds, and cultivated exotics	i	100
	13[a]	Asteraceae, Lactuca type	Sunflower Family, Chicory tribe, includes Dandelion, cultivated Lettuce, and others	i, spring-summer	70
	14	Asteraceae echinate type	Sunflower Family, spiny grains, 25–30 µm	i	40
	15	Asteraceae type C	Sunflower Family, small grain, 25–30 µm, broad-based spines, three small slits	i	40
	16	Ambrosia type	Ragweed, Bursage, Burrobrush	w, spring-summer	80
	17	Poaceae	Grass Family	w	100
	18[a]	Brassicaceae	Mustard Family includes several leafy garden vegetables (cabbage and kale) and native weeds and herbs	i	100
	19	Malvaceae, cf. Sphaeralcea	Globemallow	i, spring-fall	30

Table D.2-2 (continued)
Pollen Types Identified, Possible Ecological Source Area and Cultural Use, Pollination Category, and Sample Frequency as a Percent of 10 Samples

Interpreted Source Areas		Scientific Pollen Name	Common Name	Pollination Mode and Season	% Sample Frequency
Local native weeds, herbs, possible ornamentals, and food plants (continued)	20	Onagraceae	Evening Primrose Family	i	70
	21	Euphorbiaceae	Spurge Family	i	20
	22	Eriogonum	Buckwheat	i, spring	60
	23[a]	Fabaceae	Pea Family, includes range of landscaping, garden, and native trees, shrubs, herbs and weeds (e.g., peas, beans, locust trees)	i	60
	24[a]	Solanaceae	Nightshade Family, includes tomato, potato, tobacco, ground cherry, and others	i	30
	25	Nyctaginaceae	Four O'clock Family	i	80
	26	Polemoniaceae	Phlox Family	i	10
	27	Caryophyllaceae	Pink Family	i	20
	28	Platyopuntia	Prickly Pear	i, early summer	10
	29	Cylindropuntia	Cholla	i, early summer	20
	30[a]	Agave	Agave	i, early summer	90
	31[a]	Liliaceae	Lily Family, includes yucca, onion, and others	i	20
	32[a]	Juglans	Walnut	w, spring	10
	33	Caprifoliaceae, cf. Lonicera	Honeysuckle	i, early summer	60
	34[a]	Lamiaceae	Mint Family	i	20
Possible animal feed, corn probable human food and animal feed	35[a]	Large Poaceae	Cereal Grass, includes Wheat, Barley, Rye, and exotic weed grasses (e.g., Foxtail)	w	80
	36[a]	Zea	Corn	w	30
	37	Erodium	Filaree; Crane's Bill (introduced species)	i	50
Riparian water indicators	38	Alnus	Alder	w, spring	20
	39	cf. Cephalanthus	Buttonbrush	i, spring	10
	40[a]	Apiaceae	Parsley Family includes several spices and herbs	i	50
	41	Typha	Cattail	w, summer	20
	42	Cyperaceae	Sedge Family	w, spring	40

Table D.2-2 (continued)
Pollen Types Identified, Possible Ecological Source Area and Cultural Use, Pollination Category, and Sample Frequency as a Percent of 10 Samples

Interpreted Source Areas		Scientific Pollen Name	Common Name	Pollination Mode and Season	% Sample Frequency
Unknowns	43	Unknown 6029 cf. Capparaceae	Possibly Caper Family, grains prolate, <15 µm long, tricolpate (tricolporate?)		30
	44	Unknown 6029 C3T3	Unknown 6,029 tricolporate, pores elongated transverse to colpi, prolate, tectate, fine reticulate, grain approximately 35 µm long		10
	45	Unknown 6027 cf. Papaveraceae	Possibly a genus in the poppy family, but not California poppy (Eschscholzia californica); tricolpate grain approximately 80 µm diameter, tectate, med-coarse reticulate		50
	46	Unknown 6027b C3	Possibly mustard family member, tricolpate (tricolporate), prolate, perforate, 63 x 35 µm		40
	47	Unknown 6001 non-umbel	Similar to Apiaceae, but lacks pores; tricolpate, prolate, 40 x 20 µm		30
	48	Unknown 6013 syncolpate	Small tricolpate grain, 20–25 µm		20
	49	Unknown 6021 cf. Asteraceae or Malvaceae	Possible Sunflower or Mallow Family member; grain is large (73 x 58 µm) and echinate with one large pore (foramen?); spines broad based		20
	50	Unknown 6021 cf. Fabaceae	Possibly a genus in the Pea Family, ticolporate grain, square shape, 50 x 32 µm		10
	51	Unknown 6021 P3	Triporate grain 20–30 µm		20
Spores	52	Root Hyphae			10
	53	Small brown monoporate Spore			70
	54	Trilete, psilate Spore in perine			60
	55	Trilete, psilate Spore			40
	56	Trilete, sculptured Spore			40
	57	Monolete Spore			30
	58	Monolete, sculptured Spore			10
	59	Bottle-shaped Spores			30
	60	Diporate Cylinderical Spore			40

a - Notes pollen types that represent potential food plants.

of the same pollen types were recovered up to six days after consumption (Kelso 1976). In Table D.2-3, pollen types that represent important economic plants are noted with an * and these are interpreted as the best candidates for cultural use.

The first category in Table D.2-3 (regional natives and possible garden and landscaping plants) encompasses most of the wind-pollinated taxa identified, which are the conifers and oak. The tree pollen could have blown in from regional mountains or from yard trees and urban landscaping projects. Three different types of rose pollen were included in the first category in Table D.2-3, and two were common, occurring in 60 percent of the samples.

Several important economic and ornamental plants could be represented by the rose pollen taxa, such as garden roses and apple trees (*Malus*). There are also several possible natives, especially chaparral shrubs such as chamise (*Adenostoma*), mountain mahogany (*Cercocarpus*), and cream bush (*Holodiscus*). One rose pollen type was identified as cf. *Rubus*, which includes blackberry, or *Prunus*, and encompasses peach, almond, plum, and cherry. The various rose-related plants subsumed by the rose pollen types emphasize that the source area categories are subjective and that there is likely generous overlap between divisions.

Most of the pollen types identified represent insect-pollinated plants and are grouped under the broad category of local native weeds, herbs, possible ornamentals, and possible food plants. These taxa probably originated from plants growing near the site, plants manipulated near the privies, and pollen in human feces. For example, the chicory tribe, mustard family, pea family, and nightshade family encompass several common garden plants, such as lettuce, mustard greens, radishes, kale, peas, beans, tomatoes, potatoes, and eggplant. These same pollen taxa also include many common weeds. Human-modified landscapes, such as the residential and hotel contexts examined for this project, create disturbed ground that is optimum habitat for weeds. Almost all of the pollen types listed in the second category in Table D.2-3 include plant species that are considered weeds.

Agave pollen was identified in nine of the 10 samples analyzed, and this was a surprise. Even more surprising was the high agave values—three samples produced greater than 6 percent agave pollen. Agave is a native insect-pollinated plant that flowers once and then dies. Although agave was a food staple for several western Indian tribes (Moerman 1998), the pollen is rarely recovered from archaeological contexts (Fish et al. 1992:83) because the typical products utilized were past the flowering stage. If the agave pollen in the Chinatown samples analyzed here represents diet, then the flowers were the product consumed, or there was a popular oriental food with pollen identical to the North American agave. Another possibility is that agave pollen was deposited in privies by insects either incidental from foraging or deliberately in a food or nest cache, which implies that native agaves were growing nearby. There are examples of pollen caching by ground-nesting bees (Davis and Buchmann 1994), and there is a bee species (*Xylocopa*) that excavates nests in agave flowering stalks.

The last three groups on Table D.2-3 are riparian indicators, unknowns, and spores. The location of the project area is adjacent the Santa Ana River lowlands and Warm Creek, where a community of willows and cottonwood once existed (Weeks, cited in Belden 1955:50). The riparian pollen types may reflect a 1900s Warm Creek wetland community or plants growing along water ditches running through Chinatown backyards. Distinct unknown grains are listed in

the unknowns category and selected unknowns are documented in the microphotographs in Appendix B.

One interesting unknown grain may be a member of the poppy family, and not the common California poppy (*Eschscholzia californica*), based on reference specimens in the Laboratory of Paleoecology modern collection. The possible poppy grain occurred in half of the samples analyzed. There are several poppy species in southern California, including the native weed, prickly poppy (*Argemone*) and the introduced opium poppy (*Papaver sominferum*), which has escaped cultivation in southern California (Calflora 2002). The opium poppy is an intriguing candidate for Chinatown. Opium is harvested by incising immature seed pods and collecting a milky exudate. It is possible poppy pollen becomes incorporated in the milky sap. Although infamous as an addictive drug, opium is an important medicinal substance, useful as an astringent, antispasmodic, diaphoretic, expectorant, and sedative. Poppy seeds are widely used for food and poppy oil is used in cooking and also in the manufacture of some paints and varnishes (Simon et al. 1984).

The last group in Table D.2-3 is spores, and eight individual forms were recognized. Root hyphae were documented in one sample. Root hyphae refer to the microrrhiza resident in all soils.

POLLEN RESULTS FROM INDIVIDUAL FEATURES

Cut 1025, Hotel Privy

Four samples were analyzed from Layer 2067, a primary privy deposit (Figure D.2-1). The hotel privy was used by Anglo-European hotel workers between A.D. 1894 and 1897. The samples produced the greatest variety of pollen types identified from the project and pollen abundance was moderate with concentrations from 2,500 to greater than 5,000 gr/cc. The results were comparable between the four samples and produced a distinct spectrum for the feature. The pollen signature is characterized by high values of Hi-Spine Asteraceae, grasses, cereal grasses, and corn. Agave, pea family, and chicory tribe pollen occurred in three samples, and buckwheat pollen occurred in all four samples, which is notable as buckwheat was identified in only two other project samples. Values of mustard family pollen were moderate, ranging from 5 to 15 percent.

The highest project values of the possible poppy type (unknown 6027 cf. Papaveraceae, Table D.2-3) were from two of the adjacent samples (numbers 6010 and 6001). The maximum values of rose pollen for the project were calculated from the three adjacent hotel privy samples (Table D.2-1). Combined rose values from samples 6010, 6001, and 6007 were 8 to 13 percent, and the isolated sample (number 6004) produced a low combined rose value of 1 percent. The highest total rose pollen in the other six project samples was less than 2 percent. Small seeds observed in the pollen samples during processing were sieved and saved. Two of the hotel privy samples contained *Rubus* seeds, a genus in the rose family that may also be represented by the rose pollen type designated as cf. *Rubus* or *Prunus* (Table D.2-3)

Corn was identified only in the hotel privy samples and cereal grass was high. Corn and cereal grass are grouped with filaree pollen, a small weedy annual, in Table D.2-3, and this trio is

interpreted to represent possible animal feed. Cereal grasses and corn were certainly popular human food, but harvested grains, processed flours, and even shucked corn are products that retain little or no pollen from the flowering stage (Smith and Geib 1999). There was a hog shed and barn near the hotel privy, which means there were domestic animals being cared for and probably horses were common lodgers. Filaree is a common weed in any disturbed site, but especially barn yards. Buckwheat is another common weedy plant, and there are several weed types subsumed in the mustard category.

Cut 1001, Roasting Oven

The sample from the oven did not produce any clear evidence of cultural activities. The predominant pollen taxa were Cheno-Am, Hi-Spine Asteraceae, and grass, all of which could represent primarily weeds. Prickly pear pollen was unique to this sample, and this was the only sample lacking agave. Nightshade pollen, an important economic category, occurred in the roasting oven sample.

Cut 1035, Wood-Lined Privy

Two samples were analyzed from this feature from two distinct deposits: Layer 2084 was a secondary trash deposit overlying Layer 2085, the primary privy deposit. The redwood-lined privy was the youngest Chinese privy sampled and was active from circa A.D. 1910 to 1944. A greater variety of 23 pollen types was recovered from the secondary deposit Layer 2084, compared to the 13 taxa identified in Layer 2085. Taxa notable in the upper Layer 2084 were Cheno-Am, Hi-Spine Asteraceae, mustard family, agave, and water indicator pollen (sedge and cattail).

The sample from the primary privy deposit (Layer 2085) yielded the maximum pollen concentration value of 32,000 gr/cc out of all 10 samples analyzed, and this sample was almost pure mustard pollen (87% of the pollen count). The maximum concentration from this layer means that there was an exponential abundance of mustard pollen. In order to emphasize this result, the mustard counts are translated to concentrations as follows: Layer 2085 yielded 27,885 gr/cc of mustard (87% of 32,052 gr/cc); and the mustard concentration from Layer 2084 was 1970 gr/cc (44% of 4477 gr/cc). Agave was also high in Layer 2085 at 5 percent compared to 3 percent in Layer 2084, which again has more significance given the maximum concentration from Layer 2085.

Cut 1056, Unlined Privy

Two samples were collected from the unlined privy, one from Layer 2130, a secondary trash deposit over Layer 2132, a primary privy deposit. This was the oldest privy excavated for the project, probably dating to late A.D. 1800s. The results were similar to the samples summarized above from Cut 1035. The sample from the lower, older primary deposit (Layer 2132) produced a high pollen concentration (13,148 gr/cc), a high percentage of mustard (54%), and a high percentage of agave pollen (6%). The sample from the younger refuse layer (Layer 2130) yielded a moderate concentration (4,233 gr/cc), a low mustard value (8%), agave pollen was present (identified during scans), and values of Cheno-Am, Asteraceae, and grass were higher than the lower deposit (Layer 2132).

The refuse Layer 2130 sample included several pollen types that were rare for the project. Mint family, pea family, nightshade family, and sedge were identified in the sample, and cereal grass was high at 7 percent.

Cut 1058, Privy

One sample was analyzed from Layer 2155 in the privy exposed in Cut 1058. A high concentration (12,900 gr/cc) and a moderate diversity of 24 pollen types characterized the assemblage. Although the variety was moderate, the spectrum was dominated by mustard at 75 percent of the count. The project maximum percentage for agave was from this sample at 7 percent.

SUMMARY AND CONCLUSIONS

Experimental studies have shown that direct consumption of pollen can be recovered in human feces, but the ingested pollen can occur in abundance or as a few rare grains, depending on the amount of elapsed time from consumption (Kelso 1976). By this criterion, all 42 known and nine unknown pollen types documented in Table D.2-3 could represent A.D. 1900s diets in San Bernardino's Chinatown. The more reasonable interpretation of the pollen results is that the recovered pollen taxa represent food plants and incidental pollen in food and beverages, and pollen deposited by environmental vectors (air, water, and insects). Pollen types that are the most likely to reflect cuisine are taxa that represent known popular food plants. Sixteen of the 42 known pollen types encompass important food plants and are highlighted in Table D.2-3 with an asterisk (*).

Several pollen types occurred in abundance, such as mustard family, which could reflect a variety of greens (e.g., kale, cabbage, and Chinese cabbage [*Brassica chinensis*]). Spinach, beets, and chard could be represented in the Cheno-Am category. Rose pollen was common in the samples, and there are many prized foods represented in the rose types including peaches, apples, plum, cherry, and most berries. Corn and cereal grass were abundant in the hotel privy samples. Important foods that could be represented by some of the rare pollen types include the pea family, parsley family, mint family, walnut, chicory tribe, which encompasses lettuce, dandelion, and other possible greens, and the nightshade family, which includes tomatoes, peppers, potatoes, tobacco, and other popular garden plants.

Primary deposits from the Chinese privies (Cut 1056, the oldest privy, Cut 1058, the second oldest, and Cut 1035, the youngest privy), produced similar signatures that contrasted with secondary trash layers. The primary deposits accumulated gradually during the use life of the privies and secondary refuse was deposited rapidly as materials were dumped into the privies. Pollen assemblages from the primary layers were characterized by abundant pollen enriched in mustard and agave. The trash layers produced less pollen, a greater diversity of types, and less mustard pollen, in terms of both relative proportions and density or concentration. But secondary layers were characterized by greater relative percentages of Cheno-Am pollen. This pattern was consistent between primary and secondary layers in the Chinese privies and is evidence that plants in the mustard family were an important part of the Asian diets.

The Anglo-European hotel privy samples contrasted with the Chinese privy samples, and this result confirms that the Chinese culture maintained a different cuisine from the Anglos. The hotel privy was characterized by rose family, corn and pea family pollen, high values of cereal grass and Hi-Spine Asteraceae, and suppressed mustard family pollen. The enhanced corn and cereal grass was probably derived from ambient pollen or sheetwash from animal feed used at the hotel.

One of the most interesting pollen types recovered was agave. Agave was documented in the nine privy samples at high values (up to 7%), which is unusual because of the pollination ecology of this plant. Agave flowers or pollen may have been eaten in some way, or perhaps used in a tea. Other environmental explanations cannot be ruled out, such as insects caching agave pollen in privy deposits. The common occurrence of agave means that agave plants were part of the 1900s landscape in Chinatown. Another possibility is that some pollen-rich agave product was imported. Pollen from riparian plants occurred in all of the features, except the hotel privy. This could reflect pollen in drinking water, runoff from ditches at the site, or airborne pollen from riparian vegetation along Warm Creek.

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D.3 MACROBOTANICAL ANALYSIS

Macrobotanical Analysis of Soil Samples from CA-SBR-10399H, Chinatown, San Bernardino County, California

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INTRODUCTION

Excavations conducted by Applied EarthWorks, Inc, in the mixed residential/commercial area of San Bernardino's Chinatown and Hotel District area (CA-SBR-10399H), uncovered several privies and outdoor roasting ovens dating from about 1880 to the 1940s. Twelve soil samples, nine from privies and three from roasting ovens, were sent to the Paleoethnobotany Laboratory in the Cotsen Institute of Archaeology at the University of California, Los Angeles (UCLA) for macrobotanical analysis (Table D.3-1). In addition, four specimens collected during excavations were submitted for identification (Table D.3-2). The primary objectives of this analysis were to look for evidence of diet, other plant use, and seasonality, and to document evidence of variation in plant use among the features.

Table D.3-1
Provenience Information for the Analyzed Soil Samples from CA-SBR-10399H

EB No.[a]	Cut	Layer	SBCM/ Catalog No.	Volume (L)	Context
					Chinese Roasting Oven
3181	1001	2120	5741-6030	0.30	Fire residue / 1880–1900
					Euro-American Hotel
3182	1025	2067	5741-6002	0.20	Primary deposit / 1894–1897
3183	1025	2067	5741-6005	0.90	Primary deposit / 1894–1897
3184	1025	2067	5741-6008	0.90	Primary deposit / 1894–1897
3185	1025	2067	5741-6011	0.05	Primary deposit / 1894–1897
					Chinese Privy
3186	1035	2084	5741-6014	2.40	Secondary refuse / 1944
3187	1035	2085	5741-6017	2.00	Primary deposit / 1910–1930s
					Chinese Roasting Oven
3188	1036	2095	5741-6018	1.40	Fire residue / 1900–1930
3189	1036	2135	5741-6019	2.10	Fire residue cleanout / 1900–1930
					Chinese Privy
3190	1056	2132	5741-6022	3.50	Primary deposit / 1880–1900
3191	1056	2130	5741-6025	0.10	Secondary refuse / 1900
					Chinese Privy
3192	1058	2155	5741-6028	2.10	Primary deposit / 1900–1910

a - The EB number is the accession number of the UCLA Paleoethnobotany Laboratory.

Table D.3-2
Provenience Information and Identifications for the Hand-picked Plant Specimens from CA-SBR-10399H

Site No.	SBCM/ Catalog No.	Cut	Layer	Weight (g)	Identification
36-010399	5741-1212	1035	2079	0.3	*Arachis hypogaea*
36-010399	5741-0922	1058	2154	1.0	*Arachis hypogaea* cf.
36-010399	5741-0987	1058	2155	1.5	*Phaseolus* sp. cf.
36-010399	5741-0988	1058	2155	0.3	*Arachis hypogaea*

This area of San Bernardino's Chinatown is located near the riparian habitat of Warm Creek, with willows, sycamores, and cottonwoods. The hills were covered with coastal sage scrub. Although we have no documentation of the vegetation in Chinatown at the turn of the century, we can assume it included vegetable and flower gardens, and imported ornamental trees. Today the trees around the excavation include eucalyptus, olive, and orange trees.

METHODS

Soil samples were processed in a mechanical flotation device following Watson's (1976) design and processing procedure. The flotation device consists of a 55 gallon water-filled drum with an insert screen possessing 0.5 millimeter openings. Soil samples of known volume were slowly poured into the partially submerged insert screen. Low density botanical remains (light fraction) float to the surface and are directed out of the drum, via a sluiceway, into chiffon netting (0.02 millimeter openings). High-density botanical remains are brought to the surface by the action of water agitation and stirring. This procedure is performed until no plant material is seen flowing into the netting. A siphon is then used to remove any plant material that has become waterlogged and remains submerged (Gumerman and Umemoto 1987). Once the siphon process is completed, the netting is hung to dry, and the material remaining in the insert screen (heavy fraction) is set out to dry and saved for future analysis. All heavy fractions were examined for the presence of botanical material. Some heavy fractions contained many seeds that did not float, so they were sorted in the same manner as the light fractions described below, and the plant remains were combined.

The light fractions were sifted through a series of nested sieves (2.00, 1.00, and 0.50 millimeter), yielding four size fractions (>2.00 millimeter, 2.00–1.00 millimeter, 1.00–0.50 millimeter, and <0.50 millimeter) to be sorted. The light fraction was divided in this manner for two reasons. First, it is easier to sort material of similar size when using an incident light binocular microscope (10–40x). Second, it allows the researcher to selectively remove distinct materials from each fraction. In this analysis, wood and amorphous material were removed only from the >2.00 millimeter fraction. For most samples, all seeds and other plant parts were removed from the >2.00 millimeter, 2.00–1.00 millimeter, and 1.00–0.50 millimeter fractions. Only whole seeds were removed from the <0.50 millimeter fraction. Samples EB 3183, 3184, 3187, 3190, and 3192 contained so many small fragments of seeds in the 1.00–0.50 millimeter fractions that only whole and almost whole seeds were counted and not all of these were pulled from the sample. In addition, sample EB 3190 contained so much plant material in the 1.00–0.50 millimeter fraction that it was subsampled by weight, and only 25 percent was sorted. The total seed count was estimated by multiplying the count from this fraction by four. Most of the

remains were counted, but wood charcoal and amorphous material were weighed because variations in fragmentation make weight a more representative measure of abundance.

The recovered plant remains were identified though the use of various publications and comparative plant collections located in the Paleoethnobotany Laboratory in the Cotsen Institute of Archaeology at UCLA. Wood charcoal specimens were fractured to give a clean transverse section and then examined under an incident light binocular microscope at 60x. A grab of 20 pieces of wood charcoal, if available, was selected for identification. In some samples there were fewer than 20 fragments that were large enough to identify. This subsample size was deemed appropriate given the diversity of taxa present (Smart and Hoffman 1988:186).

RESULTS

Twelve soil samples, totaling 15.95 L of soil from four privy deposits and two roasting ovens were analyzed. The results of the macrobotanical analysis are presented in Tables D.3-2 through D.3-9. Table D.3-2 lists the identification of the large hand-picked specimens. Table D.3-3 provides the scientific and common names of the identified plants. Tables D.3-4 and D.3-5 present the plant material absolute counts and weights (grams) for the analyzed samples. Because soil volume of the flotation samples varied, density values (counts/liter or grams/liter) of the remains were calculated to permit comparisons among the samples (Tables D.3-6 and D.3-7). Some samples were smaller than 1 liter, so the density values are higher than the counted remains. Tables D.3-8 and D.3-9 present the wood charcoal absolute counts and weights. Samples that contained no charcoal were not included in these tables.

The samples contained a variety of cultivated nondomesticated native and introduced plants. Cultivated plants deposited in these samples included *Arachis hypogaea* (peanut), *Capsicum* sp. (chili pepper), *Ficus carica* (fig), *Lycopersicon lycopersicum* (tomato), *Phaseolus* sp. (bean), *Rubus* sp. (blackberry), *Triticum* sp. (wheat), *Vigna* sp. (cf. mung bean), and *Vitis vinifera* (grape). The *Triticum* has the rounded shape of bread (*T. aestivum*) and club (*T. compactum*) wheats. Fragments of wheat or possibly barley were classified as unidentifiable cereal grains (cereal frag.). The nondomesticated plants included *Amaranthus* sp. (pigweed, amaranth), *Brassica* sp. (mustard), *Calandrinia* sp. (red maids), *Chenopodium* cf. *ambrosiodes* (mexican tea), Chenopodium sp. (goosefoot), *Descurania* sp. (tansy mustard), *Malva parviflora* (cheeseweed), *Polygonum* sp. (knotweed), *Portulaca oleracea* (common purslane), *Sambucus* sp. (elderberry), *Solanum* sp. (nightshade), *Vulpia/Festuca* sp. (fescue grass), and *Xanthium* sp. (cocklebur).

Seeds are rarely identified to the species level because seeds within the same genus are often morphologically very similar and carbonization often distorts seeds, obscuring diagnostic characteristics. Some seeds could not be identified to genus and, based on morphology, were placed in families. These include the Cucurbitaceae (squash/gourd), Poaceae (grass), Polygonaceae (buckwheat), Scrophulariaceae (figwort), and Solanaceae (nightshade) families. Seeds that were too distorted or fragmented to classify to even the family level were placed in the unidentifiable seeds category. Any uncertain identifications are indicated “cf” (compare).

In addition to seeds, wood, monocotyledon stem, unknown seed coat/nutshell, rind or thick seed coat fragments, unknown fruit fragments, and unknown plant parts were recovered. Botanical

material that lacked any diagnostic characteristics and could not be positively identified to a known taxa was placed in the Amorphous category. Amorphous material typically possesses minimal vessel structure and lacks a distinctive shape. Most of the amorphous material recovered here was highly vitrified, suggesting it was burned at a high temperature.

The identifiable wood types recovered from the samples were conifer, non-pine conifer (without resin ducts), monocotyledon (possibly a thick bamboo), *Pinus* sp. (pine), *Platanus* sp. (sycamore), *Quercus* sp. (oak), Rhamnaceae (buckthorn family), Rosaceae (rose family), *Salix/Populus* (willow/poplar), and a diffuse porous type with large, scattered pores and fine rays. Charcoal fragments that lacked diagnostic characteristic or were too small to identify were classified as Indeterminate. Some of these were vitrified from burning at high heat.

Table D.3-3
Common Names for Identified Taxa from CA-SBR-10399H

Scientific Name	Common Name
Amaranthus sp.	Pigweed, amaranth
Arachis hypogaea	Peanut
Brassica sp.	Mustard
Calandrinia sp.	Red maid
Capsicum sp.	Chile pepper
Chenopodium cf. *ambrosiodes*	Mexican tea
Chenopodium sp.	Goosefoot
Cucurbitaceae	Squash/gourd family
Descurania sp. cf.	Tansy mustard
Ficus carica	Fig
Lycopersicon lycopersicum	Tomato
Malva parviflora	Cheeseweed
Phaseolus sp.	Bean
Pinus sp.	Pine
Platanus sp.	Sycamore
Poaceae	Grass family
Polygonaceae	Buckwheat family
Polygonum sp.	Knotweed
Portulaca oleracea	Common purslane
Quercus sp.	Oak
Rhamnaceae	Buckthorn family
Rosaceae cf.	Rose family
Rubus sp.	Blackberry
Salix /Populus sp.	Willow/poplar
Sambucus sp.	Elderberry
Scrophulariaceae cf.	Figwort family
Solanaceae	Nightshade family
Solanum sp.	Nightshade
Triticum sp.	Wheat
Vigna sp. cf.	Mung bean
Vitis vinifera	Grape
Vulpia/Festuca sp.	Fescue grass
Xanthium sp. cf.	Cocklebur

Table D.3-4
Plant Material Absolute Counts and Weights (g) for the Privy Samples from CA-SBR-10399H

Cut	1025				1035		1056		1058
EB Number	3182	3183	3184	3185	3186	3187	3190	3191	3192
Type / Layer	2067	2067	2067	2067	2084	2085	2132	2130	2155
Amaranthus sp.	—	1	—	—	37	3	45	—	18
Arachis hypogaea	—	—	—	—	—	—	1	—	—
Brassica sp.	—	—	—	—	3	—	—	—	—
Calandrinia sp.	—	—	—	—	—	1	—	—	—
Capsicum sp.	—	—	2	—	2	35	20	—	—
Cereal frag.	—	—	—	—	4	—	4	—	—
Cheno-Ams	—	—	—	—	—	3	9	—	2
Chenopodium cf. *ambrosiodes*	—	—	—	—	10	—	—	—	—
Chenopodium sp.	—	2	—	—	—	1	—	3	—
Cucurbitaceae	—	—	—	—	1	—	—	—	—
Descurania sp. cf.	—	—	—	—	—	—	4	—	—
Ficus carica	29	201	185	1	114	110	40	—	85
Lycopersicon lycopersicum	37	32	4	13	—	1	—	—	1
Malva parviflora	—	—	—	—	1	5	4	—	2
Poaceae	—	—	—	—	—	—	—	—	1
Poaceae fragments	—	—	—	—	—	1	4	—	—
Poaceae small	—	—	—	—	—	—	4	—	—
Polygonaceae	—	—	—	—	—	—	—	—	3
Polygonum sp.	—	—	—	—	9	8	495	—	1
Portulaca oleracea	—	1	—	—	15	—	—	—	1
Rubus sp.	349	714	71,300	1,004	3	56	387	—	6
Sambucus sp.	—	—	40	—	—	—	—	—	—
Scrophulariaceae cf.	—	—	—	—	5	—	—	—	—
Solanaceae	—	—	—	—	—	—	—	—	2
Solanum sp.	—	—	—	—	—	—	72	—	—
Triticum sp.	—	—	—	—	1	1	6	—	—
Vigna sp. cf.	—	—	—	—	—	—	—	—	3
Vitis vinifera	22	16	655	32	—	6	2	—	—
Vulpia/Festuca sp.	—	—	—	—	1	—	—	—	—
Xanthium sp. cf.	—	—	—	—	—	—	1	—	3
Unknown Type 1	—	—	—	—	4	—	4	—	—
Unknown fruit 2	—	—	—	—	1	—	21	—	21
Unknown Type 3	—	—	—	—	—	—	—	—	1
Unknown Type 4	—	—	1	2	—	—	—	—	—
Unidentifiable seeds	10	—	1	4	30	22	21	—	13
Seed Total[a]	447	967	72,188	1,056	241	253	1144	3	163
Plant parts	—	—	—	—	—	—	—	—	—
Wood[b]	0.02	0.01	0.05	0.01	2.44	0.87	6.76	P	1.47
Amorphous[b]	—	—	—	—	0.01	—	0.60	—	0.07
Monocotyledon stem	—	—	—	—	1	—	1	—	—
Rind cf.	—	—	11	1	4	—	5	—	—
Unidentified seed coat/nutshell	—	—	—	—	—	—	—	—	1
Unidentifiable plant parts									

a - Seed total includes unknown types and unidentifiable seeds and fragments.
b - Weight (grams/liter).

Table D.3-5
Material Absolute Counts and Weights (g) for the Roasting Oven Samples from CA-SBR-10399H

	Cut	1001	1036	
	EB Number	3181	3188	3189
Type	Layer	2120	2095	2135
Unidentifiable seeds		2	—	—
Wood[a]		0.55	12.8	114.85
Amorphous[a]		0.09	0.53	—

a - Weight (grams/liter).

Table D.3-6
Plant Material Densities (counts/liter or grams/liter) for the Privy Samples from CA-SBR-10399H

	Cut	1025				1035		1056		1058
	EB Number	3182	3183	3184	3185	3186	3187	3190	3191	3192
Type	Layer	2067	2067	2067	2067	2084	2085	2132	2130	2155
Amaranthus sp.		—	1	—	—	15.42	1.50	12.86	—	8.57
Arachis hypogaea		—	—	—	—	—	—	0.29	—	—
Brassica sp.		—	—	—	—	1.25	—	—	—	—
Calandrinia sp.		—	—	—	—	—	0.50	—	—	—
Capsicum sp.		—	—	2	—	0.83	17.50	5.71	—	—
Cereal frag.		—	—	—	—	1.67	—	1.14	—	—
Cheno-Ams		—	—	—	—	—	1.50	2.57	—	0.95
Cereal frag.		—	—	—	—	1.67	—	1.14	—	—
Cheno-Ams		—	—	—	—	—	1.50	2.57	—	0.95
Chenopodium cf. *ambrosiodes*		—	—	—	—	4.17	—	—	—	—
Chenopodium sp.		—	2	—	—	—	0.50	—	30	—
Cucurbitaceae		—	—	—	—	0.42	—	—	—	—
Descurania sp. cf.		—	—	—	—	—	—	1.14	—	—
Ficus carica		145	223	206	20	47.50	55.00	11.43	—	40.48
Lycopersicon lycopersicum		185	36	4	260	—	0.50	—	—	0.48
Malva parviflora		—	—	—	—	0.42	2.50	1.14	—	0.95
Poaceae		—	—	—	—	—	—	—	—	0.48
Poaceae fragments		—	—	—	—	—	0.50	1.14	—	—
Poaceae small		—	—	—	—	—	—	1.14	—	—
Polygonaceae		—	—	—	—	—	—	—	—	1.43
Polygonum sp.		—	—	—	—	3.75	4.00	141.43	—	0.48
Portulaca oleracea		—	1	—	—	6.25	—	—	—	0.48
Rubus sp.		1,745	793	79222	20,080	1.25	28.00	110.57	—	2.86
Sambucus sp.		—	—	44	—	—	—	—	—	—
Scrophulariaceae cf.		—	—	—	—	2.08	—	—	—	—
Solanaceae		—	—	—	—	—	—	—	—	0.95
Solanum sp.		—	—	—	—	—	—	20.57	—	—
Triticum sp.		—	—	—	—	0.42	0.50	1.71	—	—
Vigna sp. cf.		—	—	—	—	—	—	—	—	1.43
Vitis vinifera		110	18	728	640	—	3.00	0.57	—	—
Vulpia/Festuca sp.		—	—	—	—	0.42	—	—	—	—
Xanthium sp. cf.		—	—	—	—	—	—	0.29	—	1.43
Unknown Type 1		—	—	—	—	1.67	—	1.14	—	—

Table D.3-6 (continued)
Plant Material Densities (counts/liter or grams/liter) for the Privy Samples from CA-SBR-10399H

	Cut	1025				1035		1056		1058
	EB Number	3182	3183	3184	3185	3186	3187	3190	3191	3192
Type	Layer	2067	2067	2067	2067	2084	2085	2132	2130	2155
Unknown fruit #2		—	—	—	—	0.42	—	6.00	—	10.00
Unknown Type 3		—	—	—	—	—	—	—	—	0.48
Unknown Type 4		—	—	1	40	—	—	—	—	—
Unidentifiable seeds		50	—	1	80	12.50	11.00	6.00	—	6.19
Seed Total		2,235	1,074	80,209	21,120	100.42	126.50	326.86	30	77.62
Plant parts		—	—	—	—	—	—	—	—	—
Wood[b]		0.100	0.012	0.052	0.200	1.017	0.433	1.931	P	0.701
Amorphous [b]		—	—	—	—	0.005	—	0.171	—	0.701
Monocotyledon stem		—	—	—	—	0.417	—	0.286	—	0.031
Rind cf.		—	—	12.222	20.0	1.667	—	1.429	—	—
Unidentified seed coat/nutshell		—	—	—	—	—	—	—	—	—
Unidentifiable plant parts		—	—	—	40.0	—	—	0.286	—	0.476

a - Seed density total includes unknown types and unidentifiable seeds and fragments.
b - Weight densities (grams/liter).

Table D.3-7
Plant Material Densities (counts/liter or grams/liter) for the Roasting Oven Samples from CA-SBR-10399H

	Cut	1001	1036	
	EB Number	3181	3188	3189
Type	Layer	2120	2095	2135
Unidentifiable seeds		6.667	—	—
Wood[a]		1.833	9.143	54.690
Amorphous[a]		0.300	0.379	—

a - Weight densities (grams/liter).

Table D.3-8
Wood Charcoal Absolute Counts and Weights (g) for the Roasting Oven Samples from CA-SBR-10399H

Cut	1001		1036			
EB Number	3181		3188		3189	
Layer	2120		2095		2135	
Type	Ct.	Wt.	Ct.	Wt.	Ct.	Wt.
Diffuse	1	0.02	13	0.63	20	2.29
Rhamnaceae	4	0.06	—	—	—	—
Rosaceae cf.	6	0.09	—	—	—	—
Salix /Populus	—	—	1	0.02	—	—
Indeterminate	4	0.05	—	—	—	—
Monocotyledon stem	—	—	6	0.32	—	—
Total identified	15	0.22	20	0.97	20	2.29
Total wood charcoal	—	0.55	—	12.80	—	114.85

Table D.3-9
Wood Charcoal Absolute Counts and Weights (g) for the Privy Samples from CA-SBR-10399H

Cut	1025								1035				1056		1058	
EB Number	3182		3183		3184		3185		3186		3187		3190		3192	
Layer	2067		2067		2067		2067		2084		2085		2132		2155	
Type	**Ct.**	**Wt.**	**Ct.**	**Wt.**	**Ct.**	**Wt.**	**Ct.**	**Wt.**	**Ct.**	**Wt.**	**Ct.**	**Wt.**	**Ct.**	**Wt.**	**Ct.**	**Wt.**
Conifer	—	—	1	<.01	1	<.01	—	—	—	—	—	—	—	—	—	—
Diffuse	—	—	—	—	—	—	1	0.01	1	0.01	1	0.01	5	0.53	2	0.14
Non-pine conifer	—	—	—	—	—	—	—	—	1	0.01	2	0.04	1	0.07	2	0.1
Pinus sp.	1	0.02	—	—	—	—	—	—	1	0.02	1	0.01	1	0.04	1	<.01
Platanus sp.	—	—	—	—	—	—	—	—	3	0.19	3	0.10	—	—	3	0.21
Quercus sp.	—	—	—	—	—	—	—	—	3	0.10	—	—	—	—	—	—
Rhamnaceae	—	—	—	—	—	—	—	—	3	0.14	5	0.15	2	0.16	2	0.03
Rosaceae cf.	—	—	—	—	—	—	—	—	3	0.09	4	0.08	7	0.32	2	0.06
Salix /Populus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	0.03
Type B	—	—	—	—	—	—	—	—	1	0.03	—	—	—	—	—	—
Indeterminate	—	—	1	<.01	2	<.01	—	—	3	0.20	4	0.03	3	0.52	5	0.11
Monocotyledon stem	—	—	—	—	—	—	—	—	1	0.07	—	—	1	<.01	1	<.01
Total identified	1	0.02	2	0.01	2	—	1	0.01	20	0.86	20	0.42	20	1.64	20	0.68
Total wood charcoal	—	0.02	—	0.01	—	0.05	—	0.01	—	2.44	—	0.87	—	6.76	—	1.47

DISCUSSION

The most common and abundant remains in the CA-SBR-10399H samples were cultivated plants. Blackberry and fig seeds were recovered from all four privies, chili pepper, grape, tomato, and peanut from three privies, wheat and cereal fragments from two privies; and a possible *Phaseolus* bean and mung bean from one privy. Seed totals are dominated by *Rubus* sp., with densities from 1.25 to 20,080 seeds/L sediment. Honeysett identifies blackberry seeds from Sacramento as *Rubus ursinus*, but Lawlor suggests the seeds from the nearby Santa Fe Yards Site (CA-SBR-869H) most closely resemble *R. procerus* (Honeysett 1982; Honeysett and Schulz 1984; Lawlor 1997). *R. procerus* produces about 320 seeds/gram fruit (Young and Young 1992:307). All of the seeds were uncarbonized, except a few from Cut 1056 and two of the three seeds from Cut 1035 Layer 2084. Figs also were abundant, with densities from 11.43 to 206 seeds/L, but many more small uncounted fragments from Cut 1025. All the seeds from Cut 1035 Layer 2084 were carbonized, and all the rest uncarbonized. Grape pit fragments (few whole seeds were recovered), tomato seeds, and most of the chili pepper seeds were uncarbonized, but all the chili pepper seeds from Cut 1035 Layer 2084 were carbonized. These small seeds come from fruits that contain large numbers of seeds, which are consumed with the fruit and pass through the digestive system relatively intact. All, except for chili pepper, have been recovered from similar sites (Honeysett 1982; Honeysett and Schulz 1984; Lawlor 1997). These fruits generally ripen in summer and early fall, but they could be stored dried or cooked as preserves and jams and eaten at other times of the year.

In contrast to these small uncarbonized seeds, the larger peanuts, beans, wheat, and cereal fragments all were carbonized. Honeysett and Schulz (1984:153) note that Chinese gardeners were growing peanuts in California by the 1860s. *Phaseolus vulgaris* (common bean) was recovered from Riverside Chinatown (Kent et al. 1987), but the bean from CA-SBR-10399H is larger than the common bean. Adzuki and mung beans (*Vigna angularis* and *Vigna radiata*) also were recovered from Riverside Chinatown (Kent et al. 1987), and the specimen from CA-SBR-10399H most closely resembles mung bean. Wheat was found at Riverside Chinatown and barley at the Woodland Opera House Site (Honeysett and Schulz 1984; Kent et al. 1987). Many of the larger seeds recovered from these other sites, such as peach, apricot, winter melon, and winter melon were not found at CA-SBR-10399H. The one cucurbit seed from Cut 1035 was carbonized and could not be identified more specifically. All of these cultivated plants are introduced species.

The nondomesticated plants include a variety of wild and weedy plants that thrive in disturbed places, such as roadsides, fields, and fallow gardens. Most of these could be native or introduced plants, depending on the species: amaranth, goosefoot, tansy mustard, knotweed, nightshade, and fescue grass. Mustard, Mexican tea, cheeseweed, and common purslane are introduced species, while red maids and cocklebur are native. Many of these seeds were not carbonized, but all the cheeseweed and fescue grass, most of the knotweed, and some of the amaranth and goosefoot were carbonized. Honeysett and Schulz (1984:154) interpret the weed seeds from Woodland, with the associated corn and barley, as the remains of animal feed. They add that cocklebur is known to stick to horse hair and could have been brought to the site in that manner. These seeds could be accidental inclusions in the privy deposits, but some may have come from useful plants. For example, Cohen-Williams and Williams (2001:9) report that mallow was a common cure for kidney stones, bloody stool, dry scalp, and sore scalp in Alta California around 1838. Similarly,

in China many wild greens were collected and cooked in soups, including *Portulaca oleracea* and Chenopodium *alba*, *so* some of these weedy plants may have been encouraged (Simoons 1991).

Elderberry (*Sambucus* sp.) was recovered in only one privy sample. These uncarbonized seeds represent the collection of native wild berries probably in the summer. Elderberry grows in moist places and could have been encouraged in gardens. Elderberry seeds were also recovered from privy deposits in Woodland and the Santa Fe Yards site (Honeysett and Schulz 1984; Lawlor 1997).

The charcoal from CA-SBR-10399H indicates the use of wood and fuel from local and more distant resource. Some of the trees (sycamore, willow, and poplar) grow in wet places such as streambanks of Warm Creek, but also could be planted in yards. Smith (2001) found no pollen from these taxa in the CA-SBR-10399H deposits, so it is more likely that they were collected from Warm Creek. Pine and buckthorn pollen were very common in the deposits and rose family pollen was fairly common. All three woods were common in the charcoal assemblage. Buckthorn and many rose family shrubs grow in chaparral, but the rose could also come from cultivated plants such as blackberry. The pine wood could be from lumber or local trees. Oak was recovered in only one sample and also is rare in the pollen assemblage.

The flotation samples from CA-SBR-10399H come from privies and roasting ovens, but show three patterns of plant use and disposal. The first pattern is seen in the Cut 1025 Euro-American turn-of-the-century privy. These samples contain almost exclusively fruit seeds, with a few weed seeds, chili pepper, some carbonized rind/seedcoat, and very little charcoal. Blackberry seeds compose 97 percent of the total seeds. The paucity of other plant parts and wood charcoal from the privy flotation samples suggests that this privy was largely composed of feces and was not a site of general refuse disposal. The weedy seeds and plant parts may represent wind blown contamination. Most of the wood is conifer (fragments too small to see if they are pine) and pine.

The second pattern shows a mix of food remains and refuse from other activities. Cut 1056 is the earliest of the sampled Chinese privies. Layer 2132 is clearly a primary privy deposit mixed with other refuse, both larger foods (peanut, wheat, and cereal fragments), wild/weedy species, and a high density of charcoal. Blackberry comprises about 30 percent of the seeds, but the seeds are dominated by mostly-carbonized knotweed. The identified charcoal is predominantly the diffuse type and rose family, with no evidence of plant collecting at Warm Creek. The sample from Layer 2130 contained almost no plant matter. Although the soil sample from this layer was very small, the low density of remains also reflects that plant refuse was not deposited along with the other trash in this secondary refuse.

Cuts 1058 and 1035 are later privies, but follow this second pattern of plant remains. Figs dominate the samples at about 45 percent of the seeds from Cut 1035 and 52% from Cut 1058. Blackberry seeds are negligible in Cut 1058 and Cut 1035 Layer 2084, but about 22% of Layer 2085. Cuts 1058 and 1035 Layer 2085 are primary privy deposits, with few of the larger cultigens (possible mung bean and wheat) and many wild and weedy types. The charcoal from both privies is diverse, with a high proportion of sycamore, buckthorn, rose family, and diffuse type wood. Cut 1035 Layer 2084 contained mixed secondary refuse from abandoned buildings,

which may explain why most of the remains were carbonized. We recovered small seeds, typical of privy deposits (chili pepper, fig, and blackberry), larger seeds of cultigens (cereal fragments, wheat, and cucurbit), and seeds from wild and weedy plants (many, but not all carbonized). These seeds were burned before disposal in the privy, possibly from cooking accidents, burning refuse, and/or burned privies or structures. The charcoal diversity is similar to Layer 2085, although this is the only sample from the site with oak and Type B charcoal.

A third pattern of plant remains is found in the roasting oven samples. One contains no seeds, and the other tiny carbonized unidentifiable seed fragments. If any seeds or fruits were processed in these roasting ovens, they burned completely to ash. The low diversity of charcoal taxa in the roasting ovens compared to the privy samples suggests that specific woods were preferred for roasting. These woods may have produced long-lasting hot coals for roasting pigs. The wood from Roasting Oven 1036 is primarily the diffuse type. The clean out Layer 2135 is exclusively this type, and a scan of the sample showed no indication of other types. But a significant amount of a bamboo-like monocotyledon was identified in Layer 2095. In contrast, the Roasting Oven 1001 roasting oven contains primarily buckthorn and rose family wood (Rhamnaceae and cf. Rosaceae), probably local wild types, and only one fragment of the diffuse type. It looks more like the eclectic wood collection of the second-pattern privy samples. Roasting Oven 1036 is in the vicinity of a temple, and may have been used for periodic festivals and gatherings around the temple, while Roasting Oven 1001 may have been used frequently to cook meat for weekend sale to laborers (Julia Costello, personal communication).

Comparing these samples with other studies of similar deposits suggests that this San Bernardino Chinatown occupation was more acculturated. None of the Chinese foods recovered from other sites were found, although very few large seeds were recovered in any of the samples. Although the density of seeds is extremely high, the diversity is very low. Virtually all the remains are small fruit seeds, primarily blackberry, but also grape, fig, tomato, and elderberry. These samples represent well-sealed privy deposits, with little addition of general plant refuse and accidental plant inclusion. The second pattern of privies somewhat resembles Features 8/9 and 10 from the Woodland Opera House site, in that blackberry, fig, and grape dominate the samples and they contain weedy seeds, but they don't have the Chinese foods and other large seeds (Honeysett and Schulz 1984). The assemblage from Sacramento also contained Chinese foods and large seeds not recovered in our samples (Honeysett 1982). Although grape pits dominated those samples, it is likely that small seeds were lost when the deposit was screened through 1/16 inch mesh. We found many seeds in the 0.5–1.0 millimeter fraction of our samples. The plant assemblages are completely different from the Riverside study, where the deposits were screened through 1/8-inch mesh, so the smaller seeds, if present, were lost (Kent et al. 1987).

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D.4 CONSERVATION OF CHINESE ARTIFACTS

Conserving Chinese Artifacts from San Bernardino Excavations

by Laramie Hickey-Friedman

TREATMENT

The tiles were separated into six groups by their SBCM/Catalog number: 5741-0635, 5741-0636, 5741-0638, 5741-0639, 5741-0640, and 5741-0636.

- 35-millimeter slide photography to record initial condition.
- Temporarily rehoused in polyethylene boxes.
- Individually weighed to record damp weight.
- Placed in separate polyethylene bags for controlled desiccation.
- Moisture gradually absorbed from tiles through use of compressed natural sponges in a sealed atmosphere for duration of up to 2 months. Moisture content monitored through systematic weighing until constant weight achieved.
- Biological growth chemically neutralized.
- Bulky soil accretions and paper towel remnants removed mechanically. In some cases, soil residue left on the surface to avoid disturbance of the fragile wood fibers and any surviving pigment traces.
- Tiles exhibiting extreme fragility consolidated using a cellulose ether consolidant.
- Tiles rehoused in purpose built archival storage box.

METAL BOXES: 5741-0636 (METAL BOX ONLY)

- 35-millimeter slide photography to record initial condition.
- Tiles excavated from fragmentary metal box and treated as recorded above.
- Placement and orientation of surviving box elements recorded.
- Surrounding soil matrix retained.
- Mechanically reduced soil and corrosion accretions from metal fragments.
- Where possible, metal fragments stabilized and reassembled.
- Rehoused in purpose built archival storage box.

5741-0637

- 35-millimeter slide photography to record initial condition
- X-ray radiographs taken of box to determine overall condition and contents. The box was found to contain only a few tiles. Discussions with the consulting archaeologists led to the decision to leave the box intact and not pursue removal of contents.
- Mechanically reduced soil and corrosion accretions from metal fragments.
- Rehoused in purpose built archival storage box.

WOVEN ORGANIC FRAGMENTS: 5741-6031

- 35-millimeter slide photography to record initial condition.
- Gently removed lightly adhered soil residue.
- Consolidated using a cellulose ether consolidant, where necessary.
- Fragments re-assembled with a poly acrylic adhesive.
- Rehoused in purpose built archival storage box.

DRYING SYSTEM

Post-excavation, the wood tiles from the San Bernardino Excavations were kept for several months in refrigerated storage. When they arrived at the conservation lab they were in an extremely damp state. Since the tiles were not saturated, standard treatment for waterlogged organic materials was not warranted. The rate of drying was critical to avoid cell collapse that would result in cracking, shrinkage and distortion.

Compressed natural vegetable sponges provided a controlled method for removing the excess moisture from the tiles. A sponge was placed with a tile in a sealed polyethylene bag. This system provides the dual benefit of removing excess water content from the tiles while simultaneously buffering the micro-environment. As moisture was taken up, the sponges expanded, providing a visual confirmation of moisture absorption, confirmed by weight. As a result of this slow drying process the tiles showed minimal physical change.

Tile No.	Wet Dimensions (in.)			Dry dimensions (in.)			Denomination	Pigment	Wet Weight		Dry Weight	
	L	W	D	L	W	D			oz.	g.	oz.	g.
5741-0633.1	3.019	1.050	0.350	3.000	0.964	0.346	6/6	yes red	0.77	21.83	0.62	17.58
5741-0633.2	3.040	1.010	0.335	3.003	.0964	0.308	3/5	no	0.61	17.29	0.50	14.17
5741-0633.3	3.125	1.013	0.388	3.009	0.898	0.338	5/6	no	0.58	16.44	0.46	13.04
5741-0633.4	3.056	1.022	0.400	3.056	0.989	0.369	2/6	yes white	0.78	22.11	0.67	18.99
5741-0633.5	3.030	1.000	0.320	3.003	0.961	0.322	1/6	no	0.72	20.41	0.61	17.29
5741-0633.6	3.085	1.020	0.361	3.045	0.996	0.342	4/6	yes white	0.67	18.99	0.54	15.31
5741-0633.7	3.050	1.050	0.400	3.026	0.990	0.368	Undetermined	yes white	1.35	38.27	1.17	33.17
5471-0633.8	3.052	0.960	0.368	2.964	0.895	0.305	1/3	no	0.57	16.16	0.46	13.04
5741-0633.9	3.068	1.000	0.400	3.041	0.961	0.351	1/2	no	0.83	23.53	0.72	20.41
5741-0633.10	2.098	1.020	0.320	2.838	0.974	0.329	5/?	no	0.44	12.47	0.33	9.36
5741-0633.11	3.054	0.970	0.343	3.029	0.920	0.329	Undetermined	no	0.48	13.61	0.37	10.49
5741-0633.12	3.065	0.964	0.365	3.010	0.918	0.325	1/6	no	0.52	14.74	0.42	11.91
5471-0633.13	3.040	1.032	0.400	2.886	0.946	0.324	2/6	no	0.83	23.53	0.73	20.70
5471-0633.14	3.050	1.030	0.465	2.964	0.965	0.347	2/2	no	0.79	22.40	0.66	18.71
5471-0633 b	3.025	1.040	0.360	3.000	0.912	0.300	6/6	no	0.70	19.84	0.43	12.19
5471-0633 c	2.942	0.880	0.348	2.918	0.956	0.333	5/6	no	0.64	18.14	0.53	15.03
5741-0635.2	2.930	0.950	0.315	2.909	0.910	0.287	1/1	no	0.46	13.04	0.36	10.21
5741-0635.3	3.022	1.039	0.350	2.934	0.947	0.327	3/6	no	0.54	15.31	0.42	11.91
5741-0635.4	3.000	1.000	0.350	2.915	0.934	0.325	4/4	no	0.57	16.16	0.44	12.47
5741-0635.5 (with adherent chain)	*	*	*	2.962	1.025	0.330	4/4	yes red	4.68	132.68	4.34	123.04
Removed from fragmentary metal box												
5741-0636.2	*	*	*	3.001	0.979	0.345	4/6	no	*	*	0.43	12.3
5741-0636.3	*	*	*	2.702	1.034	0.376	Undetermined	no	*	*	0.50	14.1
5741-0636.4	*	*	*	3.020	0.978	0.471	1/4	no	*	*	0.62	17.6
5471-0636.5	*	*	*	3.066	0.968	0.320	2/3	no	*	*	0.50	14.2
5471-0636.6	*	*	*	3.040	1.018	0.356	0/3	no	*	*	0.60	16.9
5741-0636.7	*	*	*	3.022	0.958	0.337	1/1	no	*	*-	0.43	12.1
5741-0636.8	*	*	*	3.022	0.958	0.337	4/5	no	*	*	0.43	12.2
Also found in box: 6												
+ 1 fragment white counters; small stack coins												

Tile No.	Wet Dimensions (in.)			Dry dimensions (in.)			Denomination	Pigment	Wet Weight		Dry Weight	
	L	W	D	L	W	D			oz.	g.	oz.	g.
5741-0638.1	2.750	0.900	0.316	2.756	0.978	0.354	4/4	yes red	0.50	14.17	0.38	10.77
5741-0638.2	2.820	1.180	0.360	2.761	0.954	0.346	1/2	no	0.55	15.59	0.46	13.04
5741-0638.3	2.680	0.967	0.300	2.709	0.955	0.318	3/5	no	0.49	13.89	0.34	9.64
5741-0638.4	2.800	1.025	0.400	2.756	0.982	0.357	1/3	yes red	0.69	19.56	0.55	15.59
5741-0638.5	2.750	1.036	0.365	2.747	0.984	0.341	1/6	no	0.64	18.14	0.55	15.59
5471-0638 a	2.810	1.050	0.330	2.764	0.982	0.302	4/5	yes white	0.56	15.88	0.47	13.32
5741-0639.1	2.800	1.054	0.385	2.786	1.018	0.352	1/6	no	0.76	21.55	0.61	17.29
5741-0639.2	2.837	1.047	0.373	2.758	1.011	0.359	1/5	yes red	0.73	20.70	0.62	17.58
5741-0639.3	2.822	1.024	0.350	0.756	0.978	0.334	1/5	yes red	0.61	17.29	0.50	14.17
5741-0639.4	2.800	1.050	0.386	0.782	0.992	0.357	6/6	yes red	0.90	25.51	0.76	21.55
5741-0639.5	2.800	1.060	0.350	2.744	0.979	0.345	5/6	no	0.74	20.98	0.64	18.14
5741-0639.6	2.790	1.058	0.350	2.720	1.017	0.325	5/6	no	0.49	13.89	0.37	10.49
5741-0639.7	2.930	1.054	0.355	2.810	1.036	0.344	5/5	yes red	0.69	19.56	0.59	16.73
5741-0639.8	2.080	1.060	0.340	2.746	0.983	0.346	3/4	no	0.66	18.71	0.59	16.73
5741-0639.9	2.800	1.082	0.435	2.780	1.010	0.390	2/3	no	0.89	25.23	0.79	22.40
												0.00
5741-0640.1	2.880	1.020	0.345	2.821	0.980	0.330	1/4	no	0.68	19.28	0.55	15.59
5741-0640.2	2.620	1.061	0.400	2.683	1.026	0.370	6/?	yes red	0.70	19.84	0.59	16.73
5741-0640.3	2.820	1.070	0.386	2.767	1.000	0.366	2/4	no	0.93	26.37	0.86	24.38
5741-0640.4	2.800	1.090	0.280	2.800	1.044	0.340	Config?	yes red	0.83	23.53	0.71	20.13
5741-0640.5	2.835	1.042	0.386	2.722	0.968	0.356	2/2	no	0.65	18.43	0.48	13.61
5741-0640.6	2.818	1.081	0.377	2.780	1.020	0.366	1/1	no	0.85	24.10	0.75	21.26
5741-0640.7	2.821	1.064	0.407	2.768	1.023	0.364	2/2	no	0.68	19.28	0.52	14.74
5741-0640.8	2.850	1.053	0.345	2.775	1.018	0.302	5/6	yes white	0.67	18.99	0.57	16.16
5741-0640.9	3.200	0.978	0.335	3.080	0.944	0.373	1/5	no	0.60	17.01	0.53	15.03
5741-0640.10	2.770	1.000	0.363	2.778	0.984	0.339	3/6	yes white	0.60	17.01	0.56	15.88
												0.00

Appendix E

ARTIFACT CATALOGS