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William Swafford

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Forward

As the last issue of the Journal was being prepared for the printer, word was received of the passing of Tom Patterson. While it was possible to dedicate the issue to Tom's memory, printing deadlines did not allow for the inclusion of an appropriate appreciation of Tom's life and work. This omission is corrected in this issue by a fine and heartfelt appreciation of Tom by his friend and colleague, Joan Hall. She places his life in the context of his times and helps us all remember one of Riverside's great historians.

Transitions in transportation and other technologies play a key role in Casey Tibbet's substantial article which reveals how city planning has evolved over time by focusing on four different Riverside neighbourhoods and the various factors that influenced how they were planned.

In her article on the artifacts obtained from the dig at Riverside's Chinatown, Little Gom Benn, Laura Bellew discusses important ethical issues in the archaeological and museum professions by placing the debate in the context of a specific collection of artifacts owned by the Riverside Metropolitan Museum.

Finally, in a reprint from over 90 years ago, A. D. Shamel puts the famous Parent Navel Orange Tree into the context of its native land and contrasts how citrus was grown and developed in both California and Brazil.

Wm. Swafford, Editor

About the Authors

Laura Bellew - is a Ph.D. student in the history department at the University of California, Riverside. She studies 20th century American History. She received her Master of Arts in History in the Public History Program from UCR in 2005. This essay is based on a paper she wrote while a student in the Public History Program in 2004.

Joan Herrick Hall - moved to Riverside in 1952, and she is descended from a prominent local pioneer family. Her great-grandfather, Stephen Henderson Herrick, was a Riverside banker involved in the agricultural development of the Highgrove area. Mrs. Hall has authored and co-authored a wide variety of local history books and articles, specializing in biography and architectural history, including *Adobes, Bungalows, and Mansions of Riverside, Through the Doors of the Mission Inn (Volumes 1 and* 2). Mrs. Hall has also had a long civic involvement with local history, having served as chair of the Riverside Cultural Heritage Board and of the Riverside Municipal Museum Board and as president of the Riverside Historical Society.

Archibald Dixon Shamel - was a world-renowned agricultural authority in the field of plant physiology. Born in 1877 in Illinois, he began work for the U. S. Dept. of Agriculture in 1902. He moved to Riverside in 1909 and took up the work of improving citrus fruits. In his retirement he devoted himself to the development of Riverside parks and the protection and planting of the city's street trees. He died in 1956. He introduced the Shamel Ash to Riverside and Shamel Park bears his name in tribute to his lengthy services for the community.

Casey Tibbet - was born and raised in Pasadena, California. After graduating from the University of California, Riverside, she became a full-time Riverside resident and worked as a city planner for thirteen years. In 2003, she returned to UCR where she received an M.A. in History (Historic Preservation). For the past two years she has worked as an architectural historian for a locally based cultural resources management consulting firm. TOM

by Joan Hall

Tom Patterson was one great guy! When he passed away in January 2006, at the age of 96, Riverside lost one of its greatest advocates.

Widely recognized as a top authority on local history, he was ironically not a native Riversider, having been born in 1909 in Yuma Valley, Arizona Territory. Many years later, his sister, Laura Pearson, also became a Riverside resident.

After graduating from the University of Southern California, Tom's interest in journalism prompted him to become a newspaper reporter. After working for the Long Beach *Press-Telegram*, he joined the staff of the Riverside *Daily Press* in 1946 as the City Hall reporter. Following a productive year, he was promoted to City Editor, a step up the corporate ladder. In 1949, Tom and his wife, Kathleen, known as Bunny, lived in a cottage on Cridge Street with their two children.

During this time, his past affiliation with the Communist Party became an issue. As an idealistic young man during the depression years, he had joined the movement, but after World War II when the party was declared un-American, he often admitted his membership had been a foolish and regrettable act. As a result, he stepped down as City Editor.

Assigned to cover the various school district happenings, he skillfully combined human interest stories with community histories. His novel articles received several John Swett Awards from the California Teachers Association.

In 1962, he co-authored *Riverman-Desertman* based on oral recollections of a long time resident of Palo Verde, Camiel Dekins. Tom's interest in the great outdoors became apparent when Dekins' story unfolded as a book and newspaper series. The extensive county of Riverside, with so many diverse stories, intrigued Tom, but his stories were concentrated on local happenings and historic research.

The 1964 book, *Landmarks of Riverside*, disclosed his ability to capture historical features of local interest with current data, pictures and maps. This pictorial book was a prelude to Riverside's centennial year of

1970. Howard H. Hays, Jr., editor of the *Press-Enterprise*, assigned Tom Patterson the unusual project of writing the history of the community's first one hundred years.

A Colony for California was published in 1971 by the Press-Enterprise with a forward by John G. Gabbert, Associate Justice, Fourth California Appellate District. The blue colored, hard covered book was a comprehensive record of events, social causes, personalities, and heritage of Riverside, California. Tom's book had been carefully researched and documented and became a valuable asset to historians and researchers. In 1974, he received the California Historical Society Award of Merit for his celebrated A Colony for California.

As an inquisitive and galvanized reporter and historian, Tom belonged to many societies and commissions where he willingly shared information and resources. He attended all sorts of community events and accurately reported the proceedings, often mentioning people involved. He was a people-person, interested in what was happening, and not always just for a story.

After retiring in 1974, Tom continued to write a weekly column under the heading *Out of the County's Past.* In his great journalistic style, he wrote about historical subjects scattered about the vast county and gained a devoted following. By 1996, 87-year-old Thomas W. Patterson retired once again and six years later moved to Cupertino, California, to live with his daughter, Kathleen Liggett.

Unpretentious Tom could no longer be seen around town with his half-smile, floppy hat, and wavering stride. We all missed his occasional quizzical expression and smiling face, but he left Riverside a meaningful, lasting legacy in his well-researched and informative material about the community he respected and honored.

ASPECTS OF RIVERSIDE'S SUBURBAN HERITAGE

by Casey Tibbet

Suburban growth patterns in Riverside have generally reflected national trends. In the city's early period, advances in transportation determined the emergence of suburbs. Later, federal programs of the 1930s, designed to provide work and encourage home ownership, helped set favorable conditions for the post-World War II housing boom that occurred in Riverside and throughout much of the nation. This boom produced hundreds of similarly designed subdivisions filled with thousands of similarly designed homes that are now over or approaching the historic age of 50. Consequently, historic preservationists are beginning to look closely at these suburban neighborhoods in Riverside and throughout the country, in an effort to identify characteristics that make one neighborhood more historically significant than another. This essay looks at four representative examples of suburban development in Riverside - Hall's Addition, the Wood Streets, Canyon Crest, and Sungold Terrace, and discusses social and technological influences that helped shape them.

The earliest demands for suburban living in the United States resulted from nineteenth century waves of immigration and industrialization. With more and more people living and working in urbanized areas, cities became overcrowded and polluted. Middle-class city dwellers, intellectuals and idealists, disillusioned with the machine age's dehumanizing effects, advocated semi-rural living that would bring a human touch into their lives. After the 1830s, railroads provided easier access to large tracts of land outside the cities and those financially able moved away, commuting to work and pleasure by train. Between 1840 and about 1890, numerous communities sprang up in these rural areas, clustered around railroad stations. These were the railroad suburbs, often comprising large estates with landscaped grounds. Their residents and planners responded to a number of publications advocating appropriate subdivision and house design. Already in 1870, when Frank Scott's Art of

Beautifying Suburban Home Grounds of Small Extent identified these areas as suburbs rather than rural communities, residential streets were taking on a unified landscape character. It was about this time that the Southern California Colony Association founded the town of Riverside, California.

In 1870, Riverside was surveyed and platted in the grid pattern common across the nation. The original town site was one-mile square with ten-acre parcels to the north and south of the Mile Square. During the land boom of the 1870s and 1880s, Riverside grew rapidly and by 1883, when it was incorporated, it had 3,000 people and was 56 squaremiles in area.¹ It included a small business district in the heart of the original Mile Square, the Arlington area to the southwest, and 33 squaremiles that were divided into small farm lots of five, ten, twenty, and forty acres.² As a comparison, San Francisco, which was the most populous city in the state with 300,000 people, had an area of only 46 squaremiles.³ Clearly, Riverside had room to grow.

The first expansion of the Mile Square was a 100-acre triangle called White's Addition, a tract of land subdivided by various people into smaller residential lots between 1887 and 1894. This grid pattern community along the railroad tracks on the east side of the original town site became known later as the "Eastside" and by 1890 had become the home of most of the city's minority groups (Fig. 1).⁴ At its inception, three factors contributed greatly to the rapid development of White's Addition and the Eastside in general: the land boom of the 1880s, the fact that land was sold by building lot, not by city block as was so within the Mile Square, and "an ample supply of good spring water" from the Gage Canal, eliminating the well drilling and pumping by windmills that was needed in the Mile-Square.⁵ Although this expansion of the original Mile Square resulted in what might be viewed as an early "bedroom" community for the working class, its development was more a result of cost and convenience than a flight from congestion or crowding.

At about this time in the eastern and mid-western areas of the country, small-lot streetcar suburbs were beginning to develop between the older estate-lot railroad suburbs and the high density central cities. Although it took a while for streetcar suburbs to develop in Riverside, by

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Figure 1 - City of Riverside in 1897 (USGS 1901)

the late 1880s-early 1890s, several streetcar companies operated in the city. Most of the routes were within the Mile Square area, but there were also routes along Magnolia and Arlington Avenues to Van Buren Boulevard in the heart of Arlington, and two companies offered hourly service from the Eastside to various destinations. These streetcars, which were originally pulled along their tracks by mules before going electric in 1899, encouraged relatively dense growth throughout the Mile Square and Eastside areas



Figure 2 - Mule car from downtown Riverside to Victoria Club area in the 1890s (Courtesy of the Riverside Municipal Museum)

and sparse, large lot growth along Magnolia and Arlington Avenues during the remainder of the nineteenth century (Fig. 2). By 1893, when Riverside County was formed, public transportation lines of one kind or another connected Riverside to most other communities in Southern California.

The first noteworthy streetcar suburb in Riverside was an area popularly known as the Wood Streets (Fig. 3). Before being filled and topped by an extended Magnolia Avenue, the Tequesquite Arroyo, just west of 14th Street, obstructed easy direct access to Arlington from the Mile Square. The 1913 extension of the roadway bridged the gap. Perhaps in anticipation of this, in 1910, Edward H. Wood filed the Homewood Court subdivision on either side of Magnolia Avenue.⁶ Following Homewood Court's lead, new grid-patterned subdivisions sprang up along Magnolia Avenue. Most of the new streets included "wood" in their names, such as Larchwood, Beechwood, Rosewood, and Linwood, giving the area its popular identity.



Figure 3 - Riverside in 1939 (USGS 1943)

The Wood Streets neighborhood grew to encompass approximately one square-mile and about 1,220 small residential lots that were within a five to ten minute walking distance of the streetcar lines. Home styles offered architectural variety, and included Craftsman and California Bungalows, as well as period revival styles such as Tudor, Spanish **Riverside's Suburban Heritage**



Figure 4 - Craftsman Bungalow at 4210 Highland Place

Colonial, Pueblo, and Mission. This diversity was tempered visually by regular building setbacks and lot sizes that effectively established a consistency of scale giving this m i d d l e - c l a s s neighborhood a cohesive, harmonious

appearance. With the vast majority of houses having been built during the 1910s and 1920s, the Wood Streets area is an example of a streetcar suburb and a harbinger of another suburban pattern new to Riverside - the automobile suburb.⁷

Even though many working class Americans rode the streetcars into the late 1930s, by 1920 the Federal Highway Administration reported that there were nine million cars in the United States. This proliferation stimulated the development of a new transportation infrastructure: improved local road surfaces, connecting highways, traffic controls, tunnels and bridges, and widened and reconstructed downtown streets.⁸ It also facilitated suburbanization and allowed for more flexibility in subdivision design because people no longer felt the need to be within easy walking distance of the streetcar lines.

In 1916, just eight years after the benchmark Model T appeared, Congress adopted the Federal Aid Highway Act, commonly referred to as the Good Roads Act. This Act



Figure 5 - Mission Revival-style residence at 5037 Magnolia Avenue

established the Bureau of Public Roads and authorized federal funding for state road projects that met certain criteria. Although most roads in the United States were dirt, by 1916, roads paved



Figure 6 - Tudor Revival-style residence at 3669 Castle Reagh Place

with asphalt began to be common. Riverside, however, had moved ahead of many cities, having paved roads as early as 1912.

For the next decade, Riverside and the rest of the nation continued to grow and prosper. Between 1921 and 1925, the number of building permits issued annually increased from 694 to 1,136. Also during this period, the Better Homes movement was founded by Secretary of Commerce Herbert Hoover. This movement advocated domestic reform based on educating home owners about quality construction and design and encouraged construction of new homes and remodeling of older homes.⁹ Although comprehensive planning had been introduced as early as 1893 at the Columbian World's Exposition in Chicago, it was not until 1909 that city planning really took off. In that year, renowned architect Daniel Burnham and his associates submitted their comprehensive plan for the City of Chicago to the City Council, the first National Conference on



Figure 7 - Spanish Colonial Revival bungalow at 3667 Castle Reagh Place

City Planning was held in Washington D. C., Wisconsin adopted the first state law granting large and medium cities the authority to establish city p l a n n i n g commissions and prepare city plans, and the City of Los Angeles became the first large city in the nation to adopt a zoning ordinance distinguishing between residential and commercial properties.¹⁰ A few years later, in 1915, the City of Riverside established a city planning commission, but adoption of a zoning ordinance would not happen for more than a decade.

In 1926, the Supreme Court upheld the constitutionality of zoning ordinances and the following year the State of California adopted the State Planning Act. As a result, the City of Riverside hired Charles Cheney, an early urban planner, to develop a master plan for the city. Recognizing the importance of the automobile, the master plan focused on creating, extending, and widening streets and establishing more divided and landscaped boulevards like Magnolia and Victoria Avenues, which had been designed in 1874-1877 and 1890, respectively. In 1928, the City adopted its first zoning ordinance.

During the Depression years, expanded Federal involvement in the housing industry transformed residential development. From President Herbert Hoover's 1931 President's Conference on Home Building and Home Ownership, emerged transforming legislation. This included the Federal Home Loan Bank Act (1932), the Home Loan Act (1933), the National Housing Act (1934), and the creation of the Federal Housing Authority (FHA). The combined impact was the provision of a financial base for banks financing home ownership and construction and homeowner access to low interest, long term loans and refinancing. The FHA was to set standards for the industry.

In 1936, headed by Seward Mott, the FHA published Planning Neighborhoods for Small Houses, which provided standards for the design of new subdivisions that would justify approval of mortgage loans and FHA mortgage insurance. At a minimum, new subdivisions were required to provide safe living environments that were easily accessible to public transportation, schools, and other amenities and to install utilities and street improvements while meeting local regulations and carrying appropriate deed restrictions to protect property values. In this context the FHA encouraged large-scale projects with "broader and more profitable use of capital" and their adaptability to industrial methods that reduced overhead, construction, and merchandising costs. Inclusion of commercial services was also encouraged.

A key element of the new standards was the curvilinear street design. This concept came from the 1920s Garden City projects and earlier picturesque suburban movement, but it was to become a hallmark of post-war suburban subdivisions. The advantages of this street pattern included increased privacy and visual interest, greater flexibility in relation to topography and design, reduced costs for road construction and installation of utilities, and the near elimination of four-way intersections providing a generally safer living environment.

In addition to subdivision design standards, in 1936, the FHA offered five house designs that followed the FHA's principal for "providing a maximum accommodation within a minimum of means."¹¹ Most types of building material could be used and installation of modern appliances and amenities was encouraged. House sizes ranged from 534 square-feet in a one-story, two-bedroom home designed for a family of three, to three two-story designs, including one with an attached garage. To reduce monotonous repetition, the FHA suggested cul-de-sacs, varying the placement of houses on lots, and using a variety of materials and roof types. These designs had little if any ornamentation and houses that followed these general principals came to be known as Wartime Tract houses or Minimal Traditional-style houses. In 1940, the FHA presented a new version of the minimum house that was based on "expandability,"¹²

The importance of the FHA standards cannot be overemphasized in relation to their impact on post-war subdivision design across the country and in Riverside. They established large-scale "tract" housing, promoted cost-saving methods and prefabricated and standardized materials, brought commercial businesses to the suburbs, and popularized the curvilinear and cul-de-sac street design. Seward Mott and his staff in the FHA's Land Planning Division had indeed changed the course of suburban design and development.

During the 1930s, Riverside faced high unemployment and a severe drop in new construction. Initially, the federal housing related

programs made little impact. Instead, it was the public works programs that helped many communities limp along through most of the decade. In 1933, for example, the Riverside Unemployment Committee reported that 394 people had been given employment through various public works programs and that \$16,000.00 remained in the unemployment fund and should be appropriated for more works projects.¹³ In 1934, forty-five city streets were scheduled to be improved with a rock and gravel surface in a project sponsored by the Civil Works Administration.

Also during this period, highway construction continued throughout the nation. By the end of the decade, three highways connected Riverside to surrounding areas. They were the forerunner of State Route 60, which ran along Mission Boulevard and Seventh Street (now Mission Inn Avenue) and connected Riverside to Los Angeles; State Highways 60 and 395, which came over the Box Springs Mountains as a divided highway and connected the city to points east; and Highway 18, the forerunner of State Route 91, which ran through town along Market Street and Magnolia Avenue, linking the city with San Bernardino to the north and Corona and the coastal cities to the west. This infrastructure, certainly important to the well-being and future growth of the city, was also a consequence of the presence of March Field (later March Air Force Base).

March Field had been established to the southeast of the city on 1 March 1918. It was originally an Army air facility that started out with eight hangars and 96 Curtiss JN-4D "Jenny" aircraft. By July 1918, five cadet squadrons began flight training.¹⁴ After World War I, March Field virtually shut down, but, in 1927, it was reactivated and expanded and, in 1935, it was named the Western Headquarters of Army Aviation under the command of Brigadier General Arnold. During the 1930s and 1940s, the proximity of March Field made the City of Riverside eligible for federal programs that other communities were denied. For example, because so many defense workers lived in Riverside and commuted to March, Highway 60 was widened and a new stretch of road connecting Van Buren Boulevard to Highway 395 was constructed. These projects served the dual purpose of alleviating traffic and unemployment.¹⁵ The proximity of March Field, with its military and civilian personnel, also significantly increased the demand for housing.



Figure 8 - General location and configuration of March Air Force Base

Early in 1940, personnel at March more than doubled from 125 officers and 1,500 enlisted men to 250 officers and 3,600 enlisted men.¹⁶ About the same time, Camp Haan (Fig. 9) was constructed across the highway, employing 5,000 men at any one time and later acting as a training camp for thousands more.¹⁷ By mid-August 1940, public appeals sounded in the city for furnished rooms, apartments, and houses to accommodate people associated with March Field and Camp Haan.

Amendments to the National Housing Act in 1941 facilitated housing construction in areas designated critical for defense and defense production. Riverside benefitted from these defense-related housing





Figure 9 - Views of Camp Haan

projects as did hundreds of other communities in forty-three states as well as Alaska, Puerto Rico, and Washington D.C.¹⁸ In Riverside, the first of these projects to be completed was a 275-unit housing project in Canyon Crest Heights (Figs. 3 and 10).

Sponsored by the Federal Works Agency and incorporating some of the FHA standards, the subdivision had curvilinear streets, a playground for children, and landscaping around the small stucco houses. The houses themselves were equipped with light, power, gas, domestic water, sewer connections, all necessary fixtures, refrigerators, and ranges. The first residents were quite pleased with their new accommodations and noted especially the peaceful atmosphere, park-like setting, and modern conveniences. The only complaint was that none of the units were furnished.¹⁹ While many of the housing projects of this period were designed to be temporary, the Canyon Crest Heights project was intended to be permanent and, in fact, is still in use to this day as housing for married students attending the University of California, Riverside.



Figure 10 - Former military housing at Canyon Crest Heights

In 1942, building activity declined in Riverside when the War Production Board (WPB) limited construction of new residences to a cost of \$500, new agricultural buildings to a cost of \$1,000, and industrial buildings to a cost of \$5,000. In August, the WPB added more restrictions, but allowed construction associated with the military and defense workers. That same year in Riverside, construction began on Camp Anza, a 1,260acre facility located on Arlington Avenue in the Arlington/La Sierra area. When activated in December 1942, the camp created even more demand for housing in and around Riverside. Despite the WPB restrictions, by September 1943, the local Housing Authority had constructed 1,451 dwelling units in Riverside for defense workers and their families.

Following the war's end, a shortage of housing, the return of six million servicemen, and continued population growth produced the largest building boom in the country's history and most of it was concentrated in the suburbs.²⁰ Spurred by builder's credits and liberalized terms for VA and FHA approved mortgages, construction of single-family residences increased from 114,000 in 1944, to 937,000 in 1946.²¹ The classic response to this huge growth was Levittown on Long Island in New York.

Built in 1947, this huge suburb eventually had more than 17,500 simplified Cape Cod-style homes populated by over 82,000 people. It became the model for hundreds, if not thousands, of suburban developments throughout the country with its curvilinear streets, cul-desacs, and park-like expanses connecting the backyards. Building sections were fabricated elsewhere for on-site assembly line construction. Reduced costs and simplified construction eliminated the need for craftsmen and Levitt's company boasted completing a house every fifteen minutes. Though wildly popular, critics cited its striking uniformity as a serious downside to its innovative and cost-saving approach.

By 1950, home building nationally and in Riverside soared to record highs, but the real boom in Riverside came the following year. Both national and local employment rose in agriculture, the military, and



Figure 11 - Levittown, NY aerial view (ca. 1950) and Cape Cod-style house (1948)

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manufacturing.²² Enrollments began to soar at Riverside Junior College and La Sierra College. Construction began on the California School for the Deaf on Arlington Avenue, and the University of California Regents approved site preparation for the new Riverside campus located east of the Eastside. A "one-stop" shopping center with a grocery store, a department store, and other shops was proposed on ten acres at the southwest corner of Chicago Avenue and 8th Street (later University Avenue), specifically to meet the demands of UCR and the surrounding neighborhoods. In response to demand for housing by military and defense workers, and perhaps in anticipation of the increased student population, development began on numerous residential subdivisions and several shopping centers in the early 1950s.

In January 1951, the City issued permits to Johnson, Inc. for 56 lots in the first phase of Sun Gold Terrace, a 40-acre, 200-home subdivision generally modeled after Levittown with curvilinear streets and predominantly Cape Cod and California Ranch-style homes (Figs. 12-14). The development was bounded by Central, Arlington, and Brockton



Avenues and Riverside Drive (Fig. 12). Although modeled on Levittown, Sun Gold avoided banality by varying the home styles, incorporating only 4 four-way intersections, including cul-de-sacs in the overall design, and using detached as well as attached

Figure 12 - Sun Gold Terrace and shopping centers

garages. Lawn-fronted lots were open on the side and front, but enclosed behind.

According to City Directories for 1951 and 1952, many of the first Sun Gold Terrace home owners were government employees or military

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Figure 13 - California Ranch-style residence at 3579 Cheryl Way

personnel, giving the neighborhood a distinctly middle-class and predominantly white orientation.²³ To support this new neighborhood with a population of well over 500 people, a shopping area known

as the Brockton Arcade was developed adjacent to the west of Sun Gold

Terrace in the mid- to late 1950s (Fig, 12). In 1956, the even larger Riverside Plaza, located across Central Avenue to the north of Sun Gold Terrace, opened with the four-level Harris Department Store and a Woolworth's as anchor tenants, surrounded by



Figure 14 - Cape Cod-style residence at 3610 Nelson Street

expansive parking lots (Fig. 12). The Sun Gold neighborhood was also located near major streets with easy access to State Route 91, making it ideally situated within easy range of shopping, local commutes, and what would soon become a freeway. In many respects, Sun Gold Terrace seems to be one of Riverside's best examples of a middle-class postwar suburban neighborhood.

Each of the four neighborhoods discussed in this essay represents a distinct style and period of suburbanization. The Eastside was an early outgrowth of the original Mile Square and almost a "bedroom community" for the downtown commercial district. The grid-patterned Wood Streets area was one of the first streetcar suburbs as well as an early automobile suburb. Canyon Crest Heights represents the influence and importance of nearby military installations and is a good example of the application

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of the curvilinear street design and small basic home designs encouraged by the FHA. Finally, Sun Gold Terrace combined all the elements of a classic early post-World War II residential development. However, while the Eastside, Wood Streets, and Canyon Crest Heights areas are relatively unique in Riverside, the city has a multitude of residential subdivisions that are similar in period, style, and design to Sun Gold Terrace.

Between 1945 and 1960 approximately 430 residential subdivision maps were filed in the city with over 16,700 individual lots.²⁴ In many of these subdivisions, the dominant architectural styles are Ranch and Cape Cod. In order to develop criteria for determining which neighborhoods and individual houses are historically significant, it is critical to have an understanding of the history of suburbia in general and Riverside's suburban heritage in particular. By understanding and recognizing patterns of development and design trends, and identifying the developers of largescale projects, we can begin to see which of the pieces are most crucial to the overall picture. However, this is just the first step in the longer process of completing community-wide reconnaissance-level or windshield surveys of the key subdivisions. These types of surveys will facilitate the creation of a hierarchy of standards, based on the City's existing Cultural Resources Ordinance criteria for historic districts, neighborhood conservation areas, landmarks, and structures of merit, that will enable staff to determine with some degree of certainty whether or not individual properties and neighborhoods, such as Sun Gold Terrace, meet the criteria for historical significance.

Notes

¹ Jennifer Mermilliod, "Palm Heights Survey, City of Riverside, Draft Historic Context Statement," (March 2004). On file in the Riverside City Planning Department.

² Ibid.

³ Tom Patterson, *A Colony for California: Riverside's First Hundred Years*, 2d. ed., (Riverside California, The Museum Press of Riverside Museum Associates, 1996), 95.

⁴ Hongwei Huang, "Historic Preservation in 'Eastside' - a Minority Community in Riverside," (1992), 12. On file at the University of California, Riverside, History Department.

⁵Tom Patterson, *A Colony for California: Riverside 's First Hundred Years*, 2d. ed., (Riverside California. The Museum Press of Riverside Museum Associates, 1996), 185-185.

⁶ "Wood Streets Neighborhood Conservation Area Record' on file at the City of Riverside Planning Department.

⁷ This paragraph is based on information from the "Wood Streets District Record" and the "Wood Streets Neighborhood Conservation Area Record," both on file at the City of Riverside Planning Department.

⁸ David L. Ames and Linda Flint McClelland, "Historic Residential Suburbs - Guidelines for the Evaluation and Documentation for the National Register of Historic Places," *House and Yard Section* section, (National Register Bulletin, 2002), 5.

⁹ David L. Ames and Linda Flint McClelland, "Historic Residential Suburbs - Guidelines for the Evaluation and Documentation for the National Register of Historic Places," *House and Yard Section* section, (National Register Bulletin, 2002), 6.

¹⁰ *Ibid.*, 7; Hongwei Huang, "Historic Preservation in "Eastside" - a Minority Community in Riverside," (December 1992), 46. On file at the University of California, Riverside, History Department; and Los Angeles Almanac, Headline History, Los Angeles County, 1887-1909, http://www.losangelesalmanac.com, 29 January 2005.

¹¹ David L. Ames and Linda Flint McClelland, "Historic Residential Suburbs - Guidelines for the Evaluation and Documentation for the National Register of Historic Places," *House and Yard* section, (National Register Bulletin, 2002), 9.

¹² David L. Ames and Linda Flint McClelland, "Historic Residential Suburbs - Guidelines for the Evaluation and Documentation for the National Register of Historic Places," *House and Yard* section, (National Register Bulletin, 2002), 9.

¹³ "City's Jobless Help Given 394 - Unemployment Committee Given Report on Works Projects," (The Riverside *Enterprise*, 8 April 1933), 5.

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¹⁴ Jane Davies Gunther, *Riverside County, California, Place Names: Their Origins and Their Stories,* (J. D. Gunther, Riverside, California, 1984), 310.

¹⁵ Tom Patterson, *A Colony for California: Riverside's First Hundred Years.* 2d. ed., (The Museum Press of the Riverside Museum Associates, Riverside, California, 1996), 391.

¹⁶ *Ibid.*, 405.

¹⁷ Tom Patterson, *A Colony for California: Riverside's First Hundred Years*, 2d. ed., (The Museum Press of the Riverside Museum Associates, Riverside, California, 1996), 405.

¹⁸ "Canyon Crest Heights Opened at Ceremony." (The *Press Enterprise*, 24 July 1941), 3.

¹⁹ "Canyon Crest Heights Opened at Ceremony." (The *Press Enterprise*, 24 July 1941), 3. "First Residents Pleased at Canyon Crest Heights," (The *Press Enterprise*, 10 September 1941), 3.

²⁰ David L. Ames and Linda Flint McClelland, "Historic Residential Suburbs - Guidelines for the Evaluation and Documentation for the National Register of Historic Places," *House and Yard* section, (National Register Bulletin, 2002), 12.

 21 Ibid.

²² "Job Gains for March Up 500 CSES Reports," (The *Press Enterprise*, 5 April 1951), 17.

²³ Riverside City and County Directories. On file, Local History Collection, Riverside Public Library, Central Branch, Riverside.

²⁴ This information was ascertained from research completed during my internship at the City of Riverside Planning Department, during 2004 and 2005.

Little Gom-Benn: Historic Archaeology from a Museum Perspective

By Laura Bellew

Artifacts from archaeological projects offer particular challenges to museum curation - conservation, storage, and maintenance. In Riverside, the second of two Chinatown sites was excavated in 1984, producing an abundance of artifacts. This essay reviews that activity, known as the Little Gom-Benn Project, to look at some of the challenges confronting the Riverside Municipal Museum (RMM) in undertaking curation of artifacts retrieved from this important local history site.

A History of Little Gom-Benn

The two Chinese immigrant communities, each called Little Gom-Benn for the town in the Guandong Province of China from which the founders came, existed in Riverside beginning in the 1870s. Dispersal of Chinese throughout California and the West began as they were expelled from the gold fields, and accelerated later as they were laid off when the Central Pacific Railroad was completed in 1869. Anti-Asian sentiments emerged early, expressed in legislation in the California Foreign Miners Tax in 1850, in a variety of discriminatory practices, and occasional violence and bloodshed.¹

The Chinese immigrants became agricultural laborers; ran farms, operated laundries, kept shops and worked as domestic servants. Farming, especially citrus and viticulture, came to depend on them. Chinese numbers swelled by new arrivals, and, by 1885, some 105,000 Chinese lived in California.

Chinese immigrants came to Riverside in 1871, finding work in the small but growing citrus industry where, by the 1890s, they had become the majority of Riverside's agricultural laborers in citrus, grapes and other crops. Though discriminated against, they were indispensable to Riverside's flourishing economy.

Little Gom-Benn



Chinatown, ca. 1910, Historical Photographs Collection Special Collections Library, University of California, Riverside

In 1879, the first Chinese settlement, known as Little Gom-Benn, of about eighteen male Chinese, began on the city block bounded by Eighth, Ninth, Main, and Orange Streets almost in the middle of Riverside. The district consisted of ten, one-story wood buildings laundries, general stores, gambling parlors, boarding houses and opium dens. Up until 1900, Chinatown washed almost all of Riverside's clothing. Gradually, the Chinese also provided the city with all of its vegetables. Little Gom-Benn remained mainly a community of bachelors.

Between 1882 and 1885, discrimination from the Anglo population, rising real estate values, and newly-enacted building ordinances, led to demolition of the buildings of Chinatown, ironically, to make space for a proposed Citrus Fair Pavilion.

The Chinese community moved in 1885 to 6.3 acres in the Tequesquite Arroyo, outside the Mile Square district that originally contained Riverside. Here, brick and wood buildings included merchants' shops, laundries, a Joss house (Daoist temple), Tong headquarters for the local fraternal society, and residences.

This second Little Gom-Benn housed the Chinese community from 1885 through the 1920s, during which continuing racial prejudice made life difficult. Despite this, Riverside's Chinese continued as essential contributors to the economy in agriculture and public works projects.

Japanese migrants gradually replaced the Chinese citrus labor force and constituted the majority by 1907. From small beginnings in the 1920s, Mexican immigrants in turn began to replace the Japanese.

By the 1920s, the Chinese community was tiny, numbering about twelve men. Claiming that the buildings constituted a health menace, the Riverside City Council destroyed all but one of the remaining seven in Chinatown in 1929.

George Wong, born in 1900, immigrated to Riverside in 1914. He saw the destruction of the site. In 1943, he purchased the land once known as Little Gom-Benn and lived there until his death in 1974, the last Chinese resident of Little Gom-Benn. Wong covered the site with fill dirt and had asphalt lain over the central commercial district, both actions intending to protect artifacts from relic hunters.

Historic Preservation and Historic Designation

The Riverside County Board of Supervisors came to recognize the importance of the former Chinatown, submitting a proposal to the state to make the area a Point of Historic Interest in 1968. The proposal was approved the same year. George Wong officially unveiled the historic marker. In 1976, the City Council declared the Chinatown site a City Cultural Heritage Landmark.²

In 1978, the Trans-Pacific Land and Development Company purchased the property and four years later, with necessary city approvals, demolished the last surviving structures. Scavengers pillaged the site, taking any treasures they could find. Fortunately, and thanks to the California Environmental Quality Act, the developers could not build on the site without first addressing the archaeological remains, the cost of which daunted them. This brought about the sale of the land to the Riverside County Office of Education.³

In 1984, members of the Chinese Historical Society of Southern California and a local ad hoc Committee to Save Riverside's Chinatown contacted the Great Basin Foundation (GBF) of San Diego, California, to assist in an excavation. The City of Riverside contracted with GBF to perform the excavation, each party contributing \$20,000 for the project.

Additional funding came from the State of California, the government of Taiwan, and Pacific Bell Telephone Company. The GBF itself contributed additional funds close to \$150,000. That same year archaeological excavation began on the site of Little Gom-Benn.⁴

Archaeologists uncovered almost three tons of material, including more than 45,000 artifacts, mainly glass and ceramic. More specifically, they found Euro-American bottles, Asian export porcelain, opium-pipe bowls, and Western medicine vials. A RMM statement in part described the success of the excavation in this way:

> Riverside's Chinatown site was a unique, stable, undisturbed historic landmark The site contained both residential and commercial activities of a working segment of the local community, thereby providing information on a local group that had been frequently neglected.⁵

Archaeologists found evidence that the Chinese retained traditional ethnic practices in Southern California, which was revealed, for example, in the large amounts of utilitarian stoneware that carried dried foodstuffs and medicines from China to the United States.⁶ But the Chinese in Riverside used some Euro-American food products, perhaps because they lacked access to certain Asian export goods.⁷ This suggested that the Chinese combined Euro-American food consumption with imported products.

Partially in response to the GBF excavation, in 1987, the Riverside County Parks Department pushed forward an application to

put Little Gom-Benn on the National Register of Historic Places. The application cited both National Register Criteria "A" and "D," namely, that the site was associated with events that contributed to broad historic patterns, and that it had a likelihood of revealing important information on pre-history or history.⁸ The areas of significance included historic-nonaboriginal, social history, agriculture, commerce, and Asian Studies.⁹ The period of significance was the years 1885 to the present. The application also stressed the future potential of the site.

Although funding inadequacies prevented study of the entire site, there is little doubt that future digs would most likely find artifacts.¹⁰ The researchers also added that Little Gom-Benn be given "critical consideration" under qualification "G", as "a property achieving significance within the past 50 years."¹¹

In 1990 the National Parks Service approved the designation request, placing the site on the National Register of Historic Places.

Collection Issues

In October 1990, the Riverside County Office of Education, owner of the site, donated all excavated artifacts to the Riverside Municipal Museum (RMM),¹² both parties agreeing that the artifacts fit the latter's collection policy which stated:

> All collections and exhibits of the Museum shall generally reflect but shall not necessarily be limited to the specific interpretation of the history, natural history, and anthropology of the city and county of Riverside and the immediate environs of Southern California.

The collection policy later specifically noted the added appropriateness of citrus-related artifacts, especially "ethnic and minority materials relevant to local history."¹³ The Chinese role as the primary citrus labor force for more than a decade adds a further imperative.

The agreement specified that all objects would be used only for educational and scholarly purposes. The Museum accepted the boxes of artifacts without payment. In the words of the Agreement:

This outright and unconditional gift expressed the understanding that the donated items may be exhibited, loaned, stored, disposed of or otherwise utilized at the discretion of the Museum in accordance with accepted practices of the American Association of Museums as embraced by the Museum's Collection Policy.¹⁴

Further, the catalog, accession and archival records of the collection would be made public knowledge.¹⁵

The GBF chose to put the gathered artifacts in liquor boxes, lacking the foresight that might have reduced outlays of time and money in the long run. The boxes were frequently loaded with up to fifty pounds of artifacts.¹⁶

Current RMM policy specifies the following standards for storage boxes:

Use standard one-cubic foot, acid-free curation boxes with lids for final packing of collections. Overloaded boxes, in addition to being dangerous, have a tendency to disintegrate rather quickly. As a general rule, boxes should be light enough for an average-sized person to lift at least shoulder height without difficulty.¹⁷

This current RMM policy is not unusual, but consistent with standards of the Society for Historical Archaeology: Collections should be housed in standard archival boxes,¹⁸ the term "standard" being widely understood as meaning boxes that are acid free, movable and accessible. Liquor boxes weighing fifty pounds would never have been considered standard at the time that artifacts from the Little Gom-Benn excavation were accepted into the RMM collection.

Since its donation, the collection has undergone repackaging, larger box contents being separated into several standard-sized archival boxes. GBF, in good archival practice, did place artifacts in polyethylene bags as protection from environmental factors. They did not, however, package the artifacts with acid-free tissue paper as a buffer against damage from movement. The RMM staff, assisted by several interns from the University of California, Riverside, currently work toward providing this protection. The long, arduous process will eventually be completed with continued help from UCR Public History students.

In constructing a data system, GBF archaeologists initially created sixteen "features" classifying specific uses of the site. These features include trash pit areas, laundry drying areas, the Joss House, the Bamboo Garden restaurant, and so on. With the feature system established, the artifacts were shipped to analysts for study. These specialists created a sorting and classification method that could be used to further sort the large number of artifacts. They created three-letter alpha or family codes comprising materials, ethnicity, and diagnostic designations respectively. First, material codes would divide the artifacts into one of the following categories: bone (B), ceramic (C), earthenware (E), glass (G), asphalt (J), metal (M), fabric (L), porcelain (P), rubber (R), stoneware (S), or wood (VV). Second, the objects would be assigned to one of three ethnicity codes: Asian (A), Non-Asian (N), and Unknown (U). Third, and finally, the artifacts would be given diagnostic codes naming the purpose of the object, including use as a container (C), opium pipe (O), industrial ceramics (P), money (M), ammunition (A), as well as many others. For example, an Asian glass bottle would be given the code GAC (Glass, Asian, Container).

Though logical, this system was incompatible with the accession system utilized by RMM. Consequently, RMM staff and interns first adopted one overarching accession number, A1343, for the whole collection. Further, each box of artifacts was given an additional number tacked on to the first, for example, A1343 - 79. Next, each intact object within that box was given a letter code, such as A1343-79A. At present RMM intends giving only intact objects individual accession numbers. To increase accessibility further, RMM interns have adopted the Argus museum software program to create individual artifact reports, each including a digitized photograph, object dimensions and previous number assignment. The software allows tracking object use and current location. This resource is immediately valuable to curators creating exhibitions using the objects.

Receiving the collection in the proper format would have relieved RMM of almost fifteen years of re-processing, a time-consuming task for staff in re-numbering, re-packaging, and restoring the objects since donation.

The experiences of RMM might provide lessons for curators. First, a strict adherence to policy is a must. Donations should not be accepted in an inappropriate condition. Second, such is the nature of the profession that it is often necessary for the current curator to fix the mistakes of predecessors.

Storage Issues

According to the standards set by the Society for Historical Archaeology, "archaeologists have an ethical obligation to preserve the data they collect during archaeological projects for future generations."¹⁹ Fulfilling these obligations requires archaeologists and curators to provide appropriate artifact storage.

Excavated objects are not reburied, but moved to storage for later study or display. The storage of these artifacts, however, is not a simple matter. As of March 2004, the Chinatown collection consisted of eighty-seven standard archival boxes, plus approximately twenty to thirty liquor boxes of, as yet, unprocessed artifacts. The very size of the collection presents problems, not the least of which is a space shortage at RMM, a condition not unique to Riverside; many other museums try to deal with what has become known to insiders as the "curation crisis."

A 1992 technical brief from the U.S. Department of the Interior called it a national crisis arising from a tremendous increase in amounts of

materials, cultural resource management, and inadequate curatorial capacity. The crisis revolves around the different ethical perspectives and purposes of archaeologists and curators. On the one hand, the code of ethics for the Society of Professional Archaeologists requires maintaining collections in their entirety. Other proponents of perpetual storage of intact collections claim that "the research value of a collection is preserved if its provenance information is kept intact."20 They assert that archaeological collections are unique records, and therefore can never be replaced if abandoned. According to the Society of Historical Archaeologists, de-accessioning objects would not be recommended because by doing so a museum could "jeopardize the ability to study the primary site data, particularly because current levels of knowledge may not adequately recognize the research value of certain artifact classes."21 Some believe that no archaeological report can present all the potential information contained in the materials excavated. According to Andrew L. Christensen, writing in American Antiquity, "unless all excavated materials are saved, our understanding of a site will have to rest to some extent on our assessment of the competence of the archaeologist(s) who directed the work and wrote the report."22 This is one point of view.

Quite different is the view that, in most circumstances, the purpose of the museum is to maintain research collections for public presentation. According to the code of ethics of the American Association of Museums:

Museums in the United States are grounded in the tradition of public service. They are organized as public trusts, holding their collections and information as a benefit to those they were established to serve. Members of their governing authority, employees, and volunteers are committed to the interests of these beneficiaries.²³

The code also states that the "... disposal of collections through sale, trade, or research activities is solely for the advancement of the museum's mission." The code does not require a museum to maintain a collection in its entirety if such a collection does not fit with its mission statement.

The increasing volume of collections and the resulting lack of available space make informed decisions imperative concerning the acquisition and maintenance of collections. Despite the apparent logic of the arguments proposing that everything be saved, a museum is held accountable for the make-up of its collection. Is it feasible or even desirable to maintain an overly repetitive collection? Should not a collection also have research and/or display value? These concerns must be considered when a museum decides to accept or refuse a donation.

In the case of the collection objects from Riverside's Chinatown, many boxes of shards are now at RMM. Should the museum keep fifty boxes of ceramic shards? Given the limited storage space, inadequate number of research professionals, and modest support funding, optimum resource use is imperative. It is possible that, if a museum becomes overcrowded with unnecessarily redundant collections that lack display or research value, it could not accept additional collections.

The contending ethical views of these two professional groups make for awkward cooperation. Curators, on the one hand, have contended that archaeologists do not take responsibility for the collections they generate. They believe that archaeologists do not estimate the costs of the perpetual artifact storage, and in this way create collections for others to preserve. Archaeologists, on the other hand, believe that museums wish to preserve only objects with "display value," and to reject anything else. The fact is that at present, RMM cannot live up to its obligations, lacking adequate space to appropriately house all the objects in its collections.

What to do? Two unethical options are reburial and destruction of objects. The question may be asked - would it be better to maintain a smaller, yet proper, collection? Or a larger collection without strict compliance to standards? One option would be to de-accession objects to reduce the collection, with redundant objects being donated to another repository having resources ready for study and preservation. Or, a "representative collection" could be created. Such a collection would

contain a sample of objects that could be studied by future researchers. Culled objects could be de-accessioned, given to another institution with time and funds to study them.

RMM intends to retain all the artifacts excavated at the Little Gom-Benn site, an ethical obligation stated in its Repository Agreement:

Materials, which once were studied and discarded, are now routinely saved and subjected to various kinds of intensive analyses. It is now standard procedure for archaeologists, archivists, historians, and natural scientists to retain essentially 100% of the materials they collect.²⁴

At present there are no plans to change the status of the collection. It will be processed, as it is, with staff and interns continuing to re-house the objects into appropriate boxes. Object reports will continue to be created for intact, individual objects. Although this will be a difficult policy to retain in practice, the RMM will do its best to meet its obligations.

Many of the objects are known to be of slight value for display or even research. They probably should not be given priority. One procedure would be to separate intact objects from shards. Intact objects could be given extra attention and the shards stored in the annex environment. This might assure greater preservation to objects of greater value.

Conclusion

Early Chinese migrants helped shape the culture and economy of early Riverside, especially in citriculture, with obvious benefit to the financial health of the city. Despite their community importance, Chinese and Chinese-American residents received unequal treatment, endured discrimination, and eventually their neighborhood, Little Gom-Benn, was twice destroyed. As modern Riverside actively recreates the history of Little Gom-Benn, residents will come to recognize the importance of the Chinese contribution to the early history of the area. Active celebration of the Chinese contribution depends in part upon the preservation of the tangible past, especially the archaeological artifacts at RMM that now require levels of care and consideration that seem unachievable, given constraints from the original donation, museum capacity, and financial resources.

If obligations to the past and future are to be met, the Little Gom-Benn artifacts must be properly maintained, conserved and stored consistent with standards of curation. Then the essential physical and electronic access will support future research and display. With that achieved, the heritage of Little Gom-Benn will be more secure, preserved from the fate of the physical neighborhoods some eighty or more years ago.

Notes

^{1.} For the history of the Chinese community in Riverside and of the excavation site see especially: Great Basin Foundation (editor), *Wong Ho Leun: An American Chinatown*, 2 volumes. San Diego, California: The Great Basin Foundation, 1987; H. Vincent Moses and Brenda Fuller Focht, *Life in Little Gom-Benn: Chinese Immigrant Society in Riverside*, *1885-1930*, Riverside, California: Riverside Municipal Museum, 1991; Mrs. Robert Bettner, "Our China Boys," *Journal of the Riverside Historical Society*, 5, February 2001. For a wider perspective see the abundant online resource, Chinese in California, 1850-1925, collected by the Library of Congress (http://memory.loc.gov/ammem/award99/cubhtml/ cichome.html). For a single volume: Robert McClellan, *The Heathen Chinee: American Attitudes Toward China, 1890-1905*, Columbus, Ohio: Ohio State University Press, 1971.

^{2.} Harry Lawton, "Selected Chronological History," in Great Basin Foundation, ed., op.cit. p. 135, 30.

^{3.} Clark W. Brott and Fred Mueller, "Digging to China: The Historical and Archaeological Investigation of Riverside's Chinatown," in Great Basin Foundation, ed., op. cit. Vol. 2, p. 435.

^{4.} Ron Morris. "Chinatown Study Intended for Ordinary People," Riverside (California) *Press-Enterprise*, 17 February, 1988.

^{5.} Moses and Focht, op. cit. p. 16.

^{6.} Clark W. Brott, "Utilitarian Stoneware from the Wong Ho Leun Site: A Pictorial Essay," in Great Basin Foundation, ed., op. cit. Vol. 2, p. 233.

^{7.} John Blanchard, "Overseas Chinese Ethnicity and Euro-American Glass Bottles at the Wong Ho Leun Site," in Great Basin Foundation, ed., op. cit. Vol. 2, p. 228.

^{8.} Don Kleinhessellink and Harry Lawton, "Chinatown Site," National Register . . . Form, Section 7, p. 7.

^{9.} U. S. Department of Interior, National Parks Service, National Register of Historic Places, "http:// www.nationalregisterofhistoricplaces.com/ca/Riverside/state.html."

^{10.} Kleinhessellink and Lawton, "Chinatown Site," National Register . . . Form, Section 7, p.7.

^{11.} U. S. Department of the Interior, National Parks Service, "National Register," http://www.cr.nps.gov/nr/listing.htm.

^{12.} Riverside County Board of Education, Resolution 3-90, "Agreement to Convey Ownership of Chinatown Artifacts."

^{13.} Riverside Municipal Museum, "Collections Policy," December10, 1996 version, p. 1.

^{14.} Riverside County Board of Education, Resolution 3-90.

^{15.} Riverside (California) Municipal Museum, "Repository Policy for Archaeological Collections, Historic Archive Collections, and Natural History Collections." Draft document, March 2004.

^{16.} Riverside (California) Municipal Museum, "Repository Policy," March 2004.

^{17.} Society for Historical Archaeology, "Standards and Guidelines for the Curation of Archaeological Collections," (http://www.sha.org/ publications/curation.htm).

^{18.} Kathleen Obendorfer and Mary L. Obendorfer, "Raw Bits: The Riverside Chinatown Data System," Great Basin Foundation, ed., op. cit. Vol. 2, pp. 495-503.

^{19.} Society for Historical Archaeology, "Standards," p. l.
^{20.} U. S. Department of Interior, National Parks Service Technical Bulletin No, 13, (April 1992), Cultural Resources: Lynne P. Sullivan, "Managing Archaeological Resources from the Museum Perspective." p. 3.

^{21.} Society for Historical Archaeology, "Standards," p. 6.

Andrew L. Christian, "Cultural Resource Management: The Role of the Museum in Cultural Resource Management," American Antiquity, 44: 1, (January 1979) p. 162.

American Association of Museums, "Code of Ethics for Museums, 2000," http://www.aam-us.org.

^{24.} Riverside (California) Municipal Museum, "Repository Policy," March 2004, p. 4.

The Washington Navel Orange

by A. D. Shamel

The following essay on the Washington Navel Orange was originally published in the 20 May 1915 Citrograph Edition of the Riverside Enterprise. It provides much information on the background of the introduction to Riverside of the fruit that, for the better part of a century, was its economic mainstay. Similarly, it gives us insight into how the navel orange was cultivated and used in its place of origin.

Mr. William Saunders, late horticulturalist for the Department of Agriculture, at Washington, says, in one of his reports concerning the introduction of the navel orange from Brazil to the United States, that he learned from a lady correspondent of the existence of the seedless orange at Bahia, Brazil. Mr. Saunders, acting on the suggestion of this correspondent, wrote to the American Counsel at Bahia, asking that some trees of this seedless orange be sent to Washington, if possible, for trial in the United States.



A. D. Shamel

In 1869, the first shipment of trees was received at Washington, but owing to the unfavorable conditions in transit on shipboard through the tropics, none of the trees were living when examined at Washington. Accordingly, a second request was sent to the American Counsel, at Bahia, for seedless orange trees, together with careful and minute instructions as to shipping and packing the trees in order to carry the trees in a living condition during their long journey from Bahia to this country. In the meantime, Mr. Saunders reports, he secured some oranges from the market in Washington, extracted the seeds, and planted them in one of the greenhouses of the Department of Agriculture. When the second shipment of trees was received, it was found that they were in poor condition, but that some of the buds were apparently alive. These buds were transferred to the seedlings and several trees were successfully grown from these buds.

A former neighbor and friend of Mr. Saunders, Mrs. L. C. Tibbetts of Riverside, learning of the success of this second importation of the seedless orange, requested Mr. Saunders to send her some of the trees for trial at her home in Riverside. Accordingly two of the trees were sent to Mrs. Tibbetts, the remainder, with one exception, being sent to Florida, where it was thought that the conditions were more like those of Bahia and the chances for success in the experimental trials were better than anywhere else in this country. One of the trees was kept in Washington and is still living. Recently a special section of the greenhouse was set apart for its care and it is planned to transfer it from the Botanical Gardens, where it now stands, to this more favorable place. The writer has observed this tree for many years and has seen it under the greenhouse conditions bearing many fruits. At the present time the tree is in poor condition owing to its surroundings.

The two trees received by Mrs. Tibbetts from the department were planted in her yard, where she gave them her personal care and attention. They were planted in 1873 and the first fruits borne by these trees were produced in the season of 1875-76. Naturally, the neighbors and friends of Mrs. Tibbetts were interested in her experiment in the growing of these trees. They were invited by Mrs. Tibbetts to help her examine the first fruits produced by these trees. The fruits were found to be seedless and possessed essentially the characteristics of the present navel oranges. They were recognized at once as being interesting and probably a valuable addition to the citrus industry of this section, and arrangements were made to propagate from these two trees.

The history of the development of the navel orange variety from this beginning, about 40 years ago, until the present time, rivals any story in fiction. From this humble beginning there has developed a great industry, which has been the foundation on which the commercial success of the citrus business as a whole in California has been based. From

California, budwood and trees have been taken across the seas to Japan, Australia, South Africa, and other tropical or semi-tropical districts. The writer has been in personal communications with citrus growers in these districts who have been experimenting for years with this variety. In these sections, particularly in Japan and in the Transvaal, the navel orange industry has developed to large proportions. According to a recent visitor from Gosford, New South Wales, there has been a considerable planting of navel oranges in recent years in that country, so that it can be safely stated that the navel orange now is grown in many parts of the world, but has reached its highest development and largest culture in California.

Last year, the Department of Agriculture, which was primarily responsible for the introduction of this valuable variety into the United States, decided to send an expedition to Brazil for the purpose of securing further information as to the existence and the culture of this variety in that country. Accordingly, three men from the Bureau of Plant Industry sailed from New York on 4 October 1913, on the steamship Van Dyke, for Bahia, where a stay of two months was made and a careful survey and study of the navel orange variety carried out. It was found that in this city - the oldest permanent settlement on the American continent - there exists at the present time about 1,000 acres of navel orange trees. These trees are mostly grown on the higher lands and hillsides in the suburbs of the city of Bahia, the principal one being that of Cabulla. The growers of this variety in Bahia are of Portugese (sic) descent. Their tradition is that this variety originated in Bahia from the seeded variety of orange brought to Brazil from Portugal, called "laranja selecta." The name of the navel orange at Bahia is "laranja selecta de umbigo," or the selecta orange with a navel. This variety is said to have originated and was first propagated at Bahia about 1820 by a Portugese (sic) who was the first man to introduce bud propagation in Brazil. The propagation of this navel bud sport from the selecta variety proved to be successful and the trees grown from this bud sport were found to be more desirable than the parent or other varieties then grown in that district.

At the present time the navel orange is the most important of all varieties cultivated in Brazil and is almost exclusively the variety planted

The Washington Navel Orange

at Bahia. At Rio de Janiero, the expedition found about 200 acres of the parent variety, "laranja selecta." In the first orchard examined of this variety, a limb on one of the trees was found bearing about 50 typical navel oranges, so that even today, the wonderful condition of bud variation developing the navel orange, exists as it did 100 years ago in that country. It was not expected that much information could be gained as to cultural methods with the citrus in Brazil, one naturally believing that the advanced and highly specialized districts in the United States would have developed more successful systems of culture than existed in Brazil. The conditions in Brazil are very different from those of California in many respects, particularly in that there is an average annual rainfall of about 50 inches and irrigation is not practiced. The soil, of course, is different from the soil of California, and other conditions vary markedly from the conditions which exist in California, where the navel orange has reached its greatest success at the present time.

It was found that in Bahia every orange grower was also a dairyman. This condition was explained by these men on the ground that they had found it absolutely necessary to use liberal amounts of manure in order to maintain their trees in healthy and productive condition. The development of the dairy business in connection with the orange industry was explained on the ground that it was the most practicable (sic), efficient method for securing the necessary quantity of manure for use in the orange groves. This manure was carefully conserved, it was found, composted, as a rule, in such condition that it was well rotted when applied to the soil. The method of applying this manure was found to be very interesting in that instead of distributing it broadcast on the surface of the ground, the growers, as a rule, buried it in the soil in holes or trenches. These pits were usually from 15 to 20 inches in depth and from 2 to 3 feet in diameter. A wheelbarrow load of well rotted manure was placed in these pits and the earth was then piled on top of the manure. On the level lands these pits were usually dug between the trees or near the center of a square made by four trees. On sloping lands the pits were dug above the trees, perhaps 5 or 6 feet from the tree trunks, usually under the drip of the branches. In one case, in one of the most productive and successful

groves in Bahia, the grower had planted a crop of Para grass in the orchard, which was cut on the average about three times a year and fed to the dairy cows. Each day, in this case, the manure was carried to the grove and spread over the freshly cut stubble, so that this grove received a broadcast application of manure about three times a year. The trees at the time this grove was visited were 12 years old and were in as good condition of vigor and growth and productiveness as the best navel orange grove in California. Another grove, one of the larger groves in the Cabulla district and one of the oldest groves in the Bahia region, has been fertilized since its establishment, according to the testimony of the owner, with the packing house refuse from the municipal abattoir. This grove consists of about 100 acres of trees and has received annually very large quantities of this refuse, which has been buried in the soil similar to the method described for the burying of the manure. An interesting condition was found in connection with the cultural treatment of the groves; namely, the practice of tree renewal. It was found that whenever trees for any reason began to deteriorate in vigor of growth and become unproductive, the growers cut off the tops of these trees and from sprouts grew new tops. These new tops, or renewed trees, we found to produce vigorous, healthy, foliage and large fine fruits. Many of the growers told us that these renewed trees produce better fruits than the original trees. This practice of tree renewal, in the case of decadent trees, is especially interesting, in that it indicates possible means for overcoming the deterioration of growth and yield in old trees through the development of new fruiting wood by pruning. Instances were found where this renewal had been practiced three or four times. In other words, three or four new tops had been grown on the same tree trunks. At the time these trees were observed, these renewed tops were as productive as the best original, younger trees found in the established orchards. This plan of tree renewal indicates the possibility of maintaining the navel orange tree in a productive condition over a long period of time, the length of the life of the navel orange tree being unknown.

The expedition found in Brazil that there exists in the orange groves there, most, if not all, the pests, both insect enemies and fungous diseases that exist in the California navel orange groves.

The market for the oranges produced in these groves is largely the local market of the city of Bahia. The fruits are sold in the city in the municipal markets and are carried about the streets by vendors and sold much as is the case in the larger cities in the country. Considerable quantities of these oranges are sold to visiting steamships and a small amount of the fruit is exported to other cities in South America, principally to the capital of Brazil, Rio de Janiero. Occasional shipments of these oranges have been sent to London, Paris, Madrid, Lisbon, and other European cities. The average price for the orange at the time of the visit of the expedition to Bahia in the city, was about 3 cents each.

There are considerable new plantings of this variety being made in the vicinity of Bahia. The methods of propagation are essentially the same as those practiced in this country, excepting that, as a rule, the trees are budded much higher and headed much higher, than is the usual custom here. The universal stock is a sour, or bitter, orange, called "Laranja de terra." Many of the navel groves in Bahia have several of these "laranja de terra" trees. The fruits are very popular with some of the people of Bahia for making marmalade or preserves. The fruits are very heavily seeded, containing some times as many as 50 seeds in a single fruit.

A municipal farm has been established by the city of Bahia in which experiments in the cultivation of the orange are being conducted by the city for the benefit of the orange growers. This farm is under the direction of Doctor V. A. Argollo-Ferrao, who has been educated in Europe and is a man of eminent scientific attainments as well as intense practical ability.

The methods of handling the oranges are not nearly so well developed as is the case in California. Careful handling is unknown and, naturally, much of the fruit picked decays as a result of mechanical injuries during the picking and transportation of the fruit to market. This is also one of the reasons why there has not been any important development in the exportation of this fruit from Bahia. The growers were found to be very much interested in the matters of picking and careful handling and it is probable that they will introduce some of the methods for careful handling, which have been practiced with so much success in this country.

The expedition found that the orange growers of Bahia were genuinely glad of the opportunity to serve their friends from "sister republic of the north." They gave the members of this expedition every facility and opportunity to secure information, buds, and seeds, and any material or any of their plants for use in the United States. They are proud of the fact that Bahia gave to the United States its leading variety of orange and of the fact of its origins in Bahia.

The development of the navel orange industry in California was made possible through the courageous development of the land by the early pioneers, beginning in the Riverside district. These men, coming into a new country, under new conditions, developed the science of irrigation and methods for culture of this variety in what was otherwise a desert. It is to their courageous activity and their invention of means for growing, packing, handling, distributing, and marketing this fruit that we owe most largely the success of this industry. The invention of fumigation, of orchard heaters, and of many other methods of culture, have come about as a result of the study and of the efforts of these pioneers in the development of the citrus industry in California. The organization of the growers into an exchange for the co-operative handling of their crop and its distribution is another illustration of the results of the success of the citrus industry in California. Many other instances might be cited of methods developed in the course of the growth of this industry, which have a wide application, not only to the citrus but to other fruit growing industries as well.

The birth of the navel orange industry and its consequent development and success has been coincident with the origination and development of many factors in fruit growing which have a much wider application than to the citrus industry alone and have contributed markedly to the success of other agricultural activities in different sections of the United States. Someone has said that that man is a public benefactor who causes two blades of grass to grow where but one grew before. What, then, can be said of the pioneers of the navel orange industry who caused grass and fruits and flowers to grow where NONE grew before?

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