Reconstructing early historical landscapes in the Northern Santa Clara Valley

Alan K. Brown
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Reconstructing Early Historical Landscapes in the Northern Santa Clara Valley

Research Manuscript Series, No. 11

2005

on the Cultural and Natural History of Santa Clara

Santa Clara University
Reconstructing
Early Historical Landscapes
in the
Northern Santa Clara Valley

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2005

by:

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Editor's Preface

More than a quarter of a century ago when I was an undergraduate student at the University of Illinois I had the opportunity to participate in a class called "Problems in Midwestern Archaeology." This was in the heady years of the 1970s when federal legislation and highway construction merged to create a period of huge crews excavating football field-sized sites. In Illinois one of the largest projects was in conjunction with the construction of interstate 270 through the American Bottoms and the cities of East St. Louis, Collinsville, and Belleville, across the Mississippi to St. Louis. There archaeologists found thousands of sites associated with the Mississippian culture that flourished a thousand years ago. These were agriculturalists, who lived in a ranked society, had urban planning and astronomy, and built fortified cities and large burial mounds and earthen platform mounds. Population estimates for the region ran from the tens to hundreds of thousands. This was the most densely populated area of precontact America north of Mexico. My professor, Dr. Thomas Riley, charged me with a problem revolving around carrying capacity and sustainability in the American Bottoms. Specifically, what was the forest resource base and how might it have been impacted with these large, dense populations.

I was lucky. The University of Illinois is a land grant school so I had access to specialists and publications in forestry, botany, soils, agriculture, and archaeology. I worked from soil maps and the studies of extant plant communities to reconstruct those of a thousand years ago. Paleoethnobotanists provided me with information on the species of trees used for a variety of constructions from palisades, to woodhenges, to homes, litters, and fuel. Even a U.S. Government publication provided me with the estimated fuel needs (three cords of wood per person per year) for people living in the region. The exercise taught me that in the pre-industrial world of the American Bottoms, human impact seemed negligible. My dalliance with environmental reconstruction taught me a valuable lesson in the value of environmental studies and in the difficulty of undertaking such work.

When I came to Santa Clara University in Silicon Valley I saw a place that was growing silicon chips instead of food. Strip malls, tract housing, and unchecked development had transformed the agricultural Valley of Hearts Delight in less than a generation into a paved world of creeks in culverts and yards of Kentucky Bluegrass. Two hundred years earlier the region was thinly populated by the ancestors of the Ohlone. These were gatherers, hunters, and fisherfolk who lived in small villages of 50-200 people. When the Spanish arrived they brought a new economic regimen that included livestock and intensive, irrigation-based agriculture. The populace was congregated into a mission community whose population peaked at about 1500. This community not only needed fuel to cook their food and warm themselves, but also to burn roof and floor tiles for their church, their homes, and their places of employment. Another fuel need was for making ceramics. My work with the Smithsonian Institution has demonstrated that both plain and glazed ceramics were made at Santa Clara. How did all these activities impact the forest resource base in this area?

Time and resources precluded me from diving into this question in any serious manner. I queried my colleagues and met with the kind researchers at the San Francisco Estuary Institute. My friends in Environmental Studies at Santa Clara University encouraged my quest to reconstruct the historic Santa Clara catchment area, but were similarly over committed. Then, through Superintendent Meredith Kaplan of the Juan Bautista de Anza National Historic Trail I learned about the work of Dr. Alan K. Brown who reconstructed the environment in part of the East Bay to trace a section of the two century old trail. At that time I realized that I had seen Dr. Brown’s name in many Bay Area publications. I contacted him and told him what I was interested in learning. That, as the saying goes, was the beginning of a beautiful friendship. Through the generous support of Dr. Amy Shachter, Executive Director of Environmental Studies Institute, Dr. Brown and his charming wife Isabel visited the Bay Area and lectured on his work. At that time I prevailed upon him to undertake this environmental reconstruction. As I am certain the readers will find it was worth the wait to have this undertaking done correctly. Now as I close my eyes I can hear the water in the streams and the birds in the trees. In the distance I can discern axes chopping and saws rasping through the oak and sycamore trees, and I can smell the smoke of a thousand fires that began the transformation of this magnificent valley.

On behalf of the Research Manuscript Series on the Cultural and Natural History of Santa Clara I wish to extend my thanks to the Santa Clara University Environmental Studies Institute for making this publication a reality. Thanks are also extended to the Office of the President, the Dean of the College of Arts and Sciences, and the Anthropology Program at Santa Clara University for their on-going support of this publication series. Thanks also to Stratos Guiliotis at the Printing Post of Los Gatos, Inc. for the technical expertise in producing this document.

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July 3, 2005
Foreword

In 1992 Santa Clara University introduced an Environmental Studies program that, eight years later, evolved into the Environmental Studies Institute. One of the Institute's primary areas of emphasis has been---and continues to be---the study of the historical and ecological roots of the campus and the region. Through the Santa Clara Valley Historical Ecology Project, a partnership with the San Francisco Estuary Institute and the Santa Clara University Archaeology Research Lab, we are creating an integrated view of the region today and over the past two hundred years. Our aim is to understand the past, so that we can better plan for the future.

Dr. Alan Brown's study provides us, for the first time, with a picture of the Santa Clara Valley at the time of the arrival of the Spanish. His work is an outstanding contribution and clearly demonstrates the impact of the dynamic interplay between people and their environment.

Many thanks go to Dr. Russell Skowronek for initiating the project with Dr. Brown and coordinating the Santa Clara University effort.

Dr. Amy Shachter
Senior Associate Dean
College of Arts and Sciences
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PREFACE

The following essay, which is not a finished treatise upon any aspect of the early environmental history of the northern Santa Clara Valley, is also not intended to be a manual of procedures for investigating that subject. Although I would hope that elements of both purposes can be found here, the intention, more generally and tentatively, is to point out a few possibilities that may be incorporated into more rigorous and, in terms of practical consequences, more important future investigations by others.

Because of the variety and incompleteness of the approaches that are followed here, no attempt has been made to quantify the reliability of source information according to algorithms of a sort that nowadays are applied in historical-environmental investigations. On the other hand, I can call attention to unpublished source material presented not only in the text and figures but in the appendixes, for example the full account of a transit of the valley by Juan Crespi in 1772, and previously untranslated descriptions by the explorers Rivera and Font. Font’s account, as augmented from a recently discovered text, seems to make it clear that the redwood that he described and measured in 1776 was the present Palo Alto tree, a long-accepted fact that unfortunately I once doubted! This publication provides a way of drawing a line, so to speak, under a total of many years of sometimes desultory, sometimes intense personal engagement with the topic—years during which greater alterations took place on the land than most of those earlier changes that were being investigated, and during which, also, the ease of access to governmental records and other sources changed, not always for the better.

Some of the raw notes and other materials upon which this discussion is based were deposited forty years ago with local historical societies, and, perhaps understandably, have proved to be no longer obtainable. Where circumstances allowed, and although from a distance, I have tried to make up the loss, and in principle all of the sources should be recoverable, but in some cases only my own retained sketches and their annotation were available for this report. This fact explains why it has not been possible to respond to some requests for information about early property records, and I hope those who asked will excuse me. The hope is that at least the conclusions given graphically here will aid further research by such people. As will be mentioned again below, courthouse records of early legal cases are a partly unexplored source for historical investigation. Various information that was not accessible to me was supplied by Robert C. Beach (Redwood City Heritage Association), Robin Grossinger (San Francisco Estuary Institute), Don Marcott (Santa Clara County Surveyor), Patricia Marfia (Loma Prieta Resource Conservation District, Gilroy), Jeanne Farr McDonnell, and Russell Skowronek (Santa Clara University), to all of whom this study is indebted for the help, as also, and as always, to the interlibrary loan service of the Ohio State University Library. In its present form the study also owes everything to those institutions and persons who allowed me to begin to bring together many scattered materials, and to present them to a Santa Clara audience in 2003: Santa Clara University (Professors Russell Skowronek, Robert Senkewicz and others), the Anza National Historic Trail program of the National Park Service (Meredith Kaplan), and the San Francisco Estuary Institute (Robin Grossinger). On that occasion, one of the questions posed in public was what I thought of the recent “Silicon Valley” changes. My response, as an old Californian, was ungracious. It should have been: You have an exceptionally nice valley here. Take care of it.
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A CASE STUDY: THE MOUNTAIN VIEW–SUNNYVALE AREA

The nineteenth century author Francis Bret Harte’s experiences of Northern California in the 1850’s provided him with the materials of an entire writing career. One novella, set in the period between the Gold Rush and the Civil War, takes as its background some events during the San Francisco financial panic of 1855. Near the beginning of the story, a young woman from Kentucky—hence the title, A Blue Grass Penelope—is looking out the window of her new home on a city hill,

...lazily watching a boat that, in the teeth of the gale, was beating round Alcatraz Island. Although at times a mere blank speck upon the grey waste of foam, a closer scrutiny showed it to be one of those lateen-rigged Italian fishing boats that so often flecked the distant bay. Lost in the sudden darkening of rain, or reappearing beneath the lifted curtain of the squall, she watched it weather the island, and then turn its laboring but persistent course towards the open channel. A rent in the Indian-inky sky, that showed the narrowing portals of the Golden Gate beyond, revealed, as unexpectedly, the destination of the little craft, a tall ship that hitherto lay hidden in the mist of the Saucelito shore. As the distance lessened between boat and ship, they were again lost in the downward swoop of another squall. When it lifted, the ship was creeping under the headland towards the open sea, but the boat was gone. Mrs. Tucker in vain rubbed the pane with her handkerchief; it had vanished. (Harte 1914 16:357–358.)

The reader soon understands that, unknown to the protagonist, her husband was aboard the fishermen’s boat, fleeing his debts and abandoning her, and has drowned nearly in her sight as the vessel capsized in the storm. In order to escape from the creditors, she is forced to fle to the countryside, and, with the help of friends, finds refuge in a recognizable locale not far from San José. The ruinous adobe hacienda where she must live, helped by an old peón servant, is forty miles from San Francisco and ten from a steamboat landing (clearly identifiable with Alviso). An old mission church (obviously Santa Clara) is within a Sunday morning’s drive for her to attend service. Not far from the house there is an embarcadero on the slough at the edge of the almarjal, where “a long tongue of the rising tide followed the marsh” and “terminated the estuary”; an hour’s walk inland in a “cluster of scrub oaks” is a tienda, consisting of a couple of shanties, one of them a “thin, blank, unpainted shell” of a shed used as a store and saloon for ranch hands and staffed by Missourians and loafers. As she approaches the ranch,

in the growing light she could distinguish the distant, low-lying marshes eaten by encroaching sloughs and insidious channels, and beyond them the faint gray waste of the lower bay.... She almost mechanically stopped her horse as she entered the cross-road. From this momentary hesitation a singular sound aroused her. It seemed at first like the swift hurrying by of some viewless courier of the air, the vague alarm of some invisible flying herald, or like the inarticulate cry that precedes a storm. It seemed to rise and fall around her as if with some changing urgency of purpose. Raising her eyes, she suddenly recognized the two far-stretching lines of telegraph wires above her head, and knew the aeolian cry of the morning wind along its vibrating chords.

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1 The figure of ten miles must have been derived by subtraction from the well-known fifty miles between San José and the City in round measurement.
2 Sampfhere marsh, although I do not remember seeing the word recorded locally.
3 (I. e., cords.) The telegraph line—an extraordinary new technology—had been completed between San Francisco and San José in 1853.
The work's leitmotif is "the solitude and loneliness of the landscape" where the "monotonous," "dead level of the grassy sea" merges with the marsh into a "monotonous sea of tule and meadow" under a sky "scoured" by a "monotonous" "incessant" "harassing" summer trade wind, in "a place of winds and dry bones." Repeatedly the woman finds herself "alone but for the breeze on the solitary plain. The level distance glittered in the sharp light, a few crows with slant wings dipped and ran down the wind before her, and a passing gleam on the marsh was explained by the far-off cry of a curlew." There is only "the broad expanse of the shadowless plain ... On the other side the marsh took up the monotony and carried it, scarcely interrupted by undefined water-courses, to the faintly marked-out horizon line of the remote bay." The long dry season eventually fades to its end, and "one afternoon she thought the long sad waste before her window had caught some tint of gayer color from the sunset," and the tale introduces its protagonist and the reader to the impact of spring's blazing display of poppies, lupine, daisies, dog-roses and dandelions reaching "to the foot of the hills, where the green billows of wild oats carried it on and upwards to the darker crests of pines."

The story is a depiction of the chief character's gradual recovery from abandonment and disillusionment, and not much else of true significance happens. There is, to be sure, a local "Spanish" ranchero, grave and courtly, who, in a reversal of the usual stereotype, outsmarts the Yankee characters by secretly holding title to the local land grant. And unfortunately, as in other stories by this author, the dénouement is a mechanical cataclysm that leads to a tacked-on ending. The earlier-mentioned humble tidal feature at the edge of the hard ground, representing one of the extremely shallow, natural salt-gathering hotponds that used to line the bay marsh, is later described, somewhat unrealistically, as a "shining lagoon" and a "magic mirror," and then, after being "redeemed" (i.e., "reclaimed," artificially drained in connection with a deepening of the channel from the bay), it turns into "an opaque quagmire of noisome corruption and decay" which—by an unnecessary plot twist that obviously required the descriptive inaccuracy—yields up the missing husband's remains.  

Other than this last flaw, the emotionally significant landscape of Harte's story, and even one of its events, can be found depicted factually in early records, even if at present the full picture can only be recovered through renewed use of the imagination. The story's shanties at the edge of an oak grove and the unexpectedly produced land title suggest a situation at modern Mountain View after 1847, when, with the outcome of the Mexican War settled locally, North Americans moved in and "kept shack" (as one of them later put it in testimony given during the extensive land-title litigation), on the well-watered Posolmi land grant at the edge of the oaks near the lower end of Stevens Creek—not scrub oaks, however, but "the great oaks [which] add an indescribable beauty to this country, and grow in great profusion, particularly on the Murphy Grant" (essentially, Sunnyvale). (Crofutt 1878.) The new settlers were unaware that, years earlier, title to the land had been handed over to an influential Monterey lawyer, Francisco Estrada, by an act of the provincial government headed by the unpleasant General Micheltorena. 

5 The author obviously intended originally for the husband to be drowned in the accident that took place at the beginning of the story. The deepening of the channel is likely to have been suggested by the primitive dredging and excavation of the marsh at Alviso in the 1850's.
6 The resolution and decree, dated 1844, were introduced as evidence into U. S. v. Castro 1866:382–383.
On the eve of the Gold Rush, a visiting New England surveyor, Chester S. Lyman, produced a plat of the original Posolmi grant for the settlers that is a major source for any attempt at reconstructing the early aspect of the Mountain View–Sunnyvale area. The surveyor’s diary, also extant, mentions two of the houses, “of 1 room 12 or 15 ft square...”; “only clapboarded & very open” (Lyman 1924:231, 245).

This part of the plain furnishes, it is said, the finest wheat land in all the country. The soil is rich & here sufficiently moist. The grass is rank & tho’ somewhat dry affords abundant feed for stock.

[December 16–19, 1847:] ...running the dividing lines...got very badly poisoned, face much swollen. This Poisonous shrub resembling ivy somewhat, [is] very abundant—had to run lines thro’ dense thickets of it—the lines thro’ these thickets which are called chemisals [chamizales], were worse to run than any thing I have yet found.7

The revelation of an adverse title occurred at the expense of the Posolmi claim previously granted to the Indian Íñigo. In the 1830's and 1840's, when Santa Clara Mission territories passed into the private hands of natives and of Mexicans, petitions for granting of land titles from the provincial government were accompanied by legally required descriptions and “drawings” (diseños). Lope Íñigo's own diseño and his description of the original Posolmi land claim contain a number of native names (en lengua matriz, “in the womb-tongue,” or mother tongue, as the record expresses it) for places in the area: Posolmi itself was the site of his ranch house at a large, ancient native midden mound at the present-day intersection of Bayshore Freeway and the Mountain View–Alviso Road. Sojorpi, as shown on maps of the 1830's and '40's, was a settlement of a few grass houses in the present Moffett Field residential area, marked by a midden and a large perennial spring called the pozita de las Ánimas (little pool of the Souls) by the Santa Clara missionaries, and the ojo del Caballo (Horse Spring) by the Mexican populace. The two Spanish names for Sojorpi are mentioned in a report by Fr. José Mercado of Santa Clara, 1842. In the Corte de Madera land case, a sketch map by Domingo Peralta (Peralta 1862), who left the area in 1834, shows the later route of Arastradero Road as a “trail followed by cattle going [from the hills] to drink at the ojo del Caballo.” In 1850, the large spring and former small Indian settlement was taken over by a North American, John W. Whisman.

Juque-taka, meaning “at live-oak” in the native tongue, was one of Íñigo’s boundary markers, a lone tree out on the adobe flats toward the bay from the present-day Bayshore Freeway, northwest of the Lawrence Expressway on Lakeview Drive halfway between the streets named Silverlake Drive and Meadowlake Drive, some two miles south of the main Bayshore Freeway settlement.9 Later, two knowledgeable witnesses in the land-grant case, Félix Buelna and José Fernández, identified the native word juque as having passed into local Spanish. According to Fernández, the names for three different types of live oak were encino de la sierra, encino mano

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8 According to the testimony of Félix Buelna (Bancroft Library, Berkeley, Land Case 410 ND p. 331), Posolmi was “on the rise east of Posa de las Ánimas,” which could refer to the middens on the site of the Moffett Field airstrips but probably means the traditional shell mound further on that was the location of Íñigo’s headquarters, and the place he was buried.

The form “Juque Ataka,” found in court copies of the original grant papers, is a miscopying due to interference from the tree symbol on the diseño.
de león, encino juque. Lyman’s map (Figure 1) shows a native name, Sitanjun, for the agricultural settlement, chiefly a melon field, on Stevens Creek (arroyo de San José Cupertino) at present El Camino, next to what became the site of Old Mountain View when the Mexican proprietors who displaced Íñigo were replaced in turn by United States settlers.

Íñigo, although referred to somewhat dismissively by a recent biographer as being “always a survivor,” was one of those unusual individuals who manage to repeatedly survive the destruction of societies in which they have lived, and who demonstrate to the rest of us by their success that we are not creatures that are totally shaped by our own cultures. Born into a nearly still-native world, raised in the Spanish mission system and no doubt occupying a position of authority over newer converts, he later oversaw stockraising, vegetable-growing and clothmaking on his own land at present Mountain View, and found protectors for his old age even well into the somewhat chaotic early American period, when the name Inigo Slough was given to a channel leading in from the bay. Regrettably, county maps now show another designation.

Gorgonio, another land-owning Mission Santa Clara native, also provided a set of local place names, in a petition against his Mexican neighbors. Composed in his own handwriting in 1839, it is directed against Estrada and his father-in-law Mariano Castro, who were already seeking what later became the enormous Pastoria de las Borregas grant of ex-mission lands. The tract they were interested in at the time is cited in Gorgonio’s document as extending “from the road to above [sic] the hills,” apparently describing a northeast-to-southwest dimension reaching up to the foothills from the main highway of that time. The other dimension is stated as being “from Santaca to the oven of the toroguis [a native word for soapweed, amoles] and thence inward [or: "north"] to the edge of the chamizal, ending at the stream [i. e., modern Adobe Creek] which is my boundary with Sublieutenant Prado [Prado Mesa, of rancho San Antonio].” This description, besides giving us a couple of native place names, implies a southeast-to-northwest line through the midst of the tract, probably roughly along the original shortcut trail that later became the Upper San Francisco Road, then the Stage Road, and, in the twentieth century, El Camino Real. The spot called Santaca, syntactically a locative-formed name typical of those used for villages, was almost certainly in Sunnyvale, probably close to where the southwestern land-grant line was claimed to lie in 1848–1850 (along the present power transmission line), and hence very likely it can be identified with the group of native shell middens formerly there. The amole “oven” could lie somewhere in Mountain View; the chamizal mentioned specially by Gorgonio evidently is the deep brushland that covered most of present-day Los Altos.

During its encroachment onto the Posolmi claim, Estrada’s and Castro’s grant was shifted toward the bay, not a surprising fact for anyone acquainted with the history of California land ownership. Later, when the validity of the original official “giving of possession” of the land

11 A euphemized version of the coarse name that was once applied to an exceptionally deviated tidal creek, an ancient estuary of the Guadalupe River. See Figure 2. The original courses of both sloughs were destroyed early in the twentieth century in one of the hare-brained attempts to build deepwater ports in the bay marsh just before the Great Depression.
12 Presumably meaning a place, or even an actual oven, where the roots were roasted for food, rather than a knoll, which is a distantly possible meaning for the word.
claim was being challenged in a United States court, the government’s attorney and the witness Antonio Suñol had a verbal exchange about methods of surveying used in early times when the country was thinly peopled. Hundreds if not thousands of acres of the land were at stake in this legal case. Suñol was a long-term resident of San José who, according to a visitor there in 1841, had forgotten a good deal of his native French language; his court testimony, of course, was given in Spanish. To a somewhat hectoring question about what instruments he had used in the survey, Suñol replied, “The natural instruments for surveying: eyes, hands, and a piece of rope.” The cross-examination continued:

[In establishing one corner point of the land grant,] what decided you to stop at the point “D” rather than any other point on the Creek [the arroyo de San José Cupertino, now Stevens Creek]? Ans[wer]: Because it was mid[day] and very warm, and the place being cool and shady we stopped and took a nap.

The government attorney pounced: So, it was an arbitrary decision? Suñol (still speaking through the interpreter): No, it was not arbitrary. It was a circumstantial decision. (U. S. v. Castro 1866:40.)

Figure 2 is an essay at a two-dimensional representation of part of the present-day Mountain View and Sunnyvale area as it must have been in the early nineteenth century, using available sources. Tree symbols on the map are not meant to locate actual individual oaks or sycamores, even in a few cases where the records would allow it, and a distinction between white oaks (Quercus lobata) and live oaks (Quercus agrifolia) is made only roughly and in mass, since in the forests dominated by the deciduous oaks, the evergreen type also occurred, along with sycamores, laurels and buckeyes. The town of Sunnyvale, however, was originally laid out and platted under the name Encinal, referring to a grove almost purely of live oaks, growing upon the slightly acidic soil surrounding an ancient stream course whose location was still vaguely outlined during the twentieth century by progressively fewer, slowly perishing trees. At the mixed oak forest’s well-watered northern end, according to an early resident, G. F. Beardsley (1926:12), “The undergrowth was elder, scrub oak, blackberry, and near the ponds willow.” Here, where surveyor Lyman met his poison oak within what he marked on his map as “underbrush and dense underwood,” a chain of small “duck ponds” extended along what Lyman labeled as a “by road,” leading from Sitanjun to Posolmi. According to the indispensable Clyde Arbuckle History of San José ([Arbuckle] 1985:137), a couple of miles farther south, at the end of the woods, “Albert Chester Lawrence and son [in] 1852...felled huge oaks and cut them up one by one. They chopped and burned brush, soon learning to use extreme caution with poison oak so thick that it almost hid the ground.” Closer to the bay, beyond Posolmi the “by road”—the present Mountain View–Alviso Road—continued four miles onward over adobe flats to the Santa Clara Mission embarcadero on the Guadalupe River, whose tedious bends were painfully counted by early visitors by water, in boats moving slowly along to or from the Santa Clara Mission embarcadero. (Kotzebue 1830, 2:91, and in Appendix B below; Belcher and Simkinson 1979 2:36; Wilkes 1845:199–200 and more briefly in the Appendix in the present publication; Wise 1850:110 and in this Appendix; Lyman 1924:235.)

13 Outside of surveyors’ notes of line and bearing trees, only an early survey of the Enright Tract near Santa Clara (Lewis 1850a) seems to show actual individual tree locations.
SOURCES

The early historic landscape cannot be completely described or recovered. The generalized descriptions by early travelers are of great value, and the sketch-maps and descriptions accompanying Mexican-period grants of land became an element in the vast amount of ownership litigation that followed the North American conquest. A large proportion of the original land-grant papers survived the 1906 San Francisco fire in legible form, and are now held in Record Group 49 in the Cartographic Section of the U. S. National Archives, College Park, MD. These, and in addition most of the burned records, are preserved in copies of varying quality (cf. an example cited in the footnote below) in the land-case records in the Bancroft Library, University of California Berkeley and U. S. Circuit Court files (National Archives film T-1207), and in the State Archives, Sacramento (a microfilm made by the Genealogical Society of Salt Lake City is available through Church of Jesus Christ of Latter Day Saints Family Centers). The originals, however, should not be confused with these copies or with those in the Surveyor-General dockets, mentioned below, to which researchers are often mistakenly referred. The J. N. Bowman Index to all these records (typescript at the Bancroft Library) is still indispensable, despite some more recent publications on the subject. A very good, briefer discussion and listing is Gary M. Miller, “Spanish and Mexican Land Grants in California,” a typescript found at some offices and branches of the U. S. National Archives.

However, anyone interested in reconstructing features of the original landscape more specific than those found in the sketchy or dubious references of Mexican-period land titles and generalized accounts by early travelers has to turn first to those surveyors, employed privately or by the government, who did their work—sometimes extraordinarily well, sometimes, to be sure, crudely—after 1847 and but before the country became so settled up and populated that natural landmarks and features were objects of secondary, if any, interest. An example of a private survey is Preuss 1849. A name that stands out among skilled surveyors committed to describing the landscape is that of Sherman Day, later U. S. Surveyor-General for California, for whom Mount Day in the Mount Hamilton Range is named. Even so, these later-nineteenth-century survey records may misrepresent such historical conditions as the original density or absence of oak timber, since there was some destruction of trees at earlier dates, especially along the major roads and near settlements. The surveys and other relevant material can often be found in early land-case records of the U. S. District Court, now held at the Bancroft Library, University of California Berkeley, as well as in the ledgers of the Recorder’s and Surveyor’s offices of county courthouses. Although the old Board of Supervisors records for Santa Clara County are, unfortunately, no longer extant, the local court records are a potential source.14

A valuable category of these land plats, where they are available, is the preliminary surveys of grants made after they were first approved by the Board of California Land Commissioners in the early 1850’s (e. g. Van Dorn 1854, Figure 3). Unfortunately, most of these records have been lost, if they did not happen to be introduced as evidence into later court cases (see above), or into the Surveyor-General’s dockets of appeals for adjustments after final government patent had issued (U. S. National Archives Record Group 60; microfilm T-910, held at Archives

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14 Two plans from early local court cases are reproduced in Skowronek 1999:Figs. 4 and 5.
branches at San Bruno, Laguna Niguel and Washington, D. C.)\textsuperscript{15} The final patent surveys, dating mostly from the late 1850’s and recorded in many locations including county recorder’s offices, often repeat the preliminary-survey field notes without acknowledgment, but depict fewer features on their plats. The patent plat of Rancho San Juan Bautista (Healy 1863) is an exception, since it gives a crude overview of features inside the boundary lines. The same surveyor’s attempt to indicate the brushland and forest in the vicinity of the Quito grant (Healy 1864) is reproduced in Brown 2002:653 and repeated here as Figure 4.

Other records include the field notes of public-land ("township") surveys, which in addition to general notations about timber and soil along one-mile units, give extremely localized references to encounters with trees, watercourses and so forth, as do surveys of property lines (although not even C. S. Lyman penetrated the jungle surrounding the sink of Stevens Creek). The exact verbal and numerical information in the surveyors’ field notes is preferable to the easily accessible but roughly drawn graphic plats. Later transcripts of the notes, mostly typed, are available at, or from, the U. S. Bureau of Land Management, Sacramento. The transcriptions, although exact about numbers, sometimes shorten historically interesting verbal information found in the manuscript original notes.\textsuperscript{16} Linear surveys of roads and railways carry spatial information similar to surveyors’ line notes.\textsuperscript{17} On a smaller scale, Charles Hoffmann’s engraved map of the San Francisco Bay area (Hoffmann 1867; second edition, with additions, 1874) is still a worthwhile distillation of other aspects of the early government surveys. The best professional map depictions, somewhat paradoxically, are those made by the United States Coast Survey (later the Coast and Geodetic Survey, now part of the National Ocean Administration), which were limited to parts of the extensive salt marsh along the bay. The large-scale manuscript topographic and hydrographic sheets from which printed charts were made are now becoming consultable as scans, through the U. S. National Archives.

Graphic evidence can be found in some lithographed views of rural properties in the county histories. For example, a view of the Tantau ranch near Cupertino (Thompson & West 1876:89) is one of the few sources that specifically indicate the thinning out of the oaks at the inner (western) edge of the main Santa Clara Valley “Roblar.” Historical photographs that can be found in libraries, galleries or elsewhere include such significant early photographers’ names as Carleton Watkins, whose work is now viewable online (Watkins c1860–1880), and Lawrence & Houseworth (e. g., Lawrence & Houseworth c1866; Palmquist 2002).

Where mid-nineteenth-century sources cannot be found, later ones have to be used with caution. An example is the details of the same sloughs and the inner edge of the tidal marsh

\textsuperscript{15} I once saw an album of these early land-grant surveys for Monterey County, on loan at the time to the Bancroft Library, Berkeley. I have not been able to discover its present location.

\textsuperscript{16} An example is given below. These manuscripts used to be consultable at the Bureau’s Department of the Interior office, Washington, D. C., but appear to be inaccessible at present; the last that I was able to learn of their whereabouts was that they might be in the hands of a “study group” in a Virginia town.

\textsuperscript{17} The printed 1862 survey map of the San Francisco & San José Railway indicates small natural drains as well as streams, but some of the locations seem possibly difficult to reconcile with what is known about the microtopography from other sources. I have not compared the larger-scale manuscript version of a portion of the map that is on display at the San José Historical Museum.
which do not appear on the early survey (U. S. Coast Survey 1856), since it was not carried out all the way inland to the hard ground except at Alviso. Other maps, such as Lyman 1847, give only slight suggestions of details such as the shallow hotponds. These areas at the edge of the hard ground have to be filled in from a later survey (U. S. Coast Survey 1897). But despite what can be shown on Figure 2, the hotponds originally may have formed a continuous band at the edge of the hard ground. Also, in the same area, by the time of the later survey a roughly right-angled channel seems to have been dug from Jagel Slough to serve the Mountain View landings, so that on Figure 2 the suggestion of an original pattern of small waterways at this particular point represents only a guess. The same difficulty applies for the Alviso area, where the connection with Alviso (Steamboat) Slough was dug at approximately the time when the town was founded. For evidence of trees and groves that survived into the twentieth century, aerial photography is important. Systematic vertical photographic coverages include those by agencies of the Department of Agriculture (e. g., U. S. Agricultural Stabilization and Conservation Service (1939) and the U. S. Forest Service (e. g., U. S. Forest Service 1948). For some small areas immediately adjacent to San Francisco Bay, very large-scale aerial photographs were taken some seventy years ago by the Coast and Geodetic Survey (U. S. Coast and Geodetic Survey 1931), but these unfortunately are inaccessible to investigators.18

The shell mounds shown on Figure 2 that were the one conspicuous trace left by pre-Spanish-period native villages are recorded chiefly in superficial reconnaissances (California Archaeological Survey n. d.) dating from the 1930's just before the construction of Moffett Field. However, the traditionally steepest and most conspicuous of these midden, the main Posolmi site, can be outlined only on the basis of more recent soil surveys—a type of resource about which more will be said later—assisted by the later Coast Survey topographic sheet (U. S. Coast Survey 1897), on which also the outline of the Sojorpi mound is suggested by a contour line. The shell middens plotted in Sunnyvale are shown partly from personal reconnaissances made between 1950 and 1960. Certain patterns do develop even on the basis of these scattered sources, e. g., a close association between the ancient village mounds and the willow thickets surrounding the lower edge of the Stevens Creek alluvium.

EARLY TRAILS

The history of the transportation pattern, that is, knowledge of continuities and changes in the traveled trails and roads, is important for evaluating the descriptions left by explorers and travelers, and for helping to assess or explain early changes in the landscape.19 For the San José to San Francisco route, the diseños of the late Mexican period sketch a trail running not far from the bay marshes, and label it camino antiguo or camino de verano, the old or summer road—number 5 on Figure 2. A later witness mentioned the route's northern portion as "a little road or

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18 According to a communication from Joan Rikon of the National Geodetic Information Center, Silver Spring, MD, they will continue to be inaccessible "for an indefinite period." Index maps to the coverages are, or until recently were, available. Figure 2 could have been made more detailed had the photography been accessible.

19 I contributed a descriptive account of the main north-south routes to the Santa Clara County chapter of the second edition of Historic Spots in California, in sections headed "The Monterey Road" and "The San Francisco Road" (Hoover, Hoover, Rensch, and Abeloe 1966:431–33). It is not in the third edition.
mule path that had been made by natives in former times."\textsuperscript{20} Dry-season travel on the adobe flats was not difficult, so that in the 1850's and later, John Whisman and the farmers of his district found the trail still useful, and, considerably straightened, it has remained as the longer portion of Charleston Road in Mountain View. From a wider perspective, the trail's course lay from the Mesa Ranch shell midden near present Jordan Junior High School, Palo Alto (Caldwell 1949), straight toward the lower end of the present artificial Stevens Creek canal, three quarters of a mile outside of the Moffett Field boundary. Here there was a large shell mound, to which the track originally must have led from both north and south; presumably after the spot was abandoned by its native population, a small shortcut was introduced, as the trail curved to run on across smaller midden deposits to the Posolmi mound. Southeastward from Posolmi, the summer or old route ran quite straight to the Guadalupe mound near where Mission Santa Clara stood for its first five to seven years, and where, from 1797 onward, the landmark later known as the Old Spanish Bridge served travelers going south to Pueblo San José and others going northward to the new Mission San José.

However, from some relatively early date after the founding of Santa Clara in 1776, the main road from San José and Santa Clara to San Francisco ran further inland, through the edges of the oak forests, mostly avoiding the heavy adobe soils just outside toward the bay. The English navigator George Vancouver and his officers, visiting Santa Clara from San Francisco in November, 1792, rode "for about twenty miles" through parklike oaks (some of them later estimated as being over "fifteen feet in girth and ... high in proportion") "with some inconvenience, on account of the fox earths, and burrows of rabbits, squirrels, rats, and other animals," and then, "having passed through this imaginary park,"\textsuperscript{21} we advanced a few miles in an open clear meadow, and arrived in a low swampy country ... the horses being nearly knee-deep in mud and water for about six miles" shortly before reaching the Mission after dark. Other accounts by the same group of visitors stress the abundance of "foxes" and the numbers and tameness of the flocks of wild geese. (Vancouver 1984:718, 720). The latter part of this description, although the mileages are understandably slightly inflated, clearly applies to the main route (camin real), as later known, where it skirted the impenetrable parts of the oak forest and afterward approached Santa Clara through the treeless low area known as the Bajio. The French sea captain Auguste du Haut-Cilly travelled this main road in 1828, admiring the scenery earlier described by Vancouver (whose account he had read), coveting the crooked oak timber for shipbuilding, and the redwoods in view on the mountains near by for ships' masts—and suffering from the blazing sun when he left the shade of the trees for the open plain, with the Santa Clara Mission church and buildings swimming in the midst of a mirage in the distance (Duhaut-Cilly 1999:128; Du Haut-Cilly in Carter 1929:236).

If the oaks encroached on the main lower road from the inland side, the side of the trail toward the bay was positively crowded in on by many willow jungles (sauzales) up to half a mile in extent that may possibly, before the intrusion of the Mission's large-scale stockraising, have formed a continuous band or zone upon the impermeable clay subsoils that lay all along the lower edge of the alluvial ground where the oaks grew. Vancouver's report indicates that this

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\textsuperscript{20} Santa Clara County Clerk's Office, Third District Court, Case 2015 (1855), witness Ramón de Zaldo.

\textsuperscript{21} That is, it reminded them of the carefully preserved and managed park of some great English estate.
road was already the main route from San Francisco in 1792. Since it is oriented on the location occupied by Santa Clara Mission from about 1781 onward, the assumption must be that the trail was in use soon after that date. It seems plausible that in a few years' time from the founding of the settlements (missions, presidio and pueblo in 1776-1777) the settlers had learned enough of the landscape to find a careful way between tangled forest on the one hand and bogs on the other. Although this Lower San Francisco Road, as the North Americans called it, was abandoned as the principal through route after the winter of 1849, some of its portions remained in use for various purposes: for example, nearly fifty years afterward a slightly straightened one-and-five-eighths-mile section near present Maude Avenue in Sunnyvale still is shown on one government map (U. S. Geological Survey 1895), although it is missing from a large-scale Coast and Geodetic Survey topographic drawing two years later (U. S. Coast Survey 1897). The old route was outlined by settlements such as the Estrada and Castro houses and corrals (on present Alma Street and elsewhere), the Fremont House (a very large roadhouse that stood until an unknown but late date on present Sherland Avenue in Mountain View), and the Martin Murphy residence (in Sunnyvale, destroyed 1961), all of which had gone in just before most of the stagecoach traffic switched to the upper road.

The early surveys that locate this second-oldest highway are sufficient to interpret some historical sources. In 1850, on the road from San Francisco to San José, a gifted realistic draftsman, William Dougal, drew a scene (Figure 5) whose viewpoint can be precisely located as shown by the circled X in Figure 2: at the north side of the Mountain View—Alviso Road and Maude Avenue intersection between Mountain View and Sunnyvale, looking a little east of true south toward the Los Gatos Gap in the far background, with a settler’s house at the edge of a willow patch in the foreground and, in the middle ground, the lower road cutting across an opening in the Roblar (the white-oak forest) as shown in early surveys. In the foreground, the destruction of the Roblar is under way.

Through another corridor, bounded on the side toward the bay by an intransitately dense valley-oak forest with underbrush, and on the inland side by the so-called chamizales—went the upper San Francisco-Santa Clara road. Its relative lack of antiquity was expressed on the landgrant sketch maps of the 1830's by the term camino de la desecha, the cutoff road (el desecho, in dictionary Spanish). After Vancouver's Santa Clara visit, "our road back was over a more elevated country than that of the morass, leading through a continuation of the forest of oaks, but greatly inconvenienced by the many holes in the ground before noticed; and our good friend and guide the [Spanish] sergeant ... was induced to conduct us through a lower country, which he did not suspect to be so wet and unpleasant as we later found it" (Vancouver 1984:724). Clearly, by 1792 both the lower and the upper routes had become established trails, one on either side of the main Roblar, but the latter being slightly the shorter of the two: hence its Spanish name. This route is the ancestor of our present El Camino Real, at least in the area lying southward from the northern edge of present Mountain View, where it joined the original main or lower road at the

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22 The editor of Dougal’s journal and drawings (Dougal 1950:plate 22) thought that the view might have been made in the area of San Mateo or Belmont—no doubt because the artist’s other drawings of this trip were all of places in San Mateo County. Visitors at that county’s historical museum see an enlargement. But the Los Gatos gap is unmistakable in the picture.
Castro City shellmound, a major native settlement midden. The northward route which Vancouver’s guide took in order to switch back to one of the lower trails might be represented by a road noted on an 1851 township survey near the shell mound in southern Sunnyvale, easily extended on a prolongation toward the Arques-Matilda Road shell midden on the earlier-traveled camino real.

There is a portion of the present-day highway that follows part of the old route exactly, still preserving some of its swerves, from Stevens Creek southward for two miles and with a further three-quarters mile prolongation into Reed Road (past the turn introduced in 1929 to avoid the earlier American settlers’ various reroutings of the highway along their north-south section lines). About midway on this stretch, another side road, which on the hand-drawn diseños also (and perhaps more properly) bears the name of desecha, took its cutoff to the right, skirting very closely past the chamizales in its straight course onward toward the main Santa Clara Mission ranchería. Also southeastward, the upper road itself ran on into Santa Clara, first splitting into a couple of branches the main one of which veered leftward to join the lower road a half mile northeast of present El Camino, at a farm headquarters run by ex-Mission natives as late as 1850, marked as “Indian garden” on a survey (Lewis 1850a).

How the later shifts and realignments came about is suggested by a newspaper article of 1853 (Bancroft Library, Bancroft Scraps set W-2), which reports that—in place of an officially surveyed but unbuilt straight road that, obviously, no one wanted because it ran across the adobe flats down near the bay—the settlers north of Santa Clara successfully petitioned the county supervisors for permission to use, fence and maintain the existing “stage road.” Broek (1932:31) reported having seen among the old county supervisors’ records an early map of the actual road, showing chamizales reaching to its edge at several points along the route. The papers apparently are no longer extant, having been deliberately destroyed after the 1931 courthouse fire. A small-scale map of a proposed San Francisco–San José railroad ([Lewis] 1851b) also sketches the sinuous course of the stage road, before the opening of the San Francisco County road (now in San Mateo County) and before the Santa Clara settlers’ realignments of their portion along square quarter-section lines. Even in the decade after stagecoach travel had become regular on the upper San Francisco road, two surveys made a few years apart show slight differences in the alignment of the section along present El Camino. At a barbecue in a grove here in 1861, a large political turnout of Secession Democrats was viewed with a sectionally unsympathetic eye by a New Englander, W. H. Brewer, who complained of “a dust the like of which you never saw. The wind was high, and the dust of a thronged road in this dry climate...can never be appreciated until it is seen and felt. The fiercest snowstorm is not more blinding.” (Farquhar 1949:176-7.)

SOILS

23 The survey is recorded in Santa Clara County Surveyor’s Map Book A.
24 This portion of the highway retained the name Stage Road for some time; later it was usually just “the San Francisco Road,” until the present pseudo-Spanish designation was imposed early in the twentieth century as a result of publicity first developed in connection with the San Francisco Midwinter Fair of 1894–95.
Early changes in the landscape, whether caused naturally or by human settlement, were conditioned by the differing qualities of the soil, a fact that has been appreciated by investigators of environmental history; studies by Cooper (1926) and Broek (1932) made careful use of one very valuable source of evidence, U. S. Department of Agriculture reconnaissance maps showing the distribution of soil types in the Santa Clara Valley (Lapham 1904). Shortly after the middle of the twentieth century and just before the burst of building- and road-construction that replaced agriculture in much of the valley, better county atlases of soils were produced through advances in the science of soil classification and through careful field and laboratory work. Thereafter, some time ago, the federal Soil Service offices were “devolved” to the control of local environmental agencies and the published atlases are sometimes available through, or at, these units. The northern Santa Clara Valley material (Gardner et al. 1958) is not found in many libraries. The published atlas for eastern San Mateo County (Kashiwagi and Hokholt 1991) gives a careful plotting of the primary distinction between bayside adobe soil and other soils, but the latter types, because of intense human-cultural development, are deliberately not distinguished in a way that is useful for environmental investigation of alluvial soils in the ancient San Francisquito Creek fan.

The three large maps presented here cover aspects of the area with which this study is concerned, the whole central northern Santa Clara Valley. Figure 8, showing the distribution of major soil types, uses color-coding in order to show a progression, from the low-lying alkaline, heavy clays (in purplish colors), located chiefly down near the bay with a typical vegetation of willow jungles, up through the alluvial deposits brought down by the streams (and shown reddish through orange to yellow), then up to the loams (green) that supported the largest amount of oak groves, and finally to the neutral-to-acid, sometimes gravelly soils (blue-green) on the higher parts of alluvial fans, favoring a growth of live oaks and brush. Figure 6 gives, in map form, a summary of early government surveyors’ verbal descriptions of landscape conditions, chiefly vegetation. Figure 7 is an essay at a map reconstruction of the landscape at the end of the Mexican period.

LOWLANDS

Despite some disparaging remarks by early travelers as to the local natives’ lack of interest in saltwater fishing, the commander of a boat party in 1775 found that in the shallows of the uppermost basin of the bay, “poles are driven in, bearing black feathers, bundles of tule rushes, small seashells and periwinkles, which, being in the midst of the water, I conceive are fishing buoys” (José Cañizares, translated in Stanger and Brown 1969:159). Inland middens of saltwater mussel and snail shells (Gifford 1916:8) were the most conspicuous evidences of the former native villages, which allegedly fought each other over the gathering rights (according to Francisco Palou, in 1774; see Appendix, below). An early-nineteenth-century resident recalled that sea otters, before they fell prey to Aleut hunters and others, were so abundant that “the shores of the bay all the way to the Santa Clara inlet seemed covered with black [silk] sheets” (translated from Fernández 1877:26). As for the bay marsh itself, the similarity between the

25 “...tanto que desde San Francisco hasta el estero de Santa Clara el suelo parecía cubierto con sábanas negras debido a la gran cantidad de nutrias que allí había.”
shorelines on the Beechey chart of 1826 (Harlowe 1950) and those of the Coast Survey thirty years later (U. S. Coast Survey 1856) indicates a relative stability in those earlier times contrasted with the large changes that occurred during the later nineteenth century. That there was, on the other hand, a considerable amount of freshwater seepage into the salt marsh is indicated by early mentions of tall “reeds” and “grasses” along the Guadalupe estuary (Kotzebue 1827:49, translated in the Appendix here) and by tradition, which includes the name Artesian Slough. Along the edge of the hard ground, the chain or band of natural “hotpond” collected solar salt under the summer and autumn trade-winds, by the evaporation of seawater deposited in the June spring-tides: a traveler on the summer trail saw “at the roadside, large dried lake beds covered with salty crusts that, from a distance, shine in the sun like enormous snowfields” (Duflot de Mofras 1844 I:423; cf. Brown 1960:117–120). Natives, and then others, gathered the salt.

On the soil map (Figure 8), the yellow island of recent “alluvial” soil extending over the marsh at Alviso is obviously of artificial origin—fill brought in during the development as a harbor in the early 1850’s, when the old Santa Clara Mission embarcadero on the Guadalupe was replaced by opening a channel from the shorter inlet that became named Steamboat or Alviso Slough. It was well known in San José in the 1860’s and 1870’s that the area of bay marsh—“the sloughs,” los esteros—had shrunk from various causes. Early court-case testimony recently unearthed by E. Brewster for the San Francisco Estuary Institute suggests that before the 1850’s, when stream floods brought down large amounts of alluvium, the tidal marsh extended in some form as far southeast as the Milpitas–Alviso Road; if so, the road’s location obviously was determined by that fact. The same possibility is suggested by the nineteenth-century pattern of channels reaching into the hard ground, still within the same zone of recent river-brought soil, and fed by short streams that rose through isolated willow groves watered by groundwater percolation from the lower ends of old Coyote Creek courses.27 It seems clear that saltwater sloughs extended close to the foot of the Mission Range dramatically far along, all the way to original downtown Milpitas, although even in early historical times, the general margin of the tidal ground must have begun its retreat toward the bay. Here and elsewhere, the inner edge of the marsh with its chain of hotponds, coinciding with the outer edge of the hard ground with its willow jungles at seepages around the edge of alluvial fans and stream outflows, was probably in slow motion outward even under entirely natural conditions, before tremendous stream deposits were laid down during the historical period.

At the original lower limit of solid ground, the roughly two-miles-wide belt of fields lying toward the bay was interrupted only at long intervals by natural sumps, or sudden, steep-sided freshwater sloughs without any obvious sources. The soil, of the sort locally called black adobe (mostly “Sunnyvale silty clay,” U. S. Soil Conservation Service c1969:186–87), is not infertile, but seemed less favorable for cultivation by early American settlers than the higher,

26 Information kindly passed on to me by the Estuary Institute. One piece of testimony speaks of as much as eighteen inches of new soil being deposited, north of the Milpitas–Alviso Road, during a single flood.

27 The relative newness of at least some of the Campbell Clay deposits is shown by the fact that the soil maps extend this soil type to a large tract of the relatively recent artificially drained land along the Coyote River slough. The straight line between the Campbell and Alviso series that appears on the map is drawn that way merely to avoid the anachronism that would be committed if I were to follow the soil maps here.
lighter soils just inland, and so was left mostly in grass or hay until the recent industrial decades. A few bands of somewhat more alluvial soil ("Bayshore clay loam," U. S. Soil Conservation Service 1969:101–102) also extended out over the black clay, as breakouts from the ancient Stevens Creek and Los Gatos Creek fans of alluvial soil. On one such strip, at Mountain View, the Posolmi ranch houses and mound were located, along with scattering oaks. The Posolmi ranch headquarters also had, beginning about a mile southeastward, a large area of heavier clay ("Castro clay," U. S. Soil Conservation Service 1969:107–108) that at a depth of two to three feet turns bright white; it was still remembered in the 1850's that local natives had mined their white body paint at an exposed deposit on the edge of a freshwater slough near present Lawrence Station Expressway and El Camino.

Deep embayments and flats of adobe soil were well distributed around the two main early settlements. The course of the so called Battle of Santa Clara (see Regnery 1978; Hammond and Morgan 1966) that took place in January 1847 was determined to a considerable extent by the terrain—the black-adobe soil northwest of the Mission, laced with intermittent streams into one of which the United States' forces' single artillery piece of cannon sank. The day-long skirmish was waged between Native Californian ranchers and pro-North American forces that included a detachment of Marines and the irregular so called volunteers, chiefly recent North American immigrants led by a German, Karl Marie Weber, who had terrorized the district by rough seizures of horses and other property, supposedly to support the campaign of John Charles Frémont. The Myers water-color drawing made soon after the event shows what seems to be an exaggerated outline of the Loma Prieta range in the background, with the mission in the nearer distance, and, in the foreground, a close-drawn-up rank of Marines firing in unison at horsemen in sombreros—the exasperated and enraged local rancheros—on the far side of the engagement. Our highly irregular frontiersmen are also seen firing in the left foreground.

The background may not be the only element which the artist has exaggerated. The engagement itself may have been less bellicose than the drawing suggests, since the Marines seem to have acted with as much restraint as was possible under the circumstances, and their commander afterward received a written reprimand from his superior officer for his leniency. Weber himself had no future in San José, and went off to found Stockton. Among the group of North American emigrants who had occupied the ex-Mission Santa Clara buildings in the drawing, and some of whom were standing on the walls watching, was a Missourian grass widow named Mary Bennett who gained local fame by profanely inciting everyone within earshot to close in on the Californians. It may have been an unofficial reward for her patriotism that she later had no trouble in receiving a confirmation of title to a tract of ex-Mission Santa Clara Mission lands, adjacent to the main sowing grounds that were still used by the Mission Indians.

The drawing of the battle does not show the detail that gave this fight the appellation of Battle of the Mustard Stalks: another invader, a European weed, wild mustard, had occupied the Los Angeles plains by the 1820's, and had recently spread northward, "covering large tracts of the choicest land, to the annihilation of all other vegetation; for it is of such rank growth, it attains a height of nine or ten feet, and its small imponderous seed is carried about by the slightest current of air..." (Kelly 1851:323). Northeast of San José the plain had "exceedingly rich soil but the growth of mustard has entirely taken possession of it—Old stalks are as high as
my head, and as thick as it can grow” (Howe 1851). At the same spot another visitor described
“indigenous grasses, among which I noticed several species of clover, and mustard, large tracts
of which we rode through, the stalks varying from six to ten feet in height” (Bryant 1848:314).
The same writer, on setting out for San Francisco, “travelled fifteen miles over a flat plain,
timbered with groves and parks of evergreen oaks, and covered with a great variety of grasses,
wild oats, and mustard. So rank is the growth of mustard in many places that it is with difficulty
that a horse can penetrate through it” (318). Another person recalled traveling to San Francisco in
1849: “Beyond Santa Clara I remember forests of mustard of very large and dense growth. I am
sure no man’s head could have been seen riding through it, even if he had stood upright in his
saddle, on his horse” (Willey 1879:36). It was said that cabins were built out of the dry stems.
According to an account later furnished by Weber, “In marching towards Santa Clara the road
ran across a creek which overflowed its banks every spring, and the troops were obliged to
follow the beaten pathway. The overflow of the creek had sprouted an immense growth of
mustard seed on each side, and they had grown 10 to 15 feet in height and of proportionate
thickness,” severely hindering the American forces (Hammond and Morgan 1966:15). Two
native Californians described the action as centering upon a swamp at the derramadero
(probably a better descriptive term in itself than “sink”) of the arroyo, or bajío, de Tito (alias
Quito, Campbell and Saratoga Creek) only a short distance from Santa Clara. Part of the native
force had dismounted in a low spot (cañada) so that only their horses’ heads were visible.
(Robles 1877:20; Flores 1877:14.) A cynically-minded North American who heard of the fight
while in San Francisco described the Californians as “surrounding [the troops] in the mustard on
every side,” and tricking them into fusillading the stalks (Powell 1942:142).

The true “artesian” belt of naturally upwelling fresh water extended well inland (Clark
1924:24–25), including most of the adobe lowlands where the characteristic trees were the
willow patches (sauzales). Viewed from close at hand, these patches were a maze of closely
spaced thin trunks of a uniform height, not at all impenetrable but impossible to see far into and
hard to find your way through without getting lost: excellent lurking places for predators or
refugees of all species. One example: in 1843 a local justice of the peace, Narciso Antonio Peña,
while on the way from Santa Clara to his ranch at present San Antonio and Alma Roads, was
ambushed from a willow grove (perhaps the one in Figure 5) by three natives with reatas trying
to lasso him, and escaped only because of his good horse. Some of his official correspondence
is headed “Punta de Sauzales,” which must mean this vicinity of the lower road, near the Stevens
Creek sink.29

Willow jungles as places to hide and to fight from might possibly have made their
vicinity attractive as sites for native villages, an association that is strikingly visible in the case of
the largest concentration of old midden soil in the northern valley (Figure 8), which extended
along the lower fringe of the original oak forest for about a mile in the vicinity of the Oakland
Road and Lundy Avenue, starting from a mile north of the Nimitz Freeway–Bayshore Freeway
interchange. This belt of willow swamps around the head of lower Penitencia Creek and

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28 Bryant seems to have regarded both live oaks and deciduous ones as “evergreen,” presumably because of
their similar shape.
southward along the main axis of the valley’s drainage was originally so daunting to travelers that, in 1776, soldiers who had been through the country once or twice before persuaded Father Font that it would be necessary to go south many miles, to Llagas Creek, in order to get around the morass from west to east. Apparently for this reason, Font’s map shows a body of water extending up the middle of the valley south of San Francisco Bay. By the 1840’s and 1850’s, part of the northern willows, probably much reduced in size because of its closeness to the pueblo and the needs of the population, was a landmark called the Montecito (little wood); another, larger part two or three miles farther south, not far from the present Bayshore Freeway, was the upper little wood, el Montecito Alto (e. g., Healy 1861). The suggestion is that the willow jungle was originally continuous along this line as far as Santa Clara Street or above, occupying the same swamp that held standing “water about knee deep” in July (Day 1854) and, going southeastward from the Coyote, also filled the lower Silver Creek drainage. On the other side of downtown San José between the Guadalupe River and Los Gatos Creek was the vast area later known simply as The Willows. Closer to Santa Clara Mission, at the time it was founded there was another large tract, extending to the Guadalupe, that must have been a continuous willow patch, fed by many upwellings from the underground drainage of the western valley. This later became the partially drained and cleared Potrero de Santa Clara (after the Mexican War, the Stockton Ranch and some of it, eventually, the modern airport). The large lithographed Sherman Day subdivision map of the Potrero, 1850, is a wonderful depiction, showing even the wild-rose tangles along the Alameda.

STREAMS

One of the more fascinating questions concerning the complex hydraulics of the valley is the nature of the lower Coyote Creek–Penitencia Creek system, which was undoubtedly altered by some of the early large-scale drainage changes. Stream diversions, channel digging, swamp draining, and connections of discontinuous sinks were undertaken on a large scale by our North American settlers immediately on their arrival in the valley, when labor returning from the gold diggings was relatively inexpensive—large-scale projects but, on the whole, ill-documented ones. The Arbuckle History of San José reports the case of an east-side landowner, troubled by the marsh just described, who in 1852 had a ditch dug between the Arroyo del Aguaje, the old name for the upper Penitencia, and the lower Penitencia proper only a few hundred yards east of the Coyote itself ([Arbuckle] 1985:419). Apparently not long afterward, the connection was broken again although the name change remained. Both earlier and later sources indicate the upper stream as running directly into the arroyo del Coyote, although the earlier ones are probably overgeneralized or indicate temporary conditions.

Looking again at the soil distributions on Figure 8, where the recent deposits along the Coyote stand out clearly in yellow and orange-red, it would be easy to suppose that the early nineteenth-century course of tree-lined, perennial lower Penitencia Creek, closely parallel to the

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30 An alternative explanation, that Font duplicated part of the latter feature because of failures in his dead-reckoning, now seems to me less likely.
31 There is a poor, reduced manuscript hand copy in the county records. I have not seen the Chester Lyman survey map of the tract, on which Day’s is said to be based.
As a general rule of thumb, it can be stated that the lower courses of all but the largest and most perennial California coastal streams were discontinuous, rising typically among willows and sinking among sycamores. Coyote Creek, for instance, was never a perennial stream below the Coyote narrows (e.g., "water only in pools" near there in July, Day 1854); the spring salmon run up the stream left landlocked fingerlings to survive the summer in the upper reaches. One of the earliest exploring expeditions to reach that area, going northward in November, 1774, noted "a stream with cottonwoods in a good-sized bed, but dry, a thing not commonly seen in these lands" (where cottonwoods often indicated surface water); then, just below a patch of willows and cottonwoods, running water reappeared from the underground flow. (Rivera y Moncada 1962:331; Stanger and Brown 1969:133.) The original picture undoubtedly has been destroyed not only by human intervention but by the increased flooding and erosion associated with early stock grazing and later with agriculture. For example, the washouts that occurred in the nineteenth century along the bed of Coyote Creek above Santa Clara Street were extensive and must have destroyed most of the original cottonwood timber. Some of them are marked with reasonable accuracy on the Thompson & West map of 1876, and the Clyde Arbuckle History ([Arbuckle] 1985:179) reproduces, with commentary, a landscape oil painting dated 1877 that shows grape pickers at work alongside the creek, with the fifteen-foot-high streamside bluffs in the background looking raw and new.

The washouts must have been due to a lowering of the creek bed further downstream, where the transported soil, along with artificial measures to control the creek, effaced much of the original landscape. Some guesses as to its nature can still be made. A major sink of the stream, in the vicinity of the present US 101 (Bayshore Freeway) crossing, was marked by an extremely large although apparently not very dense sycamore grove, of which a random sample is provided by the Sherman Day public-land survey of 1854, in which one point was located with respect to two trees that stood 178 feet apart—both of them ten feet thick through the trunk.

Font identified this stream with one at which another exploring party had camped four years earlier, but it is clear from Crespi's journal of that expedition (see the Appendix, below) that the camp was closer to the mountains. The details of Anza's route are found only in the version of Font's journal recently printed by Soto Pérez; see the translation of the entry in the Appendix.

A personal family reminiscence.
Contours shown on a U. S. Geological Survey topographical map as late as 1953, taken together with the Thompson & West (1876) map, give a detailed indication of how the wide stream gully punched through and drained the basin, probably with the assistance of mid-nineteenth century human efforts. A small “dry bayou” leading off to the northeast (Day 1854), in the present-day industrial area between Mabury Road and Tanner Lane, probably represented the original main overflow into the willow swamp occupying the parallel Silver Creek–Penitencia drainage. No doubt also, during seasons when the creek was running, there were further natural sinks lower down toward the north, likewise located on low terraces such as existed at Brokaw (formerly Schallenberger) Road and just south of the Milpitas–Alviso Road, with water breaking out again just below them, at the foot of the shallow slopes. This situation, taken together with Father Font’s description in 1776, suggests that in the wettest seasons, when large amounts of water reached the bay, the stream may have discharged through the tidal channel that once was called Little Coyote Slough (Wallace 1859)—nameless on present-day maps, and a mile and a half west of the Coyote’s present course to the bay.

The discontinuous nature of other streams in their state of nature appears clearly in early surveys. The lowest course of Campbell or Saratoga Creek (the surveyors’ “Sanjon Creek,” originally just un zanjón, a freshwater slough) is a study in interruptedness. A surveyor running a boundary line up San Tomas de Aquino Creek had to note discontinuities—sinks, and that “the [dry] creek loses its banks” (Tracy 1859). The Guadalupe itself, issuing from the mountains and crossing the plain as seasonal Guadalupe Creek, the arroyo seco del rio Guadalupe, sank or disappeared into a very large grove of sycamores just below Willow Glen Way, depositing what shows on recent soil maps as a patch of rather barren ground. Six or seven hundred yards back to the southwestward, the perennial River of the same name arose from willow swamps, beginning its tree-lined and devious flow onward to the bay. A survey dated 1852 (Santa Clara County Surveyor’s Map Book A:66) shows the uppermost channel of the river, close to present-day Bird Avenue from near Byerley Street past Pine Avenue and Willow Glen Way to Carmel Drive, as being considerably narrower than the parallel lower bed of the arroyo seco de Guadalupe, and, in fact, being pretty much like what Captain Rivera described in 1776. About 1871, county authorities “rectified and improved” the Guadalupe channel (Hermann 1879) by digging a straight artificial canal to connect the intermittent creek to the river course lower down, bypassing the old river head, which for some time still received drainage from The Willows. Still further down, the original ancestor of the Willow Street crossing, the vado de González, was on a trail that found its way from the Santa Clara Mission pig ranch (later granted to the Indian Roberto) through an opening between the willow jungles and descended the steep northwestern bank of the river by a cutting that apparently also performed some primitive drainage of the swamp above the low bluff. The other side of the stream was a large low tract of “swampy ground covered with trees and undergrowth” (Santa Clara County Recorder’s Map Book A:85).

The early artificial “drainage” projects, which were vaguely remembered long afterward in the valley, sometimes had obviously unintended results, in addition to the usual less obvious

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34 Trees that evidently constituted the sycamore grove originally surrounding the lowest sink are shown still standing on the U. S. Coast Survey manuscript topographic sheet of 1897. The intermediate sink’s existence, and its sycamores, as shown on Figure 8, are merely deduced from topography and soils.
or more delayed ecological damage. Los Gatos Creek is the best remembered case of this sort; the attempt got away, as witnessed by the area of sterile riverwash (a white patch on Figure 6) caused by the stream’s outbreak. In 1851, a surveyor recorded that settlers in that area were talking of “turning a creek” in order to destroy the colonies of ground squirrels that were devouring their crops. This remark must have some connection with a story that was current at the end of the nineteenth century, concerning a resident who set out to drown the gophers on his property, left the hose running in a gopher hole all night, and woke up in the morning to find that he had changed the course of three miles of the creek—an anecdotal commentary on the fragility of the original California landscape. However, the history of the Los Gatos Creek diversion, no doubt, was somewhat more complicated than this suggests. Another cause is said to have been the Sainsevain family vineyard’s ditch, an irrigation channel that is shown on an 1858 survey as leading away from the well-marked outbreak and toward San Tomas de Aquino Creek (Wallace 1858); and there are also anecdotes about various disastrous effects in the 1860’s.

The stream draining the *tules de las Canoas*, the bulrush marsh that lay around the range of hills in the middle of the valley just to the south of town, was fed, in the 1850’s and later, by the big, deep artificial drain channel that led water out to the Monterey Road just north of Curtner Avenue. A ditch in this position, draining the small lake (“laguna”) at the northwest end of the marshes, is shown on a survey of 1853. Earlier than that, much of the flow out of the tule marshes seems to have come the far way around the southern end of the low hills: the name *arroyo de los Tules de las Canoas* was applied to the small stream that ran north along the *east* side of the hills. The marshes, which remained in small pockets at the base of the hills after the draining, were undoubtedly larger before the channel was cut—big enough, certainly, for the original natives’ use of tule floats (balsas) as the place name suggests. On a survey map of 1851 are sketched what seem to be clear traces of a recent outflow on the plain southwest of the small hill range; another survey made two years later shows, in that same spot, a smaller isolated piece of marsh and a residual pond. The distribution of level black-adobe soil between the hill ranges (Figure 8) suggests a very large potential size for the swamp in wet seasons and the area shown plotted on Figure 7 is a conservative estimate, since the tules may well have extended southwest beyond Blossom Hill (formerly Downer) Road.

**OAK LANDS AND EARLY SETTLEMENT**

To the exploring expeditions that first began to make it known to a wider world, the Santa Clara Valley was the *llano de los Robles*, the plain or level of deciduous oaks (Crespi 2001:604 and following.) The reason for this description is made plain by Figure 7, which may well be an understatement of the original extent of oak timber. The litany of later travelers who praised the scenery is well known, from Vancouver’s “imaginary park” of “true old English oak” in which...
“the underwood, that had probably attained its early growth, had the appearance of having been cleared away and had left the stately lords of the forest in complete possession of the soil” (Vancouver 1984:718; 720), to Auguste Du Haut-Cilly’s fantasizing of ancient Gaulish druidesses wielding their golden sickles to harvest the abundant mistletoe on the “immense grove of splendid oaks mixed with several other mature trees, disposed in thick and leafy clusters or scattered here and there but with no considerable clearings.” Another English party repeated the comparison to a British “nobleman’s park” with “clusters of fine oak free from underwood,” while, north of Santa Clara, “the noble clusters of oak were now varied with shrubberies, which afforded a retreat to numerous covesys of California partridges” (i.e., quail) (Beechey 1968:44-45). All across the valley, depending upon soil and drainage and perhaps other conditions, thick forests dominated by deciduous Quercus lobata (white oak) but including live oak, sycamores, and laurel varied with clearings and with what is now denominated as oak savanna (Allen-Diaz et al. 1999)—the “scattering timber” of the early surveyors.

And perhaps, along with the tidal marsh, it is this feature of the valley that has suffered the most conspicuously from slightly over two centuries of European-derived human occupation. Early county-history books, which usually preached the opposite of a conservationist ethic, actually regretted the loss: “south of San Francisquito Creek (that is, Palo Alto) “squatters got early possession, and stripped the count[ry] side of the magnificent timber that adorned it, to sell for cord wood and charcoal” (Alley & Bowen 1883:xii). Some thirty-five years ago it was still possible to sum up the story in the Mountain View–Sunnyvale area by writing that “the oaks... succumbed first to charcoal burners, then to the insatiable wood-burning locomotives and the needs of mechanized large-scale wheat farming, and finally to fruit orchards. The only trees left are the clumps surrounding the older farmhouses” (Hoover, Rensch, Rensch, and Abeloe 1966:432–433). This is no longer true, of course, since other causes, including oak-root disease but chiefly development, have nearly finished the story.

An early surveyor’s notes, chosen somewhat at random, give an intermediate snapshot or profile in that history.39 In the autumn of the year 1851, from the top of present-day Blossom Hill near Los Gatos, there is: “A splendid view of the valley from this point, and it has the appearance of a magnificent ornamental garden on a large scale.” Mount Diablo is so obscured by smoke from “the burning of the plains” that the surveyor cannot quite get an exact bearing on the flagpole at its summit! (An unintended comment on our last century and a half’s atmospheric deterioration.) Down in the valley a little closer to San José and Santa Clara, the line runs over “Smooth level land...timbered with oak—many of them wound by woodbine....” (poison oak, presumably). Closer still, “Enter woodland (scattering oaks) and the growth of wild oats, on the ground, and the scrubby spread of the trees, gives it the appearance of a stubble field in an old orchard (it appeared to be extensive)...timber low[,] scrubby, mossy, and crooked — [with] glades...” Finally, about three miles from the two settlements, there are “Some scattering oak trees, and those near this corner apparently cut down”:40 even at that early a date, this was what was left of the roblar del Torotal, “the buckeye-patch white-oak grove” mentioned in land-grant papers, that once centered around our I-280–I-880 interchange. Similarly, on the opposite side of

40 Altered to “...recently cut down,” in the typed Bureau of Land Management transcript.
the valley, even though there was still “a fine grove of oaks” in the vicinity of McKee Road (Day 1854), the southern part of a major oak forest occupying the alluvial fan that stretched out from the mouth of Alum Rock Canyon was apparently already thinned by 1850, blending with the miles of thin oak savanna down the east side of the valley, through the public lands open to all residents of the pueblo for timber-cutting, and the long stretch known as Pala, claimed by the Higuera brothers whose sister sued them in a San José court in the early 1840’s for having her do all the ranch work without reward. One of the worst surveys ever made, the infamous 1847 Hutton subdivision of pueblo lots (Hutton 1847; Figure 9), does indicate on its plat some of the oaks immediately south of the town, as well as the nearby sycamore groves on Coyote Creek and the Guadalupe. Despite the incredible inaccuracy of the drawing, it is interesting to notice that lower Penitencia Creek is not distinguished from Coyote Creek.

As to the original landscape at the pueblo San José and Santa Clara Mission, uncertainties remain. Much of the soil was favorable to the growth of trees, but human occupation has removed evidence of this fact and many other features. The immediate area was first surveyed for settlement late in the year 1776, when the military officer Captain Fernando de Rivera y Moncada, who two years earlier had pioneered the route up the Peninsula through this district, returned to scout out a site for the planned Mission of Santa Clara.

Nov. 25, 1776. …We spent this night at the foot of a hill and a small spring named Santa Teresa. I went separately with Father Peña and four soldiers in order to view the river of Nuestra Señora de Guadalupe…. I stood at the source of the aforesaid river. It begins in a little small gully of slight depth and almost at ground level. Within a short distance it has already become about two good regaderas 43 worth of running water. Lower down, it turns into a river contained within its banks, [with] plentiful timber, large-trunked cottonwoods, ash, laurel, and live oak. Between its beginning and the point where I found it already turned into a river, the south side is level, well moistened land; in spots there is a run-off of water. It continues level as far as the inlet [i.e., San Francisco Bay], where [the river] empties out, although [there the soil is] not very moist. The plain must be some four leagues wide between one mountain range and the other, from south to north, with the aforesaid river about in the middle. On its bank I came across a village of no small size; I handed out beads to men, women and children….There are a great many live oaks in this stretch and, at the edge of the woods [monte, probably meaning willows] next to the river here, being the end of a plain, I saw four large villages located within a distance of one league, not counting two small ones lying in the same plain. We spent the night near to another village where they have a small enclosure, very well constructed, of interwoven little laurel twigs, with a doorway and a small gate. I don’t know its purpose. 44 (Rivera y Moncada 1967 I:316–17.)

Rivera was under considerable pressure at this time to establish the site for the planned mission. Already the Anza Expedition families led by Lieutenant José Joaquín Moraga had passed through on their way to the founding of San Francisco, leaving place names as a

41 California State Archives, Sacramento, among miscellaneous land papers mostly relating to Sonoma County (received by J. N. Bowman).
42 By 1870, changes in the vicinity of the Guadalupe–Los Gatos Creek sink area, just west of downtown, had gone so far that a reconstructed map purporting to show earlier natural conditions was drawn up by one side in a legal dispute (U. S. National Archives Record Group 60, Office of the Surveyor General, California land-case docket 167; microfilm T–910).
43 An old hydraulic measure whose exact value seems not to be known.
44 This was perhaps the enclosure near present Los Altos that had been described in exactly the same terms by Font earlier in the same year. Font’s guess that it was for ceremonial purposes seems likely.
remembrance of their two-thousand-mile trek from Sinaloa and Sonora. The Lomita de la Linares was a little rise near Gilroy where, according to later tradition, Señora Linares with an entourage of women and children had been left to wait while the men went off on a hunt (independently mentioned in the military commander’s brief report of the march, Moraga 1776:430v–432r); their first sightings of grizzlies might have inspired the term La Oreja del Oso (Bear’s Ear) for present Murphy’s Peak at Morgan Hill; and in camp at the low hills at the south end of the modern city of San José, provisions were running low and “because the children cried”—from hunger—the place became the Lomas de las Lágrimas, Hills of Tears.45

In the following year, after the mission was begun at the site pointed out by Rivera, a few of the colonists returned from San Francisco to found the nearby new pueblo of San José de Guadalupe. Spanish usage frequently bestowed saints’ names in honor of important personages. In this case, it seems clear that the individual honored was José de Gálvez, who had been the originator of the expeditions that explored and occupied Upper California, and, in 1777, was newly arisen to the post of Minister of the Indies in the Spanish government.46 He seemed then to have a good chance of eventually becoming prime minister, and if he had actually done so, the course of European history might conceivably have been different. Galveston in Texas is named after another one of the family of which he was the principal member.

The incipient town had been founded uncomfortably—and in fact illegally—close to the already-established Santa Clara Mission, an infringement which, according to the missionaries, the local military authorities had carried out by giving false representations to the distant governor. Unfortunately, attempts to locate the exact first sites of either the mission or the town have had to proceed from two unknowns, since neither location is totally certain. (Skowronek 1999; Skowronek and Wizorek 1997.) In 1782, the Santa Clara Mission Fathers De la Peña and Murguía complained that livestock belonging to the pueblo was already destroying the seed-bearing grasses upon which the Indians still outside of the Mission depended. It was about this time that some of the unconverted natives east and north of the pueblo began experimenting with agriculture, and very probably the name Milpitas arose because of their effort (Brown 1994:29). The two fathers report that the native name of the pueblo site itself is Jonosum or Jonasum, implicitly asserting their converts’ claim to ownership. They also add, in their complaint, that the settlers are planning to draw water from the deep bed of the river from farther upstream, which will leave the mission and its inhabitants without what is needed for irrigating their own fields.

The original estimate by the pueblo’s founder Lieutenant Moraga was that the distance between the two settlements was three-quarters of a league, which equals 1.95 miles, or 10,296 feet. According to the missionaries’ letter, the officials who had begun the process of assigning individual house and farming lots to the San José settlers had remeasured the distance between their houses and the mission as being, more exactly, 66 chains (cordeles) of 50 varas each, plus a
few varas—that is, a little over 9,075 feet." If, as is believed, the first location for the mission was near the Old Spanish Bridge over the Guadalupe (the present 101 crossing), the distance hints at a possible site for the first houses of the pueblo in the vicinity of Market Street north of Santa Clara Street. In fact, it can be stated categorically that property records from about the year 1850 consistently refer to this area, and First Street perhaps almost as far north as Taylor Street, as the Pueblo Viejo, or Old Town. The surviving eighteenth-century sketch of the distribution of farming lots (suertes) which the fathers mentioned, signed by Moraga (Moraga 1781), cannot be assumed to be reliably to scale in terms of their exact location with respect to the depiction of the plaza or the river, still less to the "Arrollo del Collote" ([Arbuckle] 1985:502; Skowronek 1999:8), but it is not difficult to envisage the primitive plaza as being located hereabouts. Across the bottom of Moraga’s sketch, below the 200-vara-square suertes, runs an inscription that may have been meant to say "up to here is the measured distance halfway to the mission." Using the suertes’ dimensions as the implicit scale, and doubling the space between the plaza symbol and this lettering, produces a figure that is not far off of Moraga’s reported original estimate, adding some confidence to his sketch of the relationship between the town center and the suertes.

Only two family names on the Moraga plan—Archuleta and González—seem to stand in the same relationship as plots owned seventy years later, and the symmetry may well be an accident, but if a direct comparison of the two states of the suerte lands is made on this basis (Figure 10), the original acequia madre (main irrigation ditch) coincides with a narrow body of water that obviously represents an old breakout from the Guadalupe bank. The outbreak, located around present-day Taylor Street, might have been the source of the flooding that caused the original pueblo’s site’s removal, which, in that case, was indeed somewhere just to the south. The suertes in that area (toward the top of the diagram) would presumably have been created at a later date, when the pueblo houses were moved up to the slightly higher site it occupied later. In the other direction, northward and downward beyond the lower suertes, was a large patch of alkali, surrounded by "salt weed," into which both the old river breakout and the irrigation ditches apparently drained, and which marked the end of cultivable soil. If this suggested location for the original site is taken in conjunction with the friars’ report of a revised pueblo-to-mission measurement, the mission would have been located somewhere abreast of North First Street at a point around 1300 feet south of the Bayshore Freeway interchange, and therefore presumably in the vicinity of Technology Drive just southeast of Metro Drive, near or opposite the end of Century Center Court.

By the early nineteenth century, the pueblo center occupied a narrow, probably visibly elevated tongue of upland loam, an alluvial ridge formed along the original lower course of the

47 Typed transcript No. 922 in the Santa Barbara Mission Archive-Library, from the Biblioteca Nacional, Mexico City.
48 A survey map of 1852 depicts the bridge as a double, side-by-side roadway, perhaps indicating an older and a newer construction.
49 "Asta aqui es la medida de la linia parte de camino a la misión," which does not make sense. The writing looks as though someone had tried to freshen it up, and in the process of doing so had changed at least one word, probably originally mitad or media, to línea (i. e., linea).
50 Moraga’s original estimate would place it further to the northwest, of course, beyond Airport Parkway (formerly Brokaw Road).
arroyo de los Tulares de las Canoas. The dry stream bed, running down the center of the rise, is called, on an early sketch, la cañada del pueblo, the town hollow (Skowronek 1999:Fig. 3). It ended in a small sink in the present Santa Clara Street–First Street intersection. The stream up above had been diverted slightly leftward into lower ground so as to run into the pueblo’s reservoir—a relatively small-sized project, no doubt proportionate to the amount of labor that was available in, say, the 1790’s. Figure 7 includes the mid-nineteenth century vicinity of the mission and the pueblo, the latter being as much as mentioned by William Tecumseh Sherman in 1847, “a string of low adobe-houses festooned with red peppers and garlic” (Sherman 1990:50) with its ground-squirrel-infested plaza (Bryant 1848:316). The map’s diminutive representation of buildings is mostly copied from the J. N. Bowman reconstruction (Bowman and Hendry 1947). The irregularity of the property lines shown here and on Figure 10 is partly due to difficulties in interpreting the loose descriptions in the courthouse records of deeds and leases. Clearly, however, it was only in theory that the suerte lots were exactly two hundred varas square. They were marked out by narrow alleys or lanes, callejones, that were formed with planted willow trees and extended back to the river and the main acequia. The latter was a ditch that drew its water from a reservoir fed by both the Tulares de las Canoas drain and the Guadalupe and finally discharged into the before-mentioned narrow pond near the Guadalupe bank. But before that, just below the plaza, there was a fork that supplied the lower suertes along the beginning of the road to Mission San José and the Contra Costa (the lower end of what later became knon as the Old Oakland Road). A secondary ditch, apparently fed directly from the old bed of the Canoas drainage on top of the low rise, ran behind the houses on the east side and eventually into the already mentioned lower righthand branch. The closest-in suerte, stretching somewhat aslant back across the present county courthouse–main post office block and Saint James Square, is known to have belonged to Plácido Californio, so called because he was a Baja California Indian (the usual meaning of “Californio” in the eighteenth century) who had come north from the ex–Jesuit missions in 1773 with the missionary Francisco Palou, and retired and settled in the pueblo in 1796, after the change of site. The suerte was still known by his name as late as 1850.

Seemingly, there was a serious legal question as to whether, under the terms of the leyes vigentes, laws of the Spanish Empire which were still in force in Mexico and which were supposed to be observed by the United States according to the treaty of Guadalupe Hidalgo, these tracts could ever be alienated from the inheritance lines of the original settlers. Nothing could have been more incompatible with North American ideas of property. Whatever solutions to the problem were reached elsewhere—and it must have existed on both sides of the new international border—, in this case the entire suerte layout was overridden and replaced. My impression is that the basic decision was taken when Charles White was alcalde, a man who had a known dislike of native Californians and had many interests in land titles, and that it was carried out on the ground when he was a member of the first municipal council. The Mexican families were not in a position to do anything about the matter. They had lost a war, and most of

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51 Although the detailed conclusions in this monumental work are sometimes discutible, it is an indispensable resource, particularly for references to source materials.

52 Bowman and Hendry (1947) assumed that the traveler W. Redmond Ryan’s mention of a stream about ten feet wide to the lefthand side of the pueblo’s houses was a reference to the acequia, but it is not impossible that it meant the Guadalupe instead.

53 It is also the only suerte property of which a carefully made individual plat is preserved in county records.
them were already trying to sell what amounted to quit-claim deeds to their dubiously disposable land, for which a number of speculative buyers were found. In the city's new subdivision of this area, by which the suertes were abolished, a small park was set aside and named for Alcalde White, but some halfway decent second thoughts may have set in; the name and the park are not on later plats.\textsuperscript{54}

A photograph taken in 1867, included in the Arbuckle History of San José, is a view from the center of the city toward the west, showing the oaks that then survived in the old torotal, on and surrounding the low elevation at the present City College and County Hospital. Although it seems impossible to say exactly how much higher that area then stood, without knowing the focal length of the lens that took the picture or the heights of the building from which it was taken and of the intervening objects, clearly the amount was much greater than the present five feet or so of rise in the ground profile as seen from this direction (Figure 11). Santa Clara Mission also occupied a low height rising above the adobe lands, the \textit{alto de Santa Clara}, which is not discernible now. The mission fathers deliberately preserved some of the original live-oak forest here, as indicated by Otto von Kotzebue’s mention of thick oaks among the mission buildings in the 1820’s (Kotzebue 1827:52, translated in Appendix here and in Kotzebue 1830), and also by the survival of a very few trees, which still outline the area of alluvial loam soil that fostered them around old downtown Santa Clara. According to an early survey (in U. S. v. Roman Catholic Church 1852), the main ex-Mission Indian settlement, or rancheria, was located near the present-day intersection of Scott Avenue and Homestead Road (formerly Gould and Lexington Streets), just southeast of the “Indian sowing ground” that bounded the Bennett and Enright tracts. A couple of live oaks stood at the site until fairly recently.

Some of the Mission’s former neophytes were quite literate, including Gorgonio and perhaps Inigo; I have also seen a very competently composed and individually penned letter of application from an ex-neophyte asking for permission from the civil authorities to leave the mission rancheria and work as a carpenter in San José. However, it is significant of the post-secularization state of affairs that the alcalde of this rancheria in 1839, a Central Valley Indian christened José de Jesús, did not know enough Spanish to testify in a court case except through an interpreter. Although he later became an important figure in his native district and there dressed as a ranchero, it seems an overstatement for a modern author (Phillips 1993) to refer to José de Jesús as having been “educated at Santa Clara Mission.”

Among descriptions by early explorers, an important statement is Pedro Font’s remark\textsuperscript{55} that oaks on the valley floor grew thickly where the soil was “rough,” and less so where it was smooth and good. Later records do indicate dense forest exactly where recent soil survey maps place the Garretson gravelly loam, a soil type that exists in “fingers” reaching out from the edge of ancient alluvial fans, for example in Mountain View–Sunnyvale near Remington Drive and Mary Avenue, and in southwest San José near Hamilton and Campbell Avenues just southeast of the Saratoga Road. A somewhat similar but more stony soil type, forming a low ridge near the

\textsuperscript{54} I discussed other aspects of the \textit{suerte} land title disputes in Brown 1994. There seems to be some scope for genealogical research to clarify the history of the individual holdings.

\textsuperscript{55} Found only in the text of Font’s journal recently printed by Soto Pérez.
old channel of Los Gatos Creek, was described in 1851 as being “not so rich as [the loams] [in] back, [with] gravelly knolls, etc.,” and by the evidence of other sources it bore scattering trees and live, rather than white, oaks. There is no question but that all these areas were somewhat elevated above the surrounding valley floor, and that, in a kind of large-scale, natural hydroponic cultivation, the tree roots used to spread over a running-water aquifer. In other words, this soil, and the other loams perhaps to a lesser degree, must have been somewhat like a sponge, saturated with water, before they collapsed and compacted. It is not surprising that the enduring trees that have become part of modern residential areas do not survive surface watering well.

Conditions now are vastly different. There was incredibly wasteful use of near-surface water by early residents in the second half of the nineteenth century, when for a while, and until the supply began to fail, every house lot, garden and orchard in the northern Santa Clara Valley had a standpipe fountaining up the “artesian” water that was described as “the pride and beauty of the valley” ([Arbuckle] 486; 502–504). Heavy human use of this aquifer began with the North American settlement. As early as 1859, the well known writer Bayard Taylor, who had walked from San Francisco to San José at the time of the Gold Rush, revisited the northern Santa Clara Valley and found that: “All along this jornada of twenty miles without water—as it was ten years ago—farm now succeeds to farm, the whirling wind-mill beside every house, pumping up orchards, and gardens to beautify the waste” (Taylor 1862:55). Two years later, W. H. Whitney remarked at Mountain View: “The large streams that run into the valley either sink or dwindle away to mere pools. So hundreds of artesian wells have been bored. ... Many of these overflow, often with a large stream, but with the majority the water only rises to near the surface without overflowing. It is then pumped up by windmills, and hundreds of these may be seen in motion every afternoon when there is a strong breeze up the valley. Many of these are very ornamental, costing from three hundred to six hundred dollars, and impart a very peculiar feature to the landscape” (Brewer 1949:178-179). For many of us still, the windmill beside the ranch house is associated in memory with sights, smells, textures and tastes of the incredible richness of the land and its growth, traces of which survived into the twentieth century.

The lavish waste of groundwater must have led to immediate compaction of the soil, and the subsequent deeper and deeper pumping produced enormous subsidence and compaction down to increasingly great depth. Long after the excessive early pumping had greatly reduced the water table (cf. Clark 1924:24-25) and the most severe surface effects must have already taken place, there was a measured subsidence of ten to twelve feet during two thirds of a century here (Poland and Ireland 1988:F–33; Poland and Green 1962:C-7). The microtopography—not just the ponds, swamps, and swales, but the low ridges occupied by old stream beds—has been greatly affected, as has, evidently, the ability of exceptionally deep and well-drained loam soils such as the Yolo and Zamora series (e. g., Gardner et al. 1958:165–66; Welch, Lawrence 1977:54) to support the valley oaks for which they originally provided favorable conditions of growth. As a long-term result, downtown San José sits in a trough of its own making, below the level of the Coyote Creek bed, and as early as the 1860’s (cf. [Arbuckle] 1985:38), enormous culverts had to be installed at Santa Clara Street to ward off the flooding that has happened even

56 Howe 1851, described as “open plain,” with only “scattering” trees mentioned nearby. My speculation based on oak-root fungus traces (Brown 2002:656) that it was forested is not supported by these records.
in recent times. Ground subsidence amounting to twelve to twenty feet in places near the bay was measured during the twentieth century alone, and how much sinking of the soil took place earlier can only be guessed at: a genuine ecological collapse.

THE CHAMISAL

Along the valley’s west side, below the foothills clothed in grass (or rather wild oats, from the early nineteenth century onwards) and studded with oaks, the upper portions of the level lands from Atherton and Menlo Park down to Los Gatos and beyond were occupied by discontinuous, mile-wide patches of brush: “unbroken fields covered with live oaks, chaparral, manzanita, and Toyon berry bushes, alive with quail and other small game, and countless thousands of song birds” (Welch 1931:257, 262). In the words of another witness, G. F. Beardsley, “All the long stretches south from the county road to Saratoga were one unbroken stretch of chaparral with...small islands of live oak and occasional live oaks scattered through it.” (Cooper 1926:12). The local term used for the brushland, chamizales or “chamisal,” did not imply that it was composed entirely, or even mostly, of Adenostoma fasciculatum, the bush now called chamise. The word chamizo has a wide variety of references everywhere in the Spanish-speaking world (Real Academia Española 1956:408, s. v.), and the mixture of species included, conspicuously, the giant local variety of coyote brush (Baccharis pilularis sanguinea), which reaches a height of seven or eight feet, sometimes more. Volunteer survivors of it can occasionally be found, outlining the areas where it once grew thickly, as on the Stanford University campus.  

The usual speculations about the effects of burning by natives in pre-Spanish times may have some application here, if it was done to promote hunting grounds among the brush, at the expense of the live oaks. It seems plausible that the oaks would have been more continuous, and the greasewood much less so, without the long prehistory of American natives’ annual burnings, which might well have been directed partly to this purpose. It seems significant that at least in several places the chamisal was bordered by a strip of thick live-oak timber. Much better than any oak groves, the thickets could have provided cover for stalking game fowl, other small game, and deer. That these hidden grounds were frequented was discovered in 1776 when each of the two Spanish exploring expeditions happened across a round ceremonial enclosure made of laurel branches, deep in the brushland. Another Spanish expedition, likewise coming from the south, also was forced to pass through the bushes: “we came to a belt of woods so low and dense that I feared if night caught us there our animals [mules or horses] might be lost” (Rivera in Brown 1961:331–32; Stanger & Brown 1969:134). In 1816, a report by Fathers Catalá and Viader on

57 Atherton 1932:57: “[the Atherton estate] was at least two-thirds covered with magnificent woods, left in their natural state save for roads cut through the heavy underbrush.” It was G. F. Beardsley’s impression that the brush came as far east as the railroad line at this point.

58 Beardsley’s very tentative identification of his “greasewood” (a word that I use for Baccharis, and he may have done so too) as Adenostoma probably was due to a terminological confusion caused by reading botanical manuals (Jepson 1911:205, “[Adenostoma] known to mountaineers as ‘Chamise’ or ‘Greasewood’ “)—an error which he admitted was possible. He does, however, refer correctly to Adenostoma as being “wiry.” (Cooper 1926:12–13). One early Southern surveyor near present Cupertino spoke of the “vast cedar brake known as Chamisal,” which is a possible description of Adenostoma (Tracy 1859).
Santa Clara’s livestock operations mentioned the difficulty caused by the cattle escaping into the chamizales to the northwest, where, it was said, the Mission’s vaqueros were unable to recover them.59 A member of my family who recalled riding a horse through the last surviving patch of greasewood just north of Saratoga, in the second decade of the twentieth century, stated that it was a peculiar experience in that she could see where she was heading, but the horse couldn’t—and she herself certainly couldn’t have spotted a standing cow through the dense and thick bushes with their tiny oaklike leaves.

In an important early article in the journal Ecology (Cooper 1926), W. S. Cooper of Stanford University used his Carmel neighbor G. F. Beardsley’s intelligent and detailed recollections of the northern Santa Clara valley in order to develop a theory of “climax” vegetational development. Cooper’s conclusion, which was that the brushlands replaced oaks or grassland as the inevitable culmination of natural processes—the converse, as it happens, of Vancouver’s speculations in 1792—, was already doubted by Broek (1932:32), who suggested that “perhaps there is a relation between the bodies of gravelly loam and the former occurrence of chaparral.” In fact, when the historically attested vegetation types are matched with soils, there is an extremely close correlation between the chamisal–live oak association and the neutral-to-slightly acidic, porous Pleasanton soil series (“the red soil,” in Beardsley’s popular terminology) that is found in the relatively high and coarse-soiled parts of alluvial fans. An extensive stand of “black” (live) oaks did apparently exist near Los Gatos, as well as at Sunnyvale—occupying these same soils, in both cases. It would be desirable to know how densely these oaks grew there.

Beardsley raised the possibility that a meadow area that he remembered as lying between the chamisal and the inner Roblar northwestward of Santa Clara might not have been the natural clearing that it appeared to be (Cooper 1926:8, 12, 13): that is, that the brush and the white-oak forest originally ran right up against each other there.60 It is a fact that the early Spanish expeditions recorded no such natural corridor, and until 1850 the upper San Francisco road (now El Camino), along which this open land lay or developed, was regarded merely as a shortcut (desecha); the lower road would hardly have retained its priority for so long if the shorter, upper route had originally been an easily traveled one. An early thinning out of the main Roblar in the parts closest to Santa Clara Mission along the roads seems clear on Figure 7. The major cutting-back of the chamisal began near Los Gatos in the 1850’s and is described in general terms by Beardsley. It seems likely, once again, that the early valley landscape was a far more intricate and tangled affair than we might expect, looking back from later conditions.

RANGES

At the edges of the valley, the mountains stood, and stand. Covered with grass and wooded gulches, the eastern ranges remain perhaps pretty much as they were. Along the western horizon, among intricacies of Douglas fir, redwood and chaparral, roads were few, and far between.

59 University of Arizona microfilm 422, reel 26, no. 32.
60 I had come to the same suspicion, on the basis of map reconstructions, before reading the Cooper article.
It was at best merely a rocky trail winding along a shelf of the eastern slope of the Santa Cruz range, yet the only road between the sea and the inland valley. The hoof-prints of a whole century of zigzagging mules were imposed on the soil, regularly soaked by winter rains and dried by summer suns during that period; the occasional ruts of heavy, rude, wooden wheels—long obsolete—were still preserved and visible. Weather-worn boulders and ledges, lying in the unclouded glare of an August sky, radiated a quivering heat that was intolerable, even while above them the masts of gigantic pines (sic) rocked their tips in the cold southwestern trades from the unseen ocean beyond. A red, burning dust lay everywhere, as if the heat were slowly and visibly precipitating itself. (Harte 1914 12:255.)

Just where the track of the Los Gatos road streams on and upward like the sinuous trail of a fiery rocket until it is extinguished in the blue shadows of the Coast Range, there is an embayed terrace near the summit, hedged by dwarf firs. At every bend of the heat-laden road the eye rested wistfully; all along the flank of the mountain, which seemed to pant and quiver in the oven-like air, ... it held out a promise of sheltered coolness and green silences beyond. But ... when the terrace was reached it appeared not only to have caught and gathered all the heat of the valley below, but to have evolved a fire of its own. . . . The heated air was filled and stifling with resinous exhalations. The delirious spices of balm, bay, spruce, juniper, yerba buena, wild syringa, and strange aromatic herbs as yet unclassified, distilled and evaporated in that mighty heat, and seemed to fire with a midsummer madness all who breathed their fumes. They stung, smarted, stimulated, intoxicated. ... It is recorded that one bibulous stage-driver exhausted description and condensed its virtues in a single phrase: “Gin and ginger” [which] clung to it ever after. (Harte 1914 23:289–291.)

The massif stretching in back of Palo Alto, Los Altos Hills and Cupertino may be what has changed least, so that the apparent ease of getting up or down through its steep miles of thick chamise brush (Adenostoma), recorded on early surveys, is still as deceptive as it was for W. H. Brewer and other members of the state geological survey a hundred and forty years ago. They found the mountain unexpectedly “hard to get at,” along paths where fresh grizzly tracks completely covered the ground (Brewer in Farquhar 1949:178). The name Black Mountain, which they helped to fix upon what probably ought to be called the Monte Bello (so designated by the Italian market gardeners of a century and a third ago), was originally only the description for a survey station which records dating from the 1850’s state was named for the dark chaparral as seen from the north (U. S. Coast Survey 1851 et seq.). Brewer certainly understood the name in that way. However, George Davidson of the United States Coast Survey, who established the signal station, apparently thought of it as being a rough translation of sierra Morena, “Dusky Mountains,” the name that properly belonged to the shadowed redwood range just to the north.61 The older name sierra Gorda for “the Monte Bello Ridge” (the U. S. Geological Survey’s compromise term) holds no clue as to whether the bushes, back into the time of Indian burning, had been so dense as they later were. By comparison, the now bare San Bruno Mountain far to the north along the San Francisco peninsula was once covered with brush above its lowermost slopes, but this denudation was caused by very intensive grazing, associated with the slaughteryards at South San Francisco that supplied the metropolis.

61 In the 1869 edition of his coast pilot (Davidson [1869]:32), he gave a description, distance and bearing for “Black Mountain” that identify it with the Skyline ridge several miles to the north, the actual site of a survey station designated “Sierra Morena.” In the great edition of the coast pilot twenty years later (Davidson 1889:168) he confused the name with the somewhat similar term Loma Prieta, which has always belonged to what Davidson tried to rename Mount Bache (pronounced Baych) in honor of the founding superintendent of the Coast Survey. (Cf. Brown 1976 s. v. Black Mountain.)
Elsewhere along the west side of the valley, the view of the skyline has undoubtedly undergone changes. Early photographs make it plain that the Douglas firs increased and spread considerably before the middle of the twentieth century, presumably after wildfires and fires set by the natives became less frequent. Contrariwise, the redwoods which once formed a curtain wall of almost frightening height along the top of the ridge have been diminished by human exploitation: the second growth has been disappointing. The opening lines of a Harte novel lead toward the hills and the mountains.

Morning was breaking on the high road to San José. The long lines of dusty, level track were beginning to extend their vanishing point in the growing light; on either side the awakening fields of wheat and oats were stretching out and broadening to the sky. In the east and south the stars were receding before the coming day; in the west a few still glimmered, caught among the bosky hills of the cañada del Raimundo, where night seemed to linger. Thither some obscure, low-flying birds were slowly winging; thither a gray coyote, overtaken by the morning, was awkwardly limping. And thither a tramping wayfarer turned, plowing through the dust of the highway still unslaked by the dewless night, to climb the fence and likewise seek the distant cover.

For some moments man and beast kept an equal pace and gait with a strange similarity of appearance and expression; the coyote bearing that resemblance to his more civilized and harmless congener, the dog, which the tramp bore to the ordinary pedestrians....They continued thus half a mile apart unconscious of each other, until the superior faculties of the brute warned him of the contiguity of aggressive civilization, and he cantered off suddenly to the right, fully five minutes before the barking of dogs caused the man to make a detour to the left to avoid entrance upon a civilized domain that lay before him.

The trail he took led to one of the scant water-courses that issued, half spent, from the cañada, to fade out utterly on the hot June plain. It was thickly bordered with willows and alders, that made an arborized and feasible path through the dense woods and undergrowth....At last he reached a cup-like hollow in the hills lined with wild clover and thick with resinous odors. Here he crept under a manzanita-bush and disposed himself to sleep. The act showed he was already familiar with the local habits of his class, who used the unfailing dry starlit nights for their wanderings, and spent the hours of glaring sunshine asleep or resting in some wayside shadow. (Harte 1914 1:3–4.)

The basic plot situation in this novel, Maruja—the question whether the title character will deny her Mexican-Californian society by marrying one of the new “foreigners”—seems likely to have sprung out of a real-life condition involving the ownership of the Cañada de (not “del”) Raimundo land grant, which included thousands of acres of the most valuable redwood timber on the San Francisco peninsula, and whose putative heir, Manuela de Coppinger Greer, was reaching marriageable age in the 1850's. She eventually wed a native Californian from the local Miramontes family, but the speculation over the situation must have been intense. (The other main plot element is based upon a well known event concerning the early settler Dr. Marsh and his long lost son. Readers at the time Harte published the novel would also instantly have recognized “Aladdin’s Palace,” made “of thinnest white pine...that visibly warped and cracked in the fierce sunlight” as though “built by a conscientious genie with a view to the possibility of the lamp and the ring passing, with other effects, into the hands of the sheriff,” as being the white wedding-cake mansion erected by a San Francisco plutocrat, James Flood. The coyote, too, has a role in the tale.) Among papers of the Halleck, Peachy & Billings legal firm in the Huntington Library, I have seen a receipt for $10,000 in fees for defending the Cañada de Raimundo grant title during the year 1853 alone, when a dozen lumber mills were running on the property (Brown 1966a:15–16; Stanger 1967:7–51)—an enormous sum at the time.
Notes of the final boundary survey of this land grant in 1858 demonstrate that there was an intense lumbering activity—involving large numbers of shinglemakers as well as lumberjacks and teamsters—all along the top of the main Peninsula ridge, the former Sierra Morena, a fact which explains the remarkably ragged appearance of the skyline on an 1866 photograph taken from just west of Main Street north of Broadway in downtown Redwood City. There are two available existing prints of the photograph (Lawrence & Houseworth c1866; Palmquist 2002:plate 1). For a rough attempt at measuring the redwoods’ height, a graphic procedure used by surveyors to determine the intervisibility of positions (Kowalczyk 1968:377–80) can be applied to the picture. Judging by the state of the tidal creek and wharves in the foreground, the elevation from which the photo was taken (the height of the camera lens) was perhaps eleven or twelve feet above the level of mean tide, and an approximate horizon is given by hints of a view across the flat behind the A Street (now Broadway) bridge, to the right and to the left of the Congregational church (the building no longer exists), and reaching inland as far as about the ten and the fifteen-foot contours (the latter near the county road, now El Camino). The height of the hills in the middle ground is known, as is the ground height of the skyline ridge. Three identifiable points on the intermediate hill range can be chosen through which to run a profile, drawn using modern information (Figures 12–14). The projected profiles reach the top of the mountain ridge along present Skyline Boulevard: (A) at 100 meters south of and above where Bear Gulch Road comes from the east, (B) 1.3 kilometers to the north from the first point and about 200 meters west of the road, and (C) 3.8 kilometers farther north along the road, i. e., some four tenths of a mile north of the King’s Mountain Road intersection. The profile heights are corrected for the visual effect of the earth’s curvature and the atmospheric refraction, using the table provided by Kowalczyk (1968:379). A composite tracing made from the two available prints of the photo can be variously scaled to fit the horizontal intersections of the lines of sight derived from the profiles. Figure 15 gives a reduced picture of the results. Portions of some trees were clear-standing over the ridge and other vegetation to a height of perhaps 60 meters or 200 feet. An overall average clear-standing height for what shows on the photograph might be 39 meters, 128 feet, although the averages appear to be higher at the south end and lower going northward, if there is not some error in my method. A forestry expert might be able to deduce the range of total heights in the forest.

CONCLUSION

62 Another print, in local hands and evidently in rather poor condition, was reproduced in the Redwood City Tribune in 1950.
63 In the nearer distance, the photograph shows the gables of the Benjamin Lathrop residence which still stands nearby in downtown Redwood City, although in a different location. If the camera elevation could be guessed more securely, the building’s roofline height, which is reported as 36 feet (less finials), might be used to estimate the background. A second photograph in the Library of Congress collection, taken from on top of a building not far from the same location as the first photo but looking slightly further to the north (right), also shows trees on top of the mountain behind the county courthouse—a building which was replaced long ago and I do not know whether the specifications of its height are preserved anywhere.
64 On the figure, for pictorial reasons, the profile measurements are resized to fit the sketched tracing, rather than the other way around.
65 The northern end of the redwood forest on the ridge appears in the same location as at present on the Beechey chart of 1826 (Harlow 1950) and in the description of the “Pise [i. e., Pease] Hill” triangulation station (U. S. Coast Survey 1851 et seq.).
By definition and tradition, an essay is a tentative effort that excludes a precise conclusion. It is, however, worthwhile to acknowledge a truth that is almost too obvious to be stated: that is, that despite all our wishes for a scientific purity of approach, we only come to our knowledge of nature through an understanding of what is human. The importance of that fact is expressed in both the difficulty and the joy of discovering and interpreting historical records.

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APPENDIX

Selections from six early travel accounts.
[March 22nd, 1772] … On going about another league, we stopped to camp in this same hollow here, which runs still on northwestern, with the aforesaid width, and made camp at the edge of another very large running stream that comes down from the northwestern and seems rather a river than a stream, with very fine delicious water. This hollow, so far-stretching and broad that it may be called the mother of hollows, I named for St. Bernardine of Siena; one of the most excellent places for a mission. Trees are seen in the distance in several directions, and here at the stream where we stopped there are also a good many sycamores, and some quite large white oaks are also to be seen upon the plain. Throughout these swamps here, a great many cranes, ducks and a great many geese have been seen. It was a five and a half hours’ march, and from the small San Benito stream from which we set out, we must have gone eight leagues all the way over level land, four of them through this hollow.

March 23rd. At dawn it was very cold though there did not appear to have been a frost. At a quarter past six, we set out from here at the stream belonging to the San Bernardino hollow, following the same hollow’s course due northwestern, and with some white oaks and live oaks continuing on in spots. On going for close to two hours, we crossed a good-sized flowing stream which ran crossing the level from side to side. Upon going two hours, the hollow narrowed to about two leagues, and we went over a gap in some low hill ranges of sheer soil and grass and came down to another hollow. At the foot of the gap, having gotten down it, we crossed another large running stream and once again followed an entirely level hollow, much of it being well grown over with white oaks and live oaks, its width about a league, or two leagues in places, and most of it very grass-grown and with good soil; in it, an amount of lush chicory weed was gathered, and some bunches of mallows. Antelope were seen in three or four spots, of which we counted about fourteen seen nearby; we saw some deer, and one of them that got up out of some weeds scared my mule so that it was a wonder it did not throw me off. It got away from us, between our legs, as they say, without anyone being able to shoot at it, not being sighted till it was far away. No heathens have been seen, only a smoke away off from the route. On going six hours, all over level soil less the aforesaid little way over the gap, the hollow narrowed a great

67 Altered from “five.”
68 Altered from “three.”
69 In the margin, “The stream and hollow of San Bernardino” (“of Sienna” crossed out) “8 leagues” (corrected from “six leagues”).
70 The last six words are added in the margin.
71 Folio 130r.
72 Captain Fages’ s journal of this same exploration uses “mallows” (malvas) for what presumably were California poppies: “we have trodden leagues of mallows” (at present-day Berkeley and Richmond).
73 That is, the deer.
74 A proverbial idiom.
75 “Little” was added during the course of writing the phrase.
deal and in this narrows we came across a good-sized stream of running water and stopped there at the bank of the stream; and from this spot the hollow is seen to widen out once more to north-westward, [the course] which we have followed for the whole march. We must have gone six leagues: two of them before the gap and four from it to here. On [our] having reached here, two soldiers set out along the stream to hunt for ducks, and at the shots, six heathens showed themselves upon a hill who began to preach\(^{76}\) at them (and I heard their shouting), but none of them has shown himself nearby. They say this stream is not a permanent one year-round, but nearby in a corner of this hollow is a large lake of fresh water that they say is permanent, and I called it the lake of Saint Benvenuto, by whom I was praying.\(^{77}\)

March 24th. It was very overcast at dawn, and early in the morning—I supposed it must have been about a half past six—we set out from the San Benvenuto stream and lake here, following the course of the same hollow as yesterday, upon the same northwestward course. The hollow, which had narrowed where we had camped, at once widened out a good deal again, all of it very grass-grown, level soil and all well grown over with good-sized white oaks and live oaks;—following\(^{78}\) at times the course of the stream upon which we had camped, which carried a good amount of water. On our going about two leagues, the hollow had widened out to about two leagues and turned north-northwestward, and then continued widening to about some five or six leagues from one mountain range to the other, with very excellent dark\(^{79}\) friable very grass-grown soil with all sorts of different plants, the land all as level as the palm of your hand. Where we were traveling along, which was the area upon the south-southeast\(^{80}\) side, the hollow made about two leagues of the same plain that I have spoken of that were void of trees, but for the remaining leagues of its width everything is all very grown over with the aforesaid white oaks and live oaks. I wore out my eyes in gazing at such a beautiful big plain with such fine soil that many thousand fanegas\(^{81}\) of seed might be sown in it and, I shall not say\(^{82}\) towns, but cities founded upon this plain without one of them hindering another. What makes this plain the more excellent is that, from the various streams that come down from the mountains, a river is formed that goes through the midst of this plain and empties into the point or head of the harbor of San Francisco. This is the report that was given to me by our captain, and by the soldiers who scouted all of this, last year.\(^{83}\) From some distance off, I saw the trees which they said were the ones along the bed of this river; we had wished to go to camp near its mouth, but because of some swamps which we had a great deal of trouble in being able to get out of because of them being so miry, it was necessary to retreat back farther toward the mountains. At a quarter past twelve, we stopped upon this same plain, it continuing still onward north-northwestward, the journey having been five and three quarters hours, in which we must have made six\(^{84}\) leagues all over level soil,

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76 The explorers had adopted this term for the natives’ custom of making long (ununderstood) speeches.
77 In the margin: “The lake of San Benvenuto.”
78 That is, “we followed.”
79 Corrected, during the writing, from “good.”
80 Crespi does not reliably distinguish between the words “southeast” and “southwest.”
81 Folio 130v.
82 “I shall not say” added.
83 The reference is to Sergeant Ortega’s scouting party, who in November 1769 rounded the head of the bay after crossing a river that is obviously the Guadalupe. Captain Rivera did not accompany the scouts, but was their immediate commander.
84 Corrected from “five good.”
and we made camp according to our survey of the terrain, close to a small stream with a fine little flow of water about a league from the point of the inlet, about parallel with it but already upon the other side and about three leagues farther south from the spot where we were camped in the year '69 at the beginning of November, when we came by that direction on the other side of the inlet here about three leagues farther north from its point or head, as I tell at length in my journal on our reaching that place when we were searching for Monte Rey harbor. And so I figure that by this course that we have been taking, Monte Rey harbor lies distant exactly thirty leagues, the ones which we have traveled, and we are about parallel with its point and one league away from it. We saw not a single heathen upon the whole day's march. (Before reaching here we passed a large abandoned village that had nearby a well built square pen and seven or eight tall poles with hangings made of tule-rush upon them); it was only upon our arriving at where we made camp that about some fourteen heathens came to meet us, most of them well armed with good-sized quivers full of arrows and even better short bows, very well wrought, like those of the Santa Barbara Channel if indeed these are not better. Two of them came up with their whole bodies painted white and commenced shouting and preaching at us; our captain went forward with some soldiers and distributed beads to them, and so did I, and they were mollified and sat down with us for a while. On a knoll close to another small stream, a village having seven houses is visible at about half a quarter-league away from us here, with another village at about the same distance in a hollow along the course of the small stream where we are, and we viewed two large smokes upon two sides of this wide-stretching plain. I called this little stream La Encarnación. During this day's march a great many antelopes were seen in various places, and in one band that was seen closer by we counted about sixteen altogether.

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85 Corrected from "about a league before the point of the inlet."
86 The number is corrected at least twice, once having read "4."
87 The phrase was corrected two or three times, originally reading "away from," and then "farther north."
88 Altered from "exactly 27."
89 This is a final correction, added in the margin, replacing "twenty-six [leagues] traveled, and the one league we have left to travel upon this other side." Also in the margin: "Between Monte Rey and the parallel of the point of this inlet: 30 leagues" (corrected from "26").
90 The word "eight" is missing.
91 This is added in the margin.
92 The color of the ink changes here.
93 The word is missing. The description of the natives in this entry is also translated in Brown 1994:11–12.
(B) From the 1774 journal of Francisco Palóu, OFM

Francisco Palóu, journal of an exploration of San Francisco Bay, 1774. Two entirely independent translations of the entire journal, made from transcripts of the same manuscript, will be found in Bolton 1926 3: 249–307 and Bolton 1930 2:393–456. The following translation utilizes “the Noticias version,” probably derived from Palóu’s own retained copy, which is found in slightly varying form in Mexico City, Archivo General y Público de la Nación Mexicana, ramo Historia, tomo 23 (the source of the Bolton translations), and in Chicago, Newberry Library, Ayer MS 1193. “The official version,” sent to Palóu’s superiors and copied for the government, is known from Seville, Archivo General de Indias, audiencia de Guadalajara 514 (Bancroft Library film, reel M.611) and as a printing from a holograph manuscript, in Soto Pérez 1998 2: 825–829. Captain Fernando de Rivera’s journal of the same expedition is translated in Rivera 1962 and (for this portion) in Stanger and Brown 1969: 133–36, along with excerpts from the Palóu document.

25th [November 1774] … We crossed the aforesaid level and found that it ends with a middling-sized river running with a good-sized flow of water among a great deal of cottonwood, willow and sycamore trees, though because of the depth at which it flows I think using it to irrigate the plain would not be easy, unless it should allow of being drawn from farther up to the east. This river is said by the soldiers to be the one which the expedition of the year 1769 crossed at the shore, which was called the Santa Ana, alias El Pájaro. Beyond the river, we went up through some hills of soil very much clad in good grass though having no more trees than a live-oak here and there in some corners of the hills. We spent about half an hour in crossing the hill range, at which we saw a large lake, with a good deal of water, and two dry ones and a pool with a good deal of spring-fed water.94 After going up the hills we took a northwestward course on which we came down to a spacious valley, called, since the last expedition that passed through it,95 San Bernardino de Sena. This runs southeast-to-northwestward; to the southeastward its end is unknown; northwestward, the soldiers say it strikes upon the great San Francisco estuary; its width must be about four leagues at where we came down to it, all of it soil as level as the palm of your hand, and good, though in some spots are found patches of bad, nitrous ground without grass or trees. Upon going two hours more through the aforesaid valley, we came across a large patch of a great deal of cottonwood, sycamore and willow trees and brambles, and a large village within it, of more than thirty well shaped grass houses, and out of them came, as soon as they espied us, a great many Indians armed with bows and arrows. Since the path was leading us to the village, we stopped96 opposite it at about a musket-shot’s distance, and on [our] calling to the Indians they at once came over and many of them gave me arrows, which among them is the greatest token97 of peacefulness, and I responded with some strings of beads. They did the same with our commander98 and with some of the soldiers and all of them were rewarded with lengths of beads, which they value greatly. We stopped with them for a little while, [they] displaying a

94 In the Noticias text, “a great deal of water that we thought was spring-fed.”
95 Fages’s exploration of March 1772, recorded by Juan Crespi.
96 In the official version, “we passed”; in one manuscript of the official version, “passed” (pasamos) is altered from “stopped” (paramos), which is to be preferred as the lectio difficilior.
97 In the official version, feineza; in the Noticias text, demostración.
98 Captain Fernando de Rivera.
great deal of friendship to us; I made the cross over all the ones who approached me and none of them objected, staying instead very quiet and attentive to the rite being I was performing upon them, just as though they had been instructed in it. They gave us some baskets full of mush, gruel and seeds and a small bag made of a wildcat hide. Being more fearful, the women and children did not approach.

The men go entirely naked as do all the other heathens, and one or another of them wore his little cape made of animal skin or of grass protecting his back as far as the waist from the cold, leaving the rest of the body bare and the main part that they ought to keep covered. Some that I saw were very bearded and most of them were well featured and plump. The women go covered with animal skins and grasses in lieu of skirts, and with the usual little cape made of skins over their back. To judge by the people who showed themselves, they must amount to no less than three hundred souls of both sexes, young and old. We saw close to the village a large pool of water and to judge by the direction the trees run, it may belong to some running stream.

Taking our leave of this village, we continued on our way in the same direction and valley and at twelve o'clock we struck upon not very high hills where the valley seemed to be ending, though not so, for from their top we saw it continuing on northward in between the mountain range and the point of the hills, through which we saw a large amount of trees running along the valley. We came down from the hills and approached the trees, which we found were a river bed though we found no more water in it than some in pools; however, that it must carry a great amount in the rainy season is plain, as well as the fact that rain that falls in the valley must meet in this river. We stopped close to the water at a half past twelve o'clock, the day’s march, done at a good pace, having been five hours and a half, with the short delay at the village.

A spot that is called Las Llagas de Nuestro Padre San Francisco.

[November] 26th. At dawn there was a great deal of thick wet fog, seemingly a drizzle. Although lacking the sun we were unable to see at what o’clock we set out, it must have been the same as on the preceding days, at about seven o’clock. We followed the valley’s course and the same north-northwestward direction. The dense fog did not allow me to see how wide the valley was, since it was so thick that a few paces away we could not make out anything, and I was only able to tell that the hill range upon the south side was not very far away from the way we were taking, and the plain we were keeping on through was much grown over with white oaks and live oaks, and we came across some patches of thick woods of these same trees.

At eight o’clock, the day cleared a bit though the sun did not show; however, I was able to see that the valley was widening out and that it was very grown up with white oaks and live oaks. At ten o’clock we came upon a large river bed, very lined with cottonwoods, sycamores and willows, though without any water; we commenced following along its bank, which was

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99 In the official version: “…approached the trees, which were a river bed having water in pools.”
100 The sentence is not in the official version.
101 Not in the official version.
quite high and steep, and at once espied a heathen village on the other side upon a high knoll on the northern side. We kept along the river bed and struck upon a thick wood of different sorts of trees, and brambles; this we had to cross through, and inside it we came upon some little houses of heathens, who on hearing our noise left their things and hid. We crossed in through the wood, and close to the village there is a good-sized slough of running water, which we shortly lost sight of and judged it must sink among the sands. On leaving the wood we found ourselves in the presence of some heathens armed with their bows and arrows, very close to the path that we were taking; I called to one of them and he at once approached and I gave him some beads; on seeing this, the others at once approached me and I gave them presents too but did not stay there, the spot being a very uncomfortable one for me what with its woods and dense growth and the fact that the pack train and horses were still coming on through it.

Past the thicket, the valley again widens, with good soil also grown over with white oaks, and at twelve o’clock we came to a middling high hill range of sheer soil and grass, over which we went, and from the top espied a large plain, upon which at the end of the hills to the north a great deal of trees ran along that we thought belonged to some river, and the level of the valley continues along its banks, connecting with the plain we saw from the high hill; from which we could see very far in the distance a high mountain range bearing to the north-northwest and at its foot I saw a little round blue hill which the soldiers told me was an island in the inlet. We came down from the hill and approached the trees and found it was a river that held water only in pools; we stopped close to them (beneath some live oaks, with which the river flat is much overgrown), about a half past twelve. We found near the spot the traces of a village which they plainly had moved away from not long before.

[November] 27th. I said mass early in the morning, it being the first Sunday in Advent, and everyone heard it; and, the people having gotten wet from yesterday’s rain, our commander decided not to set out till after dinner in order for the clothing to dry out what with the good sunlight that came out. And so we did not set out until twelve o’clock, and followed the spacious plain on a west-by-northward course and found that the valley goes onward with good soil with a great deal of grass, and very grown over with white oaks. At about one o’clock in the afternoon, in a little grove of the aforesaid trees, we came upon three heathens with their bows and arrows, seemingly out hunting, since we saw no villages nor smokes in the whole surroundings though on the plain we did come across many well beaten paths; and on seeing us they gave not the slightest sign of fleeing or hiding. We passed not very far away from them; I called to them but they would not approach even though I showed them beads; they gave me to understand I should throw them to them, which I did, but not even then would they approach, and our captain,

102 In the official version, just “…a large river bed…along which we went.”
103 This phrase is not in the official version.
104 “Good-sized” not in the official version.
105 Slightly different wording in the Noticias text: “In the distance we could see high mountains that seemed to be a very long way off bearing to the northward,” etc. “I saw” is not in the text as printed by Soto Pérez.
106 Not an island, but the San Bruno Mountain.
107 “About” is not in the printed text.
108 “The aforesaid” is not in the Noticias version.
seeing this, got down and gathering up the beads gave them to them, and we continued on our way, leaving them to their activity.

At about a half past one, we found a large swamp in the same plain with a great deal of tule-rush marsh, which we were unable to cross because of its miriness, and it was necessary to circle it by taking a southward course for about half an hour until we struck upon a stream with a good deal of water and brambles, in order to cross which it was necessary to clear and prepare the ford; with some trouble we got across, and some of the soldiers got quite wet. We took up again the west-by-north course, the plain still having good soil and, in places, thick woods of some bushes that appear like junipers, with among them some bigger madroños with their fruit like a large chick-pea although not yet ripe. On the way, we came upon two streams with a good deal of trees but no water, and at a half past five we stopped at a patch of white oaks where we found good grass for the animals but no water; we ourselves made do with a little that we were carrying in a calfskin waterbag.

28th. At dawn it was quite clear, and before having sight of the sun we saw a rainbow in the west. We set out from the spot about seven o’clock, taking a northwestward course continuing on through the same plain. The march, although lasting no longer than four hours and a quarter, has been quite difficult because, even though entirely over a level way, it has nevertheless been hard because of the thick patches of woods of the variety of junipers and madroños that I spoke of yesterday, though the woods were interspersed with good-sized patches of good soil overgrown with grass and good-sized white oaks and live oaks. We came across three streams during the march, two of them waterless and the other had some only in pools; all three, however, have a good deal of trees on their beds. At a half past eleven we came to another, deep stream with a good flow of water, about two bueyes worth, running through it, its bed very lined with cottonwoods, willows, sycamores, laurels, brambles, and other, unknown trees, and close to the ford is a patch of very tall trees of the redwood sort; and some hundred paces further down, another very tall one of the same redwood sort which is espied from over a league before reaching the stream and from the distance looks to be a tower. We crossed the stream, down into and up out of which the way is quite steep, and camped at a half past eleven in the morning close to the edge of this stream on a very wide-stretching plain, where there is good grass for the animals and a great many white oaks and live oaks.

We have not seen a single heathen in the entire march, though have seen a great many paths which cross the plain and come down from the high mountain range on the north to the big inlet which we have in view only a league away from the spot; and its point or end, they say,
reaches to about two or three leagues above this spot. On coming to this stream, while looking along its bank for a way down it, our captain saw two Indians in the distance who at once hid themselves and have not shown themselves since.

This is the same spot that the first expedition was at, it being the farthest point that it reached, and they camped at it while the scouts were searching for the harbor of Monterrey, on the 7th, 8th, 9th and 10th of November of 1769, and they turned back on the 11th in the afternoon along the same shore route that they had taken.

To both our commander and myself the spot seemed well suited for a mission, and the site nearest to the inlet or arm of San Francisco harbor, enjoying a great deal of good crop-growing soil, grass, wood, timber, and water; since the water of this stream, although flowing very deep down, nonetheless coming down, as it does, from the hollows of the high hill range, can be led to irrigate this plain. And in addition to this water, there are other small\textsuperscript{118} streams that come down from the hills and run at ground level over the plain and empty into the inlet. From the mouth through which the inlet connects with the sea upon the bight, the spot lies distant about a day’s march,\textsuperscript{119} traveling fast, the whole way grown over with grass and white oaks. Ships coming into the inlet and anchoring in it would have this mission right at hand, and it would easily receive aid from them. The spot lies in north latitude 37 degrees 46 minutes, with its surroundings very much peopled by large villages\textsuperscript{120} that frequent the inlet a great deal while searching for mussels and fish.

At two o’clock in the afternoon, six heathens from the nearest village came to visit us, all of them totally unarmed. They have spent the whole afternoon with us with as much trust as though they had been among their own people. They are very well-behaved and friendly, with good faces, and most of them are bearded. I signed the cross over them all, they being very attentive to the rite, which they had no understanding of nor of the purpose to which it was directed. Using the Monterrey language I spoke some matters to them concerning God and heaven, but though they were very attentive I was not satisfied they understood me even though it seems they did understand when I spoke to them of other things; and when they spoke, I understood many of their terms though I could already tell there was a good deal of difference in them. I gave them all the usual strings of beads, and on seeing the arrows that had been given us by the villages in the valley they asked where I got them from, and, telling them it was from the village that we had passed through,\textsuperscript{121} I presented them to them, with which they were well pleased. They took their leave, telling me they were going to inform the people of the neighboring villages, and would return the next day and bring us mussels, gruel and mush. I thanked them for it, telling them we would be going on early in the morning and later I would come back to live with them to teach them what is necessary in order to be saved, and they gave it to be understood that they were happy, saying that everyone would gather together and build their houses; with this they took their leave.

\textsuperscript{118} “Small” is not in the official version.
\textsuperscript{119} In the official version, “about a half day’s march” (sic).
\textsuperscript{120} “Very much” and “large” are not in the Noticias version.
\textsuperscript{121} In the official version, “from the next village.”
In view of the fact that this spot is the closest one to the inlet and that it holds everything that is needed for a mission, our commander and I thought it good to set up here the standard of the Holy Cross, which we did, making it up with two good-sized irons, and planted it upon the bank of the aforesaid stream close to the ford where we had set up camp, and setting upon it\textsuperscript{122} our good desires of founding, at the same site, a church dedicated to my seraphic father Saint Francis, whom I take as intercessor in order so that Divine Majesty\textsuperscript{123} may grant me to see it during my own days and that I may see the great amount of heathens who people this vicinity won over to our holy faith.

\textsuperscript{122} In the Noticias version, "setting it up, and upon it" etc.
\textsuperscript{123} I. e., Providence, God.
Pedro Font’s journal of the second Juan Bautista de Anza expedition from Sonora to California is a well known document, of which the author prepared three versions: the one kept during the journey (it is now in the Franciscan archive in Rome); an abbreviated version, sent to his ecclesiastical superiors (preserved in draft and in copied forms); and a third, later-dated text in which some details of the first long version were suppressed in favor of added personal reflections. The third version is the one that has been printed by Montané Martí (Font 2000) and translated by Bolton (1930; 1931) under such descriptions as Font’s “complete,” “augmented,” or “private” journal. The first version has recently been printed for the first time by Father José Luis Soto Pérez (Soto Pérez 1998). Translated details from that printed text (referred to in the following footnotes as “the earlier version”) are inserted here and are marked by being placed between close-spaced pairs of “+” signs. The main text (called “the later version” in these footnotes) is translated from a photographic copy of the author’s autograph manuscript of the third version (Font 1777). Font’s sketch of the profile of the Coyote Hills is not reproduced here; it can be found in Soto Pérez’s printed text.

[March] 25th, [1776,] Monday. I said mass. "A fair day at dawn although with a northwesterly wind blowing a bit cold and some scattered clouds, which about midday because of the wind’s having stopped turned into rather thick clouds. Don Juan [Anza] continued improved [in health]." We set out from the Las Llagas stream at a quarter before eight\footnote{In the earlier text: “a little before eight o’clock.”} and stopped at four o’clock in the afternoon at the San José Cupertino stream, having traveled some twelve leagues, on course: three [leagues] northwestward, two northwest by north [sic],\footnote{For “by east”?} five west-northwestward, and two west by north.

Here is the White-oak plain, beginning a little beyond where we set out from the stopping-place, and we continued through it during the whole way. There is a great plenty of white-oaks in this valley or plain, more in some places and less in others, some of them very large and others not so much, and along the way we also found some lakes made from the water that becomes emponded during the rains and from the streams issuing out of the mountains on both sides, which flow toward the inlet of the harbor and lose themselves upon those flats and low spots. The whole of the way is pretty level and good going, excepting some mires one comes upon and has to circle about a bit in order to get around them.

We traveled a northwestward course about two leagues through the valley in which we had spent the night, which holds a great many white-oaks of all sizes and a few live-oaks and other trees; we then went up over some small-sized hills and down to another plain most of which is a lake when rain is plentiful and now was dry except for one piece, and the white-oaks and trees continue along the foot of the bare northern range, which runs onward, and we traveled about one league upon the same course with some westward declension; we went up over other small-sized hills and down to a good-sized plain that at first was very much grown over with white-oaks and then having the trees run onward close up against the northern mountains; everything else, as far up as the foot of the southern hills that shape the valley here, is very level.
soil with lakes which though they were dry we circled a bit in order to get around them because of their miriness.

+Here about ten Indians came out to meet us along the way+126 who upon seeing us shouted out from among the white-oaks there, and out they came, in the buff, like fauns, running and shouting and making a great many gestures as though wanting to stop us there, and indicating we should not go onward; and though they came out carrying bows and arrows they committed no hostility toward us. +They seem very impoverished Indians though+ they did not appear to me to be so thin and starved as the ones yesterday did, and I saw some of them bearded and one or two with long moustaches and several of them half-moustached and long-bearded: many of them wore their hair tied up, with a branch surrounding their heads, perhaps for a fillet, while others wore their hair short; they had their ears pierced like those +behind us and+ on the Channel, with little canes in them; +and though they were unwilling to approach us, finally they did approach and our Captain gave them some beads; and immediately some twenty of them or more came out from the hills on the south, armed with bows and arrows and some of them with long poles, and we saw more people in the distance who we thought must have been women, there appearing to be a village there to judge from the paths and number of people, though we did not see it; and according to their shouting, motions and gestures we were being told to turn back and go no further onward.+ I think that today I must have seen over a hundred Indians. Some thirty of those who came out to us, seeing that we paid them no attention +by turning back+ but were pursuing our way onward, or perhaps just because of the novelty, decided to follow us for a good way, and their fashion of doing so was for one of them to run behind another in a file until they got ahead of us, and then they would stop and begin shouting at the top of their voices, while making a great many motions and gestures as though being annoyed and not wanting us to pass onward; and on seeing that we continued on our way without paying them any attention, they went back to running and getting ahead of us and then performed the same action of shouting and speaking very loudly and fast, although we did not understand them at all; and so they kept on for about a league, until finally they went off, a few of them lingering and bit by bit leaving us; and we saw no more of them.

+We must have traveled a bit over two leagues on a west-northwestward course, when we went over a hill or pass, and then came into a large plain or valley some four or five leagues wide and seeming to end upon the sea or inlet since we could not see its end nor any hills in front of us. From one side and the other a number of Indians came out to meet us in this valley, clothed in the buff like all of them and with their motions and gestures being like the ones behind us.+

+This valley, that I call the White-oak valley because it has so very many of them and quite large ones too, is shaped on the south by very grassy hills and mountains full of woods and red-pine which run about westward and west-northwestward, and on the north side by the same chain of mountains that shape the San Bernardino valley and the rest and that follow the same northwestward direction on the other side of the inlet of the harbor, going, by what I could see today, very far up. We traveled about six leagues through this valley, which in places has only a few white-oaks and in some spots is without any, but trees are always in view in it and no small

126 The later text: "And in it [the valley] there came out to meet us a great many Indians"
amount of them. We crossed two rivers of some little width, two narrower ones, and two streams with deep beds but all of them dry, and apparently they come out of the mountains upon the south and run towards the inlet. All these plains are very green, the more so wherever there are no white-oaks because of it being better soil there; while where there are any, the ground is rough. We traveled a bit over four leagues through this valley, course west-northwestward, and then traveled west about two leagues till coming to the foot of the southern mountains, near which we came upon the route that they had taken in the previous journeys; and a bit before four o’clock in the afternoon we stopped at the edge of a stream of good water called San José Cupertino, at which there are a great many sycamores, and which comes out of the mountains on the south through some very small-sized hills and runs in the direction of the inlet, and in the dry season has running water only as far as this spot.

This place called San José Cupertino is one having good water and a great deal of fire-wood, but not in any wise suited for a settlement, lying as it does among hills very close to the spruce mountains I spoke of yesterday and having no level ground. Near it there begins a very dense pricklewood that they call the thornwood although it has no thorns, and from here or a bit before here, we could see in the distance the inlet of San Francisco harbor and a great deal of trees in that vicinity. Today we went some dozen leagues. This spot is very handsome, lush and plentiful in firewood and timber, but little suited for a settlement because of a lack of water, unless more of it could be found than that of the aforesaid stream; perhaps some may be found among the hills on the south, which we did not go into, or planting ground as well, there being none at this spot because it is all little hills.

26th, Tuesday. +12 leagues. I said mass. At dawn the day was fair and a bit fresh, although with some clouds. We set out from the San José Cupertino stream at a little after a half past seven in the morning and at a quarter to four in the afternoon we stopped at a little stream that was nearly dry, about a short league after passing the San Mateo stream, having traveled some twelve leagues on a course: one league northwestward, another north-northwestward, and then some four leagues west-northwestward until crossing the San Francisco stream; then three northwest by west, and three west-northwestward. On setting out from the spot we saw from a hilltop a great part of the southeastern inlet of the harbor, on the shores of which are visible a number of little inlets and a great piece of bad, muddy, nitrous ground before coming to the water, and it appears that the inlet reaches out all across this margin and flat when it rises during some seasons. We traveled a bit over one league course northward with some veering toward north-northwestward, and then crossed a stream called Los Laureles because it has a good many of them, and with water in it; we then kept on northwestward over some small hills and levels and came to the edge of a very dense wood of what they call bruc in Catalonia and that I believe is called prickle in Castile, and which over a good distance stretches to the inlet; and a little later, on going into the thornwood, we struck upon a stream or slough with a great deal of ponded-up water barely running, where we were delayed for

127 In the earlier text: “we saw from the hilltop most of the southeastern inlet.”
128 The earlier version: “some.”
129 In the earlier version, “a good deal.”
+over a quarter of an hour+ looking for a ford across it +and clearing the way leading up out.+
And I shall note that +this and+ all of the streams one comes across between the San Bernardino
+hollow or+ valley and the harbor come from the mountains full of spruces to the south, which
I spoke of day before yesterday, and they flow toward the lowland and the inlet. Close to here,
+before crossing this stream,+ we saw +in the distance+ a construction and went to inspect what
it was, and we found a very round enclosure shaped out of laurel branches that was well plaited
together and about six quarter-varas tall, with a somewhat higher door +upon one side+ to enter
inside by and, correspondingly, opposite to it close to the ground, another smaller one like a little
window +a third-vara wide;+ and atop the fence were four tufts of dry grass, beaten like hemp,
and inside it to one side there was a bundle of poles about two varas long, with no points, driven
into the ground and with feathers at the end like arrows, and other shorter poles, all of them tied
together; but there was not a single Indian about, and we supposed that this enclosure was a
dancing place, having as it did the trace of the fire in the middle.

+We then traveled about three leagues west-northwestward and+ then came to the San
Francisco stream, at the bank of which we saw a village whose Indians came out to meet us on
our way, and our Captain went with me to the village and gave the women beads, and I counted
about twenty huts.132 We crossed the stream and came upon the cross planted by Father Palou at
its edge, last year, where there are a number of laurels, ashes and other trees, and some few
spruces of the sort they call redwood [palo colorado], certainly a handsome sort of tree and, I
believe, very useful for its wood, since it is very straight and tall, as I shall tell later on. +At the
edge of the stream there are laurels, ash and other trees, and eight redwoods, certainly a most
useful tree since they are very straight, long and thick, one of which I estimate must have had a
trunk four to five varas wide, and below the crossing there is another larger one. This spot is an
excellent one for a mission—if the stream did not dry up, and it may be that by going a little
closer to the mountains on the south from which it rises, which are the ones very plentiful in
redwoods, perhaps year-round water might be gotten there.+ We went on over a very beautiful133
plain full of white-oaks, which we saw along the whole way during yesterday and today and
which also are visible in the distance, so that it seems that they are found all around the inlet on
the whole plain, +which is a level+ continuous with yesterday’s plain; wherefore it appeared to
me that the San Francisco stream is a fine spot for a mission if the stream is a year-round one.
+We traveled northwestward about three leagues, level ground with a good many white-oaks.+ On
going one league over the plain twenty-three Indians came out to meet us, and immediately
as many more came out, most of them bearded, and shouting, and close to the village some
women came out, to whom our Commander gave beads. During the other visit, they had called
these Indians—whose long-bearded chief was recognized by Corporal Robles134—The Shouters.
At about another league we came to another village where there was a large garbage-dump of
mussels135 which they take out of the inlet and which the villages usually fight with each other
over; we stayed there while our Captain gave the women beads. We traveled a little bit further,

130 In the later text, “a good while.”
131 “redwoods [palo colorado]” in the earlier version.
132 The old translation (Bolton 1930, 1931: 326) reads, mistakenly, “about twenty-five huts.”
133 In the earlier text, “handsome.”
134 In the earlier text: “whose long-bearded chief recognized Corporal Robles.”
135 The earlier text: “we saw much trace of mussels.”
and here the white-oaks stopped, which had been found along all the way between here and before reaching the Las Llagas stream. We traveled a bit further and arrived near a village where a number of Indian men and women came out, whom our Commander presented beads to, and we stopped for a little with them. There was a man who had been wounded in the leg by an arrow, and another stood with his bow and arrows making a great many motions and gestures as though he were fighting, while pointing to the wounded man, from which we supposed he was telling us how they were at war with other villages up ahead and that he was encouraging us not to go there, because they were very fierce.

We kept onward, course west-northwestward for some five leagues, and at about a league before halting came to a village of no small size located upon the bank of the San Mateo stream, which has a great many laurels on its banks, and ashes, and during this whole stretch, which also is level land, there are a good many laurels and some live-oaks and an occasional white-oak. This is not a bad spot for a settlement if the stream is a year-round one, for besides enjoying a very lovely view, it is level ground and has sufficient trees and timber, and more of it in the spruce mountains which are nearby here. We finally stopped at a quarter to four in the afternoon on the bank of a gully or little stream with very little water, not running, which is a bit close to the hills on the south, having traveled about twelve leagues. We have been following the Pine mountains upon our left, with some hills lying along in front of it which together with the aforesaid mountains (which have no pines visible on them directly opposite where we stopped, and continue as only high green hills) form the valley or hollow of San Andrés, and not far, apparently, from where we stopped lies the place between the hills where Father Palou along with Captain Rivera was held up by rain.

At sunset some Indians showed themselves upon a hill, and immediately others came out and drove the first ones away and then came to the camp, and to judge by the signs that they were making with their bows and arrows it seems they wished to tell us that those former ones were enemies and that we should not be afraid, because they had put them to flight. These Indians stayed with us, very cheerful, and seemed to be asking me whether we were staying, but I could not understand them and, using signs, tried to tell them we would be going on; and at nightfall we sent them all away. All of the Indians we saw today are quite ugly ones, with their ears and nostrils pierced and a little stick thrust through them, all of them in the buff, and the Indian women wearing little grass skirts; but not a very thin folk, and most of them bearded and their hair cut short, although some of them wear it long and tied on top of their head, like the Yaquis. They appear to be well-behaved Indians and that a good large-sized mission could be made from them. The inlet can be viewed from this place pretty clearly, and also the mountains that form the harbor’s mouth; the inlet is very large but has very bad shores, since over a good-sized stretch it is all surrounded with marshy ground and little inlets going out from it and entering more or less of a way into these margins and flats; but outside of them the land is level and fairly green.

...
30th, Saturday. [12 leagues.] I said mass. We had a bit of rain last night and at dawn the
day was very overcast and drizzling at times, and at midday it grew a little stronger and a thin
rain kept up until a little before we came to camp.

The Indians of the village on this stream came very early in the morning to our camp and
were very courteous and kind. We set out from the San Mateo stream at a quarter past seven in
the morning, and halted at four in the afternoon upon the other side of a river that we called the
Guadalupe river (which empties into the end of the harbor, and is very deep at about a league
before it empties out, because of having its water backed up with no current in it), having
traveled some twelve leagues on a varying course.

Upon setting out we followed the same route as on our coming for some six leagues, in
the corresponding direction, and traveled about three leagues to east-southeastward and passed
by the three villages that exist in this stretch, the Indians of which showed themselves very
well behaved and friendly; and those belonging to the third village came out to greet us,
shouting, and were saddened, as it were, because we did not visit their huts, which they wanted
us to go to. We traveled about two leagues further veering a bit to southeastward and came to the
San Francisco stream where the cross is, and turned northward downstream for about a
quarter-league in order to measure the height and width of a redwood tree that stands at the bank
of the stream (which is dry here) and can be seen from very far off on all quarters. We came up to
its trunk and saw that it was not a single tree but two, very close together so that from a distance
they appear as being one, and the thicker one has two small ones close up against it. I took this
thicker one’s measure, and using the graphometer they loaned me at San Carlos del Carmelo
Mission, I found it to be fifty-five and a half varas high, that is, fifty-six, if I succeeded in the
procedure, which was done by planting the graphometer thirty-six varas away from the foot
and a vara and a half from the ground, and then by sighting its top through the vanes of the
alidade the latter read fifty-two and a half degrees, which, triangulating those degrees by using
the graduated semicircle, and adding to it the height of the graphometer’s stand, one and a half
vara, yielded, using the dividers, the aforesaid fifty-six. The trunk was five and a half varas in
circumference at its foot, and the soldiers said that there were even larger ones in the mountains.
The Indians of the village, who came to visit us and who dwell here, were present at all of this,
very quiet and attentive, and, as it were, struck with wonder at seeing what I was doing.

Deciding to go on to inspect the great river they had been calling the San Francisco and
that was said to empty into the harbor upon its north side, here we left the route we have taken on
coming up, in order to head around the inlet and reach the other side; and, changing our course,
we traveled toward the water; but keeping about a league away from it, or more in places because

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137 After exploring the San Francisco peninsula, and describing the harbor, the party returned southward.
138 The later version: “The same villages”; in the earlier version, “all of them kind, well behaved Indians.”
139 The later text has: “…the San Francisco stream on whose bank stands the spruce of such height which I
spoke of yesterday, whose tallness I measured…and found to be more or less, according to my calculation,
some fifty varas…. The procedure by which I measured this tree was in this fashion:…”
140 The later version briefly reports the result of the calculation as being “a bit more or less…than some fifty
varas in height.”
141 “Who followed us,” in the later text.
of the mires, and we kept on for some three leagues on an eastward course; commencing to go
around this end of the harbor, we then went about three leagues northeastward, finally winding
about from the west to the eastward in order to ford the river and as far as the camp.

We took up an eastward course and traveled thus for a bit over two leagues, and came to
a village the Indians of which had a great deal of fear of us, and the Indian women hid inside
their huts even though our Captain gave the men beads. This village is on a large plain at the end
of the inlet. From here I viewed the island that lies about halfway along the arm of the inlet that
runs this way; it shows the shape which I represent in the margin here: <>.

We continued on a northeastward and then north-northeastward course over this plain, which because
of its being such low ground is somewhat miry in spots, and plainly, if it rains very much it
becomes untravelable," for which reason the soldiers with experience told us that in order to get
to the other side it was necessary to go around as far nearly as the Las Llagas stream; but God
willed the success of our cutting across here, by which we saved some leagues. "Almost in the
center [of the plain] there is a small grove with water, from which I could see that the inlet’s
direction answers to east-southeastward by eastward as I saw yesterday." And "having traveled
a bit over two leagues we came upon" the Guadalupe river, which the soldiers had had no
knowledge of, "a river big not so much because of how much water it carries as because it has it
backed up, and with a very deep bed, for the reason that it goes and empties into the inlet, which
holds back its flow;" and because of finding it so deep, it delayed us for over an hour in finding
the ford over it. "We wished to cross it where we had come onto it since there was a bridge there
made of a tree lying across, and on the other side there was a village whose Indians displayed a
good deal of fear as soon as they saw us, and our Commander soothed four of them "who were
on this side" by giving them beads, "so that they became calm and did not flee. We intended to
ford the river," but this could not be, because its edges were so high. "We went on down-river
about half a league, course almost westward, but saw that the farther it went toward the inlet and
its own mouth the worse it became, "through having a great deal of water in it, even more backed
up. We returned in an eastward direction to the village, where there was a bridge made of a tree
lying across, wherefore it was decided to have the packs and all146 cross over by the bridge and
have the animals cross by swimming; and as the gully was so deep and wooded, "it was
necessary to fix the edge of the bed so as to let them get in and out." Work was begun on this,
cutting branches147 "to open a way" and digging out the edge of the bed to make a way into it. A
soldier then set out to look for a ford across it up above,148 and in a short while he came back,
saying he had found one; "whereupon, leaving the work just begun, we went that way, traveling

142 In the later version, what seems to be this same remark (not accompanied by the drawing) is transferred to
the location of the village at the end of the march, "two leagues and a bit more" further on.
143 The bearing given above under that date was “southeast-by-eastward or even nearly east-southeastward.”
There might be a fusion of the two directions in the printed text here, since the bearing as given is not in a
standard form. The later version gives what seems to be this same remark in connection with the location, over
two leagues further on, of the camp at the end of the day’s march; there the bearing appears as “east-southeast.”
144 In the earlier version, only “a big river.”
145 The earlier version adds, “And here we came around the head of the aforesaid inlet and passed about one
league, or a bit more, away from the apex of its waters.”
146 In the earlier version, “for the people and the packs to cross by the bridge.”
147 In the earlier version, “trees.”
148 In the earlier version, “set out to see whether it had a ford higher up.”
about a quarter-league northeastward with small difference, and in fact "the river could" easily be forded there "without unloading, by only cutting a single tree and" some few branches. "And having forded the river, we halted on its bank at four o’clock in the afternoon, having traveled some ten leagues, which what with the turnabouts we made in order to ford the river made a bit more than eleven. The river here did cause us something of a setback, but still withal we gained a great deal through the plan of having come out upon it, both because by crossing over the plain here we have avoided making a large circuit which the soldiers said was necessary for us to get to the other side of the inlet, which perhaps we could not have done in a single day’s march, as also because we discovered this river emptying into the end of the inlet, which, although some doubt was raised that it might be the Coyote stream which we had upon our left hand while going, seemed on the whole to be a different one; for which reason we gave it the name of the river of the Virgin of Guadalupe. This river twists through the midst of a great and extended plain."

This spot has "very good" soil, very level and well covered with grass, but somewhat lacking in wood, there being no more of it than the trees along the river, which is "very dense with" cottonwoods, "willows," sycamores, "some" ashes, and laurels "and other trees"; and nowhere in all that is there a single stone. Afterward the Indians were somewhat polite.149 brought over some "sticks and brush" for firewood, "and fire, etc.," and were not so much afraid as at the start.

During this day’s travel we went leaving upon our right hand "the white-oak grove that begins at the second village that we passed this morning and goes on as far as the Las Llagas stream, through which we passed while coming. A little beyond the tree that we measured we found three very fine springs of running water on the plain (the whole of what we traveled today is level land)"; and on starting to get around the head of the inlet, we found another village whose Indian men and women showed great fear as soon as they saw us, which was reduced a little by giving them beads; and one old woman, from the time that she saw us until we went away stood in the door of her hut making a number of motions with crosses and with some lines upon the ground, while at the same time she was speaking to herself as though she were praying, and she stood unmoving during her prayer, paying no attention to the beads that our Commander was offering to her.150

From here I viewed the direction of the inlet, and saw that it was east-southeastward just as I had seen it yesterday, and also I took the bering of the island that is visible at this end, close to the land, as I said on the 27th.151 At this spot we felt a good deal of chill, +still, and we have had the same thing during these past days, even being, as we are, in the springtime+; and we were also somewhat bothered by +small+ mosquitoes +that bite a bit+; that breed on the edge of

149 In the earlier version, “Our camp was at once visited by some very well-behaved, polite Indians, and they brought across...,” etc.
150 The Spanish language has an expression, con cruz y raya, that refers originally to the crossing out and lining out of words in writing but is used to denote absolute refusal. It may have been at the back of the author’s mind as he wrote this description.
151 As was already noted, the contents of this paragraph seem to appear farther back in the earlier text, attached to the description of the village a little over two leagues before the end of the march.
the river, which appears to have some fish in it, as we have seen small *mojarras* and some fish-traps the Indians fish with, though I believe that all of this is a very small matter, since I noted that the Indians who live around about the inlet and harbor are no fishermen, and one only sees, at their villages, piles of mussel shells, which must be what they fish for and eat the most.

+I shall note that these last courses, in getting around the inlet’s head and fording the river, are not very precise since most of it was done while winding about.+  

31st, Sunday. +12 leagues.+ I said mass. At dawn the day was clear and with a frost making the grass, tents, and everything else all very white, and with a good deal of chill all night and in the day also, what with the northwesterly wind +prevailing, and it cleared the sky though afterward it turned to a westerly and with this the horizon became somewhat obscured, although it was no great matter. We set out from the Guadalupe river ‘a little after’ eight o’clock in the morning, and at four o’clock in the afternoon we stopped at the bank of the San Salvador stream (so called by Father Crespi, and otherwise named the arroyo de la Harina [Flour stream], having been so called by the soldiers during señor Fages’s journey according to the statement of the soldier Soberanes who comes with us as a guide, for the reason that they had a pack-load of flour wetted in the stream), having traveled some ten long leagues on a changeable course:

At the start we took up a northward course and, on going a short way, then north-northwestward, and traveled thus for about one league; but as we were close to the end of the inlet, we were faced with a miry slough in front of us, one of a great number that there are here in the lowland where the inlet extends and that reach inland; and it caused us to go back around in order to get past it, and at once we came upon a stream with a very little ponded-up water, not running, and according to the estimate it seems to be the stream that Father Crespi, in his journal, names as La Encarnación, which he crossed farther up and we crossed it where its tree grove ends. We then came at once upon other sloughs that caused us to wind about and go in all directions for around about a league; in one of them we saw that the water of the inlet was running upwards in the slough as though the inlet was at the flood, and at the spot where we crossed it a small stream of water was running downward toward the inlet. In the end we drew close to the foot of the bare hills that run along this side and have not a tree on them, and they are the same chain of hills and mountains that run to the San Bernardino valley and beyond; and by all that we traveled during these windings, one may estimate three leagues: eastward, northeastward, and a bit northward. Being now on higher ground, we took up a north-northwestward course and and traveled thus about two leagues; afterward, we went turning to northwestward and continued in this course until we halted.+

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152 The later version condenses the wayside details of this day’s march. Corresponding to the beginning of this entry, the later version reads: “At the start, [we went] about one short league north-northwestward, and then at once, because of the sloughs and mires, began changing about, east-northeastward and northeastward, for about three leagues, winding about till we got out of the sloughs and low ground that we had been in and got to higher ground along the foot of the hills that run on as far as the bay and mouth of the Freshwater Harbor, which belong to the same range that I spoke of on the 8th. We then traveled quite far away from the water for some three leagues course north-northwestward, and another three northwestward....” Descriptions of the natives encountered and details of the further march fill the rest of the entry.
A Visit to Santa Clara Mission, by Otto von Kotzebue, 1824

Translated from Otto von Kotzebue, *Neue Reise um die Welt, in den Jahren 1832, 24, 25, und 26*, Weimar: W. Hoffmann; St Petersburg: J. Brief, 1830, pp 46–56. Kotzebue, a Baltic German in Russian service, wrote for armchair travelers, in German, some widely appreciated and easy-to-read accounts of the navigations he commanded. He was supported by patronage and subscriptions from the Russian nobility. Elsewhere, he attacks Protestant missionaries in as strong terms as he does Catholic ones here, contrasting the methods of both with the more relaxed approach of the Russian Orthodox church to evangelism. This re-translation differs very little from the London translation of 1830 (Kotzebue 1830).

St. Francisco Bay contains fully 90 [German] miles in its extent. It is divided by islands into two fairly equal basins of water, a southern and a northern one. Upon the shores of the southern one, which takes an eastward direction inland, lie the three missions of St. Francisco, St. Clara, and St. Jose. Of the northern half of the bay I shall speak further later on.

On the morning of September 28th the launch was provided with everything needed for the little journey, and ready to sail. We made use both of the tide and of a favorable wind, and sailed in an entirely eastward direction past attractive shores, islands and foothills to Mission Santa Clara, which lay approximately 25 [German] miles distant in a straight line from our ship. Everywhere that the eye turned, the land seemed fine and fruitful. One sees no bare crags here. The shores, clad in the fairest green, are of only a low height. Towards the interior of the country, hills rise in waves, amphitheater-like, and the background is formed by high, forested land. Little groves of oaks stand scattered upon the nicely rounded hills and, separated by friendly meadows, form groups more pleasing than could be produced by art. With little effort, the most luxuriant crops might be derived from all of this country; but one looks in vain here for persons to make use of what nature so lavishly offers. Over these realms, far and wide, there rules a deathly silence, broken only by wild beasts—as far as the eye can reach, nowhere a hut, nowhere a trace of humanity. No skiff travels this water upon which ships might sail and which forms a number of good harbors. Only the great white pelican with his mighty pouch under his beak exploits the wealth of fish; in the two hundred years that they have been inhabiting California, the Spanish have not reached the point of possessing a net. How carefree and fortunately might thousands of families live here; how much better would those Europeans who passed to Brazil as colonists have done if they had settled here! There, they have to struggle with many more hardships, are not always treated as they would wish by the government, succumb finally to the unaccustomed, burning sun; here, they would have found the climate of southern Germany and a Nature that would have responded with generosity to their slightest efforts.

When we had been sailing for a couple of hours, a deep embayment opened upon the right, on the shores of which we glimpsed Mission St. Francisco between wooded hills. In the mean time the ebb had set in, the wind turned weak, and we made slow headway by using oars alone. That induced us to land upon a small, friendly island after we had made around about 15
miles. It was exactly upon noon. A big fire was lighted and, since every sailor knows a little about cooking, a noon meal was soon prepared that tasted splendid amid the fine weather in the open air under shady oaks. While the sailors rested, we looked about the island. The northern shore was fairly high and fell almost vertically down to the water. The soil of the island beneath the ground of the embankment consists, like that of the whole country about St. Francisco Bay, of varicolored slate. There was no trace to show us that humans had ever been on this island, and probably it was the case that they never had, since there was never a boat here until recently, and now each mission possesses merely a single large barge with which the pious monks undertake voyages into the rivers that empty into the northern half of the bay, in order to make converts among the Indians who occasionally linger upon their banks, and thereby to recruit workers for themselves. The Indians, also, have no other boats than such as consist of lashed-together reeds and in which they sit in water up to their hips. The fact that here, where the finest construction timber is present in such abundance, no one knows how to build even the simplest skiff testifies very clearly to Spanish laziness and to the heedlessness of the Indians.

Our island was surrounded with wild ducks and other sea-fowl; the whiteheaded eagles hovered over the oaks and hunted for a species of very small hare and a sort of pretty little partridges that are very common here. Having enjoyed the recreation ashore, so welcome to seafarers, for a couple of hours, we then continued on our journey with a fresher wind.

The sun was already close to the horizon as we approached the eastern shore of the bay. Here the water’s depth allows only large boats, but no longer any ships, to travel, and the land takes on a different character. The mountains withdraw farther into the distance. In front of them lies a wide-stretching plain that becomes lower and lower, turning, at the shore, into a swamp intersected in serpentine windings by a throng of channels deep enough for boats to reach dry land. It was already beginning to become dark as we entered these channels, and even in broad daylight one would go astray here without a good pilot because of the reeds growing densely upon the swampland on both sides, which are so tall that one can see nothing above them but the sky overhead. Our sailors rowed with much effort; the channels became gradually narrower and the land drier; soon now we detected human voices too, behind the reeds, and finally, at twelve o’clock at night, we reached the landing. A large fire had been set alight here. Beside it stood two dragoons with riding horses for ourselves and some half-naked Indians sent here from the mission to receive us. Since the mission was still an hour’s distance away, the night was very dark, and I was unwilling to disturb the monks at their rest, I decided to wait here for the morning. Our little tents were at once set up, several fires lit and the cooks once more set to working. After the long journey in the boat (because of the various courses we had had to take, we had made at least forty miles from the ship), camping upon land during the fine night was quite comfortable. The air breathed as mildly upon us as during the warmest summer nights at home although we were already right at the end of September. Around our camp we heard incessantly a sort of barking as though we were surrounded by young dogs. The noise was from a small species of wolf, about the size of a fox, that are spread all over California in very great numbers. These animals are so bold and clever that they approach the habitations of men during darkness and are not easily to be scared away from grabbing whatever pleases them. We too,

153  Schiffe, an obvious misprint for Schilfe, as the translator of the London edition also saw.
ourselves, experienced that; our meat supply was insufficiently well protected, and in the morning we found only the empty, gnawed sack.

The rising sun announced a fine day and revealed the surroundings of the camp for us. They consisted of interminable levels that are used for wheatfields by the mission. The grain was already harvested and only stubble was to be seen, upon which large herds of cattle, horses and sheep grazed. St. Clara Mission possesses the great wealth of more than 14,000 head of cattle, 1000 horses and 10,000 sheep. The majority of these animals live entirely unattended in the woods in a wild condition, and increase very rapidly.

I now had the horses saddled and we rode for the mission, which became visible to us behind the enormous fields of grain. The way led directly over the stubble, which was covered with flocks of wild geese, ducks and snipe of all sorts who fearlessly let us come so close to them that with a bit of exertion one might have bagged a great many of them, by throwing sticks. These migratory fowl remain here during winter after spending the summer in the north and having bred there. We fired a couple of shots among the geese and killed a dozen of them, some of whom were entirely white, and of the same size as our domestic geese.

After an hour and a half's ride, we reached St. Clara, where the monks received us in most friendly fashion and took every kind of effort to make our visit with them pleasant. The mission, founded in the year 1777, lies upon a small stream of the finest, purest water amidst a large, immeasurably fertile plain. Thick oak trees shade the buildings, next to which lie indifferently tended gardens which nonetheless afford vegetables, fruits of all sorts and the finest grapes in abundance. The buildings of St. Clara are like those of all the other missions: a large stone church, a very spacious dwelling for the monks, large warehouses for storing grain and tools, and finally the rancherias or barracks for the Indians, as was already mentioned. These consist of long rows of narrow low houses or, better, stables, with a separate section for each family, in which it scarcely finds room enough to sleep. We also noted a large four-cornered square, surrounded by buildings, that has no window looking outward and is provided with a small, carefully locked door, so that it has entirely the appearance of a prison for criminals. This is where the monks, as strict guardians of chastity, keep the young unmarried Indian women enclosed under their especial oversight, and busy them with spinning, weaving and similar work. This jailhouse lets its prisoners out only when they have to go to church, which happens two or three times a day. One time I witnessed how the portal opened and the poor girls tumbled out in a real frenzy to be able to breathe the open air again, and how then they were driven by an old ragged Spaniard carrying a small stick in his hand, just as though they were a herd of sheep, into the church whence after attending the Mass they had to return at once to their imprisonment. The young maidens are protected with such care by the spiritual fathers, and yet it was explained to me that the iron bars on the feet of one of these unattractive fair ones were a penance for having evaded the vigilant oversight. Only after they are married do these cloistered virgins return back to their folk in the barracks.

Three times a day a bell calls the Indians to a meal which is prepared in many large cauldrons and then is distributed in set portions to each family. There is only seldom any
meat; the usual food is a porridge, mixed out of wheat meal, maize, peas and beans and boiled in water; not exactly the healthiest kind of nourishment.

The mission of St. Clara has 1500 Indians of the male sex, of whom about half are married. This mass of humanity is ruled by three monks and guarded by four soldiers along with an under-officer. This small guard being, as it is, sufficient for so large a number of people, one has to believe that the Indians of the mission are very well off in comparison with their free, wild countrymen, or else that their small capacity makes them like the animals whose instinct ties them to the spot where they were raised. The former seems not to be the case; daily heavy labor, except on Sunday alone, which has to be spent almost entirely in prayers, corporal punishments, imprisonment in irons on the feet for not following the monks’ orders punctiliously, poor nourishment, wretched habitation, deprival of any property and of almost every free enjoyment—these are matters which simply cannot suffice for the contentment of human beings. Many a one, indeed, tries to attain a better fate by escaping; the soldiers, however, know how to puzzle out his whereabouts quickly, and often, as was mentioned before, they bring him back out of the company of his wild countrymen, by force, for a severe punishment then awaits him. Thus the patience with which these Indians subject themselves to the treatment they receive in the missions can only be ascribed to their own brutishness; and I must confess that I have never seen such a stupid, ugly race of humans, one which perhaps is at a lower level than the inhabitants of Tierra del Fuego and Van Diemens Land; these creatures have, in fact, only a distant resemblance to humanity. The Christian religion, or rather that to which the monks give that name, has furthered them culturally not at all; how could it have found an entry into these so limited minds, when the means of making it intelligible, an acquaintance with their various different languages, is almost entirely lacking? To the contrary, the procedure of the Christian teachers with these stepchildren of nature has brought them even lower. I later had the opportunity to see free Indians, who seemed not so stupid and to be on a somewhat higher level than those who were under the control of the gente rational,\(^{154}\) as the Spaniards call themselves here.

Had the attempt been made to turn them, not into pretend Christians, but also into humans, had they been taught building, cultivation and stockbreeding upon properties that would remain their own and whose produce they had the free use of, then a humane culture would, of itself, soon have made progress among them and los bárbaros would perhaps have reached a level equal with the gentе rational.

There are a very large number of different tribes of Indians in California whose speeches vary so far from one another that often they have no similarity at all, as, for example, in the single mission of St. Clara more than twenty separate languages are spoken; but the same dirty, stupid, ugly, revolting appearance is common to all of these Indian tribes. They are also universally of middling stature, very weak of build, and of a blackish color. They have all a flat face, big turned up lips, wide Negro noses, almost no forehead at all, hair quite black, heavy and smooth. Their intelligence still lies in deepest slumber, and La Pérouse perhaps does not exaggerate when he states that anyone among them who realizes that twice four makes eight can

\(^{154}\) Sic; gente de razón, actually.
be regarded as a Descartes or a Newton among his people; this concept is too high for most of them.

In their wild state, all of these Indians lead a wandering life. Hunting is their sole occupation, their sole means of obtaining subsistence; therefore, shooting arrows is their only skill and it has cost many a Spaniard his life. Naked, they roam woods and hills to ambush game. They build wretched huts of branches for themselves to stay in for only a short period, and they burn them as soon as they leave the area.

Agriculture, as was already mentioned, is the lucrative source of income for the clergy here. They pursue it on a very large scale. The annual wheat sowing of St. Clara alone amounts to over 3000 fanegos,\textsuperscript{155} approximately 620 English quarters or 3400 Berlin scheffels, and with the extraordinary fertility of the soil, on average the harvest is fortyfold of grain, although a European farmer would have a great deal to plant out in cultivating the fields. The field is broken up using a very imperfect plow, then sowed and re-plowed. All work stops there, and a considerable part of the seed perishes beneath the big hard clods; with good cultivation, these fields would yield a return unparalleled in Europe. The monks themselves admit that they do not understand much about agriculture; they can, to be sure, content themselves with their rich harvests; what is unforgivable, however, is their slackness in preparing the flour. Not a single mill yet exists in California and the poor overburdened Indians must very laboriously grind the wheat between two flat stones.

From the mission, we took a stroll to the half hour distant pueblo. This term in California refers to a village which is inhabited by married veterans and discharged soldiers from the presidios, and their descendants. This pueblo lies in a pleasant vicinity. The friendly houses are built of stone\textsuperscript{156} and surrounded by fruit orchards over whose fences grapevines hang enticingly. The inhabitants received us with friendliness, and with Spanish good manners and propriety invited us into their simple but clean homes. Every face witnessed to health and contentment. These people are fortunate indeed; free from taxation and in possession of as much land as they wish to occupy, they live carefree upon the rich yield of their fields and their stockraising. There are several of this sort of pueblos and there is every year a large increase in their populations, while on the other hand the Indians in the missions diminish greatly because of a great mortality often amounting to a third of the entire number in a single year; for which reason the spiritual masters would not be able to hold out, either, if they did not constantly enlist recruits from the wild Indians through guile and force. In Old California, several missions have already disappeared because the wild ones who dwelt in those parts had already been wiped out. For New California, the north still holds a rich supply of people; yet if they continue to be treated so wastefully, a time will come when this source too will dry up. In the meantime the pueblos will go on increasing, and eventually will give California a new population.

After staying for three days with the monks in St. Clara, who must at least be credited with the virtue of hospitality, we undertook our return with a cargo of vegetables and

\textsuperscript{155} \textit{Sic}; fanegas.

\textsuperscript{156} \textit{Sic}.
fruit that we had bought at reasonably low prices and that was carried to the landing upon very poorly constructed heavy two-wheeled carts yoked to oxen. The wheels of these carts were disks assembled out of thick boards; not quite circular nor drilled through exactly in the center, they turned about the axles with difficulty and lent the latter a bouncing motion from which our fine melons, strawberries\(^{157}\), peaches, apricots, grapes, figs, and the splendid apples that have no equal in Europe, suffered greatly. Reaching our launch, we found everything in readiness for loading our cargo. The sailors during our absence had been disturbed at night by a species of large white wolves, so they said.

Favored by the ebb tide we left the shore and soon saw a riverlike arm of the sea stretching eastward, on the shore of which the mission of St. Jose was built in the year 1797 in a very fertile area. It is already now one of the richest ones in California and another pueblo has arisen in its vicinity.\(^{158}\) This one, and the one at St. Clara, were up until now the only ones on St. Francisco Bay. Recently a road was laid out between St. Jose and St. Clara that can be ridden in two hours.

Soon after our arrival back at the ship, a monk in company with a dragoon came on horseback to the shore and signaled with his big hat that he wanted to come over to us. ...
(E) From the journal of Charles Wilkes, 1841

Deciphering even a part of a journal entry in the incredibly bad handwriting of Lieutenant Charles Wilkes, commander of the United States Exploring Expedition of 1838-1842, is an extraordinarily tough job. Forty or fifty years ago, I had better success with the original manuscript than just now with the National Archives microfilm that one is forced to use. Even so, in the portion dealing with California an enormous difference is clear between Wilkes’s manuscript and the 1845 published Expedition narrative. The printed version (Wilkes 1845) has been heavily fleshed out with details to furnish it with the know-it-all, superior tone that was then considered appropriate for travel accounts. The rewriting effectively destroys the writer’s original intention of expressing lavish gratitude to his hosts and guides. One has to wonder where the large amount of extra information came from, whether from Wilkes’s own memory, which seems unlikely, or whether it was added by others during the official preparation of the narrative. The United States government of the time, deeply interested in acquiring West Coast territory, had agents upon the scene, and probably possessed sources of information in addition to those that we know about. I hope a future editor will deal with this problem. Meanwhile, the following highly fragmentary, incomplete attempt at a decipherment yields one or two extra details, such as the geese that were said to eat the plain bare of vegetation. (Wilkes 1944: reel no. 9, fols. 211v ff.)

29th Oct. [1841]. Set out on a visit with Capn. Hudson to the Mission of Santa Cruz in the valley of [blank]. We went over the bay to Yerba Buena which is a small place containing some 30 or 40 houses but <only> one or two that deserve the name, paid attend(ance) to Mr. Spears Capn. Hinckly & others; who was kind enough to furnish us with a guide or rather pilot to carry us to the Embarcadero on the ( ) creek which runs near the Mission of Santa Cluz — We had a fine wind and went briskly along avoiding the numerous sand bars until it became somewhat dark when we several times grounded and found difficulty in getting off and after a good deal of trouble (did) at last and fortunately too hit the mouth of the creek and after passing through a creek of the shape of a corkscrew as Jack termed it we reached the landing, but we felt disappointed that we saw no sign of a dwelling and not a little fatigued with cold & hunger we found we had a mile to walk to the Estancia — [rest of side cancelled:] we had landed on the extensive plain of Santa Clara extending between the two mountain ranges some 40 miles to the SE — and composed for the most part of a rich (vegetable) mud with little or no variety to the plain except the scattering [sic] oaks here and there dispersed, and a few (long) extending growth of trees & bushes which ever attend the meandering of the brooks & creeks, or Rivers as the people here call them — along one of them we made our way to the Estancia and the first notice we had of our approach to it was its broken cor<al>al the ground covered in its neighborhood with the bones hoofs & horns of its slaughtered occupants. After (mak)ing one short turn we were set upon by the most outrageous ‘pack’ of dogs that one could well imagine to belong to any establishment, some 50 in number of all sizes and kinds from the sharp snappish bark of the pug up to that of the sonorous hound all approaching us full of intent of arresting our progress to the domicile then in sight consisting of a huge adobe building with the somber (cast) of shade from its projecting thatch covering of huge thickness — gave one some reason to expect an unwelcome reception, all the outbuildings—fences &cetera had the appearance of neglect and ruin. After quieting the dogs by stones and hoots we succeeded in reaching the only door visible & knocked, knocked, no answer and no light; however cold & hunger caused us to redouble our efforts & suddenly as if by magic the door opened by the aid of
a little Indian girl and we were asked into the salle a manger; here we had a fine view of the other parts of the house as the doors were wide open & in a few moments we were followed in by a huge Spaniard in his shirt some 6 feet high and whose countenance indicated no little ferocity. He soon ascertained our wants and called up the family by whom we were greeted with genuine hospitality that is (fined). Supper was provided consisting of tortillas, valdivias, (ham) with ( ) & eggs etc. and the family giving up their room & beds to us and all with such pleasant faces, good grace & satisfied looks & spirits that it was really delightful to find ourselves in such quarters; and although the exterior had at first given us some apprehension (for the within) yet it served to enhance the comfort & delight of such a treat—for in truth it is one to meet with such people & I would say to all who pass by the Embarcadero on their way to Santa Clara not to let the (inmates?) pass unnoticed for few there are who have such true views of hospitality as (so) (they) belongs to the family of Peraltas for some time seated in this country (as) one of the most respectable families; their hospitality was ( ) (such) in appearance an everyday occurrence tho' I could not but admire the ( ) and (au?) of it, and the (pecu ) satisfaction & thanks (served/seemed) to (give) ( ) ( ).

30. I gave orders that at daylight horses should be sent for to the mission ½ dozen in number. In the ( )ing ( ) (time) and the horses arriving, 5 in n° from the mission we concluded to take our departure.—One can scarcely conceive the despair when we went to look at (ha ) our horses, they were in truth the lame, halt and the blind—sore backs I have seen, four ½starved ancients, & one whose eye was protruding from its socket (at ed) to (shock) (me/one) more than one would expect, the best was chosen for (me) to ride (here) I never rode so ( ) (any) on a (walk) in my life. (I ist) thought it was a short ride of 1½ leagues & at 10 oclock we came in sight of the mission, situated on the level plain & surrounded with its small tenements for its <blank, meant for "neophytes," presumably.> One can scarcely give credit to the immense flocks of geese ((wild)) about us tame as our barnyard ones, allowing us to cross through, and divide them in ( ). I can now readily believe some of the stories that are told respecting the numbers in the season; that ((it is with difficulty a horse and his rider can get through)) they are represented as destroying all the grass— ( ) (in) the (successive?) drought having cut off all the grass, and this ( ) (ant) plain appears now as one barren waste.— We rode up to the mission having its northern side flanked by the Church some 80 feet by 40 wide—this is a long one story adobe building with tile roof and corridor extending the whole length of it and inhabited by the Administrador Senor Aliza [Alvizu] who has the keeping of and management of its temporal (commons), while the ecclesiastical duties are (in ) the entire ( ) of the Priest whose name is Mercader [Mercado] (an) intelligent and obliging liberalminded man; the (misfortunes) of the Priesthood by the regulations of the Govt. (Mexican) have been reduced to nothing and their missions have (seen) the new order of things (have/live) constantly enduring decay (from) the exactions and ( ) that have been made on them by the Govt(s), Govr. & Administradors, in fact they can seriously be said to <be> unjust(ly) dispos’sd of all their valuables and their Neophytes turned off in the same destitute condition, ½ civilized as they are without the means of employment or wherewithal to get food, it is said have in many instances gone back to their native pastures and tribes, vowing vengeance on their (dis? ) — the statements hereto annexed will shew most conclusively how ruinous this new order of things has made the (s s) — Padre Mercader spoke to me with a good deal of resignation on the subject, & did not express much surprise that such things should have happened, when it was
considered by whom the country was ruled. — The administrador Señor Aliza is a kind excellent old man he has risen from a corporal to his present station owing to being unwell. I had no reason to reject his acquaintance as some have from his loquaciousness but we had all the attentions, that lavish, (correct?) hospitality ( ) us, there are few housewives that will compare with him — such ( ) () ( ings) & comfort is rarely to be found in any person or country <"or country” added interlinearly> ( ) ( ) in the earth. Americans ( ) Californ(a) ( ) ( ) fortunate in making the acquaintance of Señor Miguel Felesforo [sic] de Pedrorena (as) the ( ) ( ) whom we found a lively and intelligent companion who is well acquainted with the country & people,

<213v> he afforded us many opportunities of h(av)ing acquaintance with the different people we met & their characters of which his employment made it necessary that he should have much knowledge of, being a supercargo and extensively engaged in the peculiar mode of trading in this country — After we had taken breakfast Don Miguel proposed a visit to the Padre to see the church — and passing to the end of the mission adjoining the church we (visited) his apartments where we were kindly received by Padre Mercador [Mercado], of the Franciscan order, he is a good-looking portly and cheerful person (who is) devoted to his library which though small is well selected ( ) ( g) and report says his (cl ) ( ) was (living?) in a domicile opposite, for the affairs of the church are not conducted with as vigorous concealment as formerly nor are its Padres believed to be so scrupulous, certain it is the people have not only lost their fear but the respect for the (s) of religion to a great degree.

Padre Mercador was kind enough to give ( ) the different annual returns of the Missions for several years from among these I have selected those that will shew the highest point of success the missions obtained & their present (return) will denote the suddenness of their fate ((which has)) — It may (now) be <said> that these missions are destitute of property and with their wealth their influence will have gone. It is not to be denied that they have made many endeavors to improve the country and to induce the Indians to live with them, but not being able to succeed in carrying their views into (force) by the voluntary (aid) of the Indians they made an effort to compel them to come under instruction which was in some cases attended with much harsh usage, the Indians hereabouts are a quiet inoffensive race, and were easily brought into subjugation and so far as their tribes extended they were enabled to push their Establishment but no further — No country can be in a worse condition than California is at this present moment— no laws for its government, almost separated from Mexico but in name, its Govr & Governmental officers a set of rogues dividing the spoils of the missions with others and all who are within their powers subjecting to the most barbarous treatment. Indeed it would be surprising if it were not so, for the whole population may be termed a lawless set — (freed) from responsibility and beyond the protection of the Mexican power to protect ( ) and this ( ) ( ) the p( )ing point out.

The Padre took great pride ( ) in showing us the robes of the church, which together with its in (existence) & his keeping. (these) magnificent much (together) this vicinity. His pride was somewhat tickled as (we) suspec(ted) & he (was) ( ) in his explanation in showing off the different ( ) of ( )ing the (ac s) and (print) to correspond.
It has quite an extensive choir ( ) 80 Indians in constant practice & ex( )ed that they ( ) took to music seriously ( ) ( ) paying (s )() for it. He however told us he made no selections on this account, but took those whose physical abilities (seemed) best adapted to the instrument & practice did the rest, & produced such music as delighted the Indians & people of the count(r)y & therefore answered his purposes. He invited us to (visit) him another (call) in the evening inviting us to play a game of chess with him.

After partaking of dinner Don Miguel proposed a ride to the Pueblo of San Jose about a leagues distance. ( ) ( ) ( ) been good for the road we ( ) had a delightful view of it, a fine clear day sufficiently cool to make ( ) ( ) ( ) through the beautiful avenue of trees (--------- )<”Alameda” meant to be added here, no doubt> that leads from the mission to the Pueblo planted by a pious father in the early days of the mission that the heat of the sun might form no excuse for the non attendance on the mass gorgeous display of the mission was established in 1776. In our ride to the Pueblo just before entering the town we passed a creek of water in whose vicinity it appeared as if a feast day was being celebrated on the beautiful ( ) ( ) ( ) its banks...159

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159 The account (as witnessed by the later published text) goes on to describe the scene presented by the Pueblo inhabitants’ washday, with their clothing spread out to dry.
[After a stop at the ranch of Carlos Castro, on the way north from Monterey] ...being in good humor with all the world, [I] threw a peso in the kind Señora’s lap, and with a lively adios, [we] turned our horses’ heads again toward the north star. The moon was riding high, round, and gleaming as the silver dollar I had just thrown the good lady, flooding the whole lovely plain, with its waving fields of yellow oats, and magnificent clusters of oaks, in one continuous vista of unexampled beauty. Five leagues beyond we struck off to the right, and after losing our path repeatedly, amid beds of water-courses, and bolls of trees, and when I was on the point of giving orders for a night bivouac on the sweet and yielding grain, we became aware of our proximity to a habitation by the usual barking diapason of half an hundred dogs and curs, and I was not sorry to swing my weary limbs from the saddle after a hard ride of eighty miles. In a few minutes I was stretched beside the proprietor of the rancho, Mr. Murphy, and as kind a specimen of the true Milesian as ever took leave of the Hill of Hoath [Howth]. I knew that by the kindly tone of his voice; but I fell sound asleep, giving the old gentleman an account of the battle of Cerro Gordo, and never moved until long after sunrise. On awaking, I found myself in a dwelling constructed of pickets, driven perpendicularly into the ground, the apertures filled in with mud, and all covered by a roughly-thatched roof. The enclosure was rather a primitive and I should judge temporary affair, to serve the first year or two of an emigrant’s home. The dwelling was large enough, however, to comprise capacious beds in three of its angles, a couple of tables, dresser, chairs, and a variety of useful articles scattered around the earth floor, but all presenting a far neater appearance than usually characterized the ranchos of the country. I was not left long to conjecture the cause of this tidiness, for whilst lacing my moccasins, preparatory to a yaw and shake, by way of toilette, I was saluted by a very nice young woman, with the hope that I had slept well, and at the same time presented with a large bowl of water and clean towel, by the young lady herself, who was afterwards introduced to me by her good father, as his daughter Ellen. She was tall and well made, a very pleasing face, lighted by fine dark grey eyes, black hair, and beautifully white teeth. I learned from her own rosy lips that she was the first American girl that ever walked over the mighty barrier of the California sierras, which she accomplished with one of her brothers, leaving the wagons, and her friends, to follow on a longer route. They were a large family, and most of the children born in Canada, thence locating in Missouri, and so on to the farthest west in California. There were four stalwart sons, who had all been more or less engaged in the last troubles, and had shown the natives a choice mould of bullets from their unerring rifles. They treated me with the utmost kindness; and after partaking of a capital breakfast of new eggs, hot bread, cream and lomo—tenderloin—prepared by their pretty sister, I felt quite equal to a short tramp among the hills, particularly upon finding the horses well nigh knocked up, and requiring a few hours more rest.

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160 Irishman.
161 The Mexican War, locally.
The rancho was situated on the northern verge of the broad valley, on the borders of a pure sparkling stream, surrounded in every direction, far and near, with golden lakes of wild oats, thickly studded and shaded by the oaks. In company with one of the boys, Dan, we followed up the course of the stream for a mile or more, and I then had the satisfaction of sending a ball through and through the shoulders of a large doe. Dragging the carcass down to the water, and divesting it of its jacket, we then did the same ourselves, and swam and plashed for an hour in the little torrent. At the same time, with an extempore rod, twine, hook, and a "devil’s darning-needle" for bait, Dan pulled out from a limpid pool delightful salmon-trout, full two feet in length; I ate part of one, and a charming fellow he was. Leaving our deer to the varmints, we returned to the rancho at noon, dined, and again boot and saddle; struck the road, and six or eight leisurely leagues brought us to the settlement of Puebla San José. Here I was most civilly received, and entertained by an American gentleman, Mr. Ruckle, to whom I bore a letter. Supper, good old sherry, a cigar, and four hour’s sleep; up betimes, and sent the jaded animals on to the Mission of Santa Clara for a bite of grass. I remained to break my fast at the house of an agreeable white-toothed lady named Pico, and then, accompanied by Mr. Ruckle, we hurried along the road which traverses the plain, shaded by noble avenues of oaks and willows. The Mission stands but a league from the Puebla, presents a tolerably flourishing appearance, with a well-preserved church, clusters of out-buildings, and well-cultivated gardens. It is by far the most important and respectable settlement of its kind in this portion of the territory; and since the dispersion of the priests, and confiscation of church-lands, has still fortunately retained a mite of its former wealth and influence. The good Padres, a score or more years ago, were pleased to live well; and their well- filled granaries, cultivated grounds, and myriads of horses and cattle—in all praise be it said—were the first to induce the native Indians, who, in brutish ignorance and social degradation are even now but a remove from the beasts of the field, to devote their time to some useful employment. By these means the shrewd Fathers never lacked comfortable houses to shelter them, nor raiment to clothe their sleek skins. This Mission, according to Vancouver, was established in 1778, by Franciscans, which, with one founded three years previously at San Francisco, were the northernmost settlements of any description formed by the court of Spain, on the continental shores of north-west America, exclusive of Nootka. Although the Jesuits had planted the cross on the lower territory, on the peninsula at Loretto (1697), they had not explored the west coast. Of all the numerous voyagers of note who have visited and written upon California—Perouse, Vancouver, Kotzue [sic], Belcher, Wilkes, and others—there is not one whose delineations are characterized with so much truth and simplicity as Vancouver—not only in the territory, but in the groups of Polynesia. He must have been truly a good man. His intercourse with the untutored savages of the Pacific was ever tempered with justice and humanity. He did more than any succeeding navigator in stocking the islands with cattle, and his scientific duties were executed with exceeding accuracy for the means at his command. The English may well be proud of the renown he has shed upon the land of his birth; and his name will be for ever cherished in the Pacific, when the unscrupulous deeds of his great Commander shall have been forgotten. [Note by the author.]

Tarrying but a few minutes at Santa Clara, and selecting the best horses of the cavallada, I parted with Mr. Ruckle and continued my journey; the first fifteen miles was wearisome labor with our worn-out beasts, and we stopped for breath at a ranchito of a pretty
little widow, who did the amiable most refreshingly by handing me a dish of raspberries and cream. Seeing a filthy Indian poke them out of a bottle with a stick, occasionally giving it a suck, did not enhance the flavor of the fruit.166 A short league beyond, we came to another mud-built rancho, and our horses having apparently determined to proceed no further, accordingly tumbled down; there were half a dozen women and children about the hut busily employed in cutting beef in long strips for drying; but they continued their occupation without deigning to cast even a glance of sympathy upon our piteous plight. Indignation getting the better of my misfortunes, I kicked off the spurs and marched bravely up to the mansion; then, after dodging about under long fringes of raw beef, I was suddenly confronted by a stout dame, with a mass of meat clutched in one hand, and a dripping knife long as her arm in the other; this savage apparition rather abashed me, and I timidly inquired how she did? She merely gave a sharp upward jerk to her chin, with an ireful visage—as much as to say, “I’m in excellent preservation, don’t bother yourself”—pointing to my foundered studs, I politely urged the necessity of procuring fresh horses! “No, Señor! No hay! The horses are all mares, the mares are wild—there is no one to catch them”—in other words I’ll see you in purgatory first. So I called up a little resolution, though far from feeling it, and letting the butt of my rifle fall heavily to the ground, I said, “Hark ye, my friend, if you don’t speedily furnish me with beasts I’ll make a seizure of that fine animal I see saddled in the corral; besides, I’m willing to pay liberally.” At the word “money” the patrona’s features relaxed, tu no eres voluntario—she remarked—por dios! no! mi alma yo soy de la marina, y Católico ademas! I’m a sailor and a good Catholic to boot. At this last admission and the sight of a handful of bright pesos, the whole party surrounded me—ah! Tan maliciosos [sic] son esos malditos voluntarios! Ave Maria! El official no es herége—es Cristiano [sic]—y pagara los caballos—ah, what light-fingered gentry were the Volunteers;167 but the gentleman is a Christian, not a heretic, and going to pay like a trump—they exclaimed. There was still some doubts as to whether I intended to pay in efectos [sic] or hard tin, and if I could make it convenient to liquidate a few outstanding claims which some of my countrymen had forgotten to adjust; but when satisfied on that point a small boy ran off to drive in the cavallada. Meanwhile the Señora poured me out a cup of aguadiente [sic], touched her lips to it, and handed it to me to quaff. The drove of horses was soon brought up, and as a particular favor, the patrona selected her own nag to bear me—a small mare and natural pacer that rattled along at a great rate without whip or spur—embracing the party, we again mounted and started off in fine style. The country has the same lovely aspect as in the vicinity of San José; great level plains teeming in wild grain, and wide-spreading foliage of oaks, chestnuts, maple and willows, enclosed between high-swelling hills. In fact the country for more than forty leagues of this broad valley is so perfectly level that a coach could be driven in any direction without serious obstruction; however, there is

166 The ranchito of the “pretty little widow” visited on the way to San Francisco was presumably the Mesa ranch in present Palo Alto; it, and the owner, are described in similar terms by another visitor, Edwin Bryant (1848: 318–19). The widow not long afterward married a newcomer, John Greer, who had contracted to rebuild her adobe ranch house in fired brick and who much later became the first public school superintendent of San Mateo County. If the identification of the ranch is correct, then the next small settlement very likely was a little building, made in the peculiar local redwood-framed variant of rammed-earth construction, that formerly stood in present-day Atherton and about 1960 was moved up to the top of the Skyline near Skeggs Point.

167 The reference is to Karl-Marie Weber’s gang of North American frontiersmen, who during the war mistreated many of the local population while seizing horses and other property, supposedly to support the campaign of J. C. Frémont. Wise elsewhere gives some sketches of their character.
one annoyance to which horses are subjected, in the multitudes of holes burrowed by a species of
ground squirrels, very frequently bringing horse and rider to their faces. A few leagues rapid
traveling brought us in sight of the southern arm of the waters of San Francisco, and skirting
along its shores, by sunst we had left the low country, traversed the rugged hills of the sea-girt
peninsular, floundered knee deep in the sandy road, and by nightfall I found myself comfortably
housed with a generous bachelor friend, Mr. Frank Ward, in Yerbabuena.

Remaining but a few days in Yerbabuena, and when on the point of taking leave, I met
with a brace of navy men, who were about to sail up the Bay for a hunt among the hills; so
giving orders to the brave courier to join me at Puebla [sic], I embarked with my friends one day
at noon in a small launch, and a stiff sea-breeze soon wafted us forty miles; then entering a
narrow creek, formed by high sedgy reeds that sprang from the shallow water, we performed a
tortuous serpentine track, in a labyrinth that fairly required Ariadne’s clue to thread its mazy
windings, actually sailing sixteen miles to gain three, as the bird flies; at last we arrived at the
embarcadera [sic] of San José, and after a fatiguing walk, at dark we came upon a tenement. The
house was filled with women and dogs, who chattered and cheated, dinned and dunned us to
such a pitch that we were obliged to seek shelter elsewhere; and accordingly we packed our
saddles, blankets and rifles, and at about nine o’clock reached the estate of one Don Ignacio de
Sylvia. Our host received us with open arms, prepared a supper of beef and tortillas, and in
return, we complimented him with strong rummers of punch; his fat spouse joined in the
festivities, and when the evening was somewhat advanced, a shake-down was arranged for us on
the floor of the sala, which, fortunately for “fleas and ourselves, chanced to be laid with a floor of
boards. My slumbers were greatly disturbed by being placed in full view of a pretty young
brunette, whose light from an adjoining apartment threw her form in most distinct rays of
animated beauty, amusing herself the while playing with a baby, whilst her filthy villain of a
husband regaled himself for an hour or more with a cigarrito. My dreams were none of the
pleasantest, and I was glad when day dawned to light me out of the dwelling, and breathe the
pure morning air.

Como les gusta a los Americanos el fresco, said our lazy host, as he sat
wrapped in a blanket on a hide, observing me take a bath in a little rivulet near by; se hace
daño—the death of him—as he blew the cigar smoke from his lungs with a deep sigh!

Notwithstanding his indolence we found him a most consummate extortioner, and after throwing
every impediment in our way, he hired us miserable horses at an extravagant rate; and then
mounting, we took the road over a dry, salt, marshy country. Passing the mission of St. Josephs,
we never halted until reaching Puebla, where we were most kindly welcomed by Mr. Ruckle.
The town is planted in the midst of the great plain, with small streams of water, which is much
needed elsewhere, coursing on either side. The place contained some five hundred inhabitants,
the dwellings all of the adobie [sic] mud-built order of architecture, with but one road between
them: for ten leagues around the land is most fertile, and the country in many respects appears to
possess great advantages, and has the reputation of being the garden of Upper California. We saw

168 In the sense of “cheat the time,” pass the time.
169 Evidently Ignacio Alvizu (Alviso).
170 I. e., lacking.
quantities of fruits, peas, peaches, and grapes, very unripe, but the natives like them the better green.

Under no contingency does the natural face of Upper California appear susceptible of supporting a very large population; the country is hilly and mountainous; great dryness prevails during the summers, and occasionally excessive droughts parch up the soil for periods of twelve or eighteen months. Only in the plains and valleys where streams are to be found, and even those will have to be watered by artificial irrigation, does there seem the hope of being sufficient tillable land to repay the husbandman and afford subsistence to the inhabitants. Sheep and cattle may be raised to any extent; as the gentle slopes, clothed in rich wild grasses, afford excellent districts for grazing.

We breakfasted at the residence of a plain, sensible and industrious family of emigrants from Virginia, named Campbell; then strolling to the banks of a little rivulet, we took siesta beneath the shade of drooping willows, surrounded by groups of brunettes washing in the pools near by. In the afternoon my fellow travelers left me for their hunt among the mountains; and upon learning that Commodore Stockton was in the village, I immediately made my homage. He was by long odds the most popular person in California, and by his enthusiasm, energy, and determination, accomplished more, even with the limited means at his command, in the acquisition of this valuable territory, than any other man before or since, who has planted his foot on the soil.

The following day was Sunday, the Fourth of July, and moreover the feast day of the Patron Saint of California—Nuestra Señora del Refugio. Meeting Miss Ellen Murphy and brother on the road bound to high mass at the mission, I agreed to accompany them and return to their rancho in the evening. There was a large assemblage in Santa Clara, and we attended church. The building was oblong, painted roughly in fresco, and decorated with a number of coarse paintings, and lots of swallow-tailed, green and yellow satin pennants dangling from the ceiling. During service an indefatigable cannonier, outside, gave frequent feux de joie, from a graduated scale of diminutive culverins—made of brass in shape of pewter porter pots, half filled with powder, and the charge rammed down with pounded bricks—this with music of kettle-drums, cymbals and fiddles made a very respectable din; there were two gentlemanly priests of the order of Saint Francisco, whose acquaintance I afterward made, who preached each a brief sermon with eloquence and force. Among the congregation were all the belles and dandies of the valley; the former kneeled demurely on little rugs or bits of carpet in the nave of the church; but the latter were lounging near the doors—their gala costume is quite in keeping with Andalusia—and one handsome fellow at my side took my eye, as I have no doubt he did that of many a brighter. 171 He was dressed in a close-fitting blue cloth jacket; sky-blue velvet trowsers, slashed from the thigh down, and jingling with small filagree silver buttons; snow-white laced calçoncillos, 172 terminated by nicely stamped and embroidered botas; around the waist was passed a heavy crimson silk sash; a gay woolen serapa hung gracefully over the shoulder; in one hand a sugar-loafed, glazed sombrero, bound with thick silver cords; and in the other, silver spurs

171 Meaning to say that he "took many a brighter eye," that is, attracted the attention of women.
172 Undergarments of the leg.
of an enormous size, each spike of the rowels two inches long: all these bright colors—set off by
dark, brilliant eyes, jetty black locks, and pliant figure—would have made him irresistible
anywhere. Turning towards me, he asked, smilingly, Porque no se arrodilla vd en Misa?—Why
don’t you kneel at the Mass?—Tengo pierna de palo, quoth I, quite gravely: glancing at my
pins with much interest, to discover if they were of timber, he seemed to relish the joke, and we
then sidled out of the church, and became firm friends on the spot.

After service, I was introduced to many American emigrants, mostly Mormons,
who, in a free and easy style, had taken possession of the outbuildings and tenements belonging
to the Mission; and who, in their contempt for the kind and good Padres, and rightful proprietors
of the domain, were not only averse to request permission to remain for a season, but were
hugely indignant at the military governor of California, Colonel Mason, for having issued a
decree, requiring these lazy gentlemen to leave the lands of the Church. Notwithstanding their
mutterings, a few weeks later they were summarily forced out by the bayonet.

Whilst we were at mass, a serious mishap occurred to young Murphy. A juvenile
damsel, whose cognomen was “sugar-plumb [sic],” and being the only eligible maiden for
matrimony, I was assured by a hospitable dame, one Mrs. Bennett “that she was the forwardest
gall [sic] in the Mission,” through some silly, childish freak, frightened my friend’s horse, so
that the restive animal broke the halter, and made long strides over the plain. A couple of
drunken Indians started in pursuit, but having a quarrel on the way, one plunged his cuchillo\(^\text{175}\) up
to the haft in his companion’s thigh, which brought him, deluged in blood, from the saddle. We
found this poor devil and conveyed him to town; but of the runaway horse and saddle, which was
worth half-a-dozen Indian lives, or horses, we could learn nor see nothing. We made but a short
stay in Puebla, and an hour before the sun sank for the day, we put foot in stirrup, and a long
swinging gallop of seven leagues soon carried us to good Mr. Murphy, and a good supper.

The following morning I arose with the lark, took a long pull at the milk-pail, volunteered
a little surgical advice to an Indian vacuero [sic], who being thrown from his horse, was suffering
under a badly-contused thigh; he had bound the limb tightly with strands of hide, and was doing
a new principle of local bleeding by puncturing the flesh with sharp stones—a mode of treatment
very much in vogue with the natives. Under guidance of Dan, we mounted capital horses, and
sallied out for a bear-hunt. ...

\(^{173}\) I have a wooden leg.

\(^{174}\) Whim.

\(^{175}\) Knife.
FIGURES
Figure 1. Partition map of the Posolmi land grant (Lyman 1847). A partial tracing.
Figure 2. Map of part of the Mountain View-Sunnyvale area, showing reconstructed landscape. The modern street pattern underlay (gray) is from Santa Clara County Division of Public Works 1988.
Figure 5. View on the road to San José (Dougal 1850).
Figure 6. Verbal descriptions from surveys by government agencies, 1851-1866.
Figure 7. Map reconstruction of the central northern Santa Clara Valley landscape at the end of the Mexican period.
Figure 8. Soil types in the central northern Santa Clara Valley. Purple hues show low-lying alkaline clays; red-orange to yellow mark recent alluvial deposits; greens express loams of middle elevation; blue-green areas are higher, more acidic, sometimes gravelly loams on alluvial fans; brown indicates hill soils.
Figure 10. Original plat of pueblo suertes (Moraga 1781), in grey, overlaid with property lines and ownership circa 1850. The modern street pattern, in yellow, is from U. S. Geological Survey digital line graphs, 1:24,000 and 1:100,000.
Figure 11. Tracing of oaks in 1867 photograph looking westward along Santa Clara Street.
Figures 12-13-14. Profiles drawn from Redwood City to Skyline Boulevard. Black lines show heights corrected for the visual effects of the earth's curvature and atmospheric refraction. Heights are from U. S. Geological Survey digital line graphs (hypsography) for the Palo Alto and Woodside 7-minute quadrangles. Irregular curves are tracings made from an early photograph showing redwoods on the mountaintop (Lawrence & Houseworth c1866, Palmquist 2002).
Figure 13
Figure 15. Results of setting the projected lines of sight against the early photograph (redrawn).