

Matanza: A Reinterpretation of a Presidio Site

By Paul G. Chace

Introduction

A thriving cattle economy characterized the early days of San Diego under Spain and Mexico. From the founding of the San Diego Presidio through the era of private Mexican land-grant *ranchos*, the raising of cattle for domestic food and leather and for the international maritime trade in cattle hides and tallow occupied almost everyone: retired Spanish soldiers, pioneer settlers from Mexico, the church missionaries, and the missions' neophyte Native Americans. Cattle introduced by the Spanish thrived, and the herds expanded rapidly in the verdant coastal valleys and plains of California. The number of cattle owned by the San Diego Presidio and the nearby San Diego Mission multiplied quickly from fewer than 200 in 1770 to over 1,000 twenty years later, and probably



From a watercolor by William Meyers, U.S.N., 1843. Courtesy The Bancroft Library

Hide Houses at La Playa district of San Diego where cattle hides were stored for shipment to Boston and other ports on the East Coast.

Paul G. Chace received his Ph.D. (1992) in Anthropology at the University of California, Riverside. His career spans 40 years, as a museum curator and as the head of Paul G. Chace & Associates, a cultural resources consulting firm. He has published widely on Western prehistory, historical archaeology, and Chinese American cultural heritage.

Provincia de California. Jurisdiccion de S.ⁿ Diego.

Estado que manifiesta el numero de Indios y Gente de razon existente en dicha Jurisdiccion segun el Padron de fin de este año de 1798 con distincion de Hombres, Mujeres, Muchachos y Muchachas.

	<i>Indios.</i>					<i>Epañoles, y otros cast.</i>				
	<i>Hombres</i>	<i>Mujeres</i>	<i>Muchachos</i>	<i>Muchachas</i>	<i>Juven.</i>	<i>Hombres</i>	<i>Mujeres</i>	<i>Muchachos</i>	<i>Muchachas</i>	<i>Juven.</i>
<i>Presidio de San Diego</i>	..2	...	...2	....	...4	..70	..32	..44	..27	..175
<i>San Diego</i>	..561	..644	..158	..163	..1,526	..5	...	...	...	..5
<i>San Gabriel</i>	..445	..455	..357	..211	..1,468	..9	..6	..9	..4	..28
<i>San Juan Capistrano</i>	..389	..402	..115	..201	..1,107	..9	..5	..9	..7	..30
<i>San Miguel</i>	..54	..87	..26	..38	..205	..13	..10	..7	..7	..37
<i>San Luis Rey</i>	..58	..59	..46	..47	..210	..6	..2	..5	..6	..29
	1509	1647	704	660	4520	112	58	74	51	299

San Diego 31. de Diciembre de 1798.

Manuel Rodriguez

Population statistics at the Presidio of San Diego on December 31, 1798. Courtesy of the San Diego History Center Research Archives.

more than 7,000 by 1800. One activity closely associated with cattle ranching was *matanza*, the term denoting the killing or killing ground, particularly for the slaughtering and rendering of cattle.

The San Diego Presidio was founded in 1769 on a defensive hill position overlooking San Diego Bay. The military soon built it into a rectangular fortification with corner cannon bastions. This citadel was about double the size of a football field. Inside the defensive walls were about 45 adobe-walled apartments, a large chapel, and an elegant abode for the military's *comandante*. About 200 inhabitants occupied the Presidio in the 1790s: soldiers, civilian craftsmen, and their families. In 1825, under Mexico, the resident population swelled to over 500 when Governor José María Echeandía made the San Diego Presidio both his residence and the capital of Alta California. In the following decade, the settlers moved down to the lower flat lands, forming what is today's "Old Town," and the Presidio was abandoned. Archaeological investigations within the Presidio quadrangle have recovered immense amounts of cattle bones in the kitchen garbage, underlining the importance of the cattle economy at the Presidio.

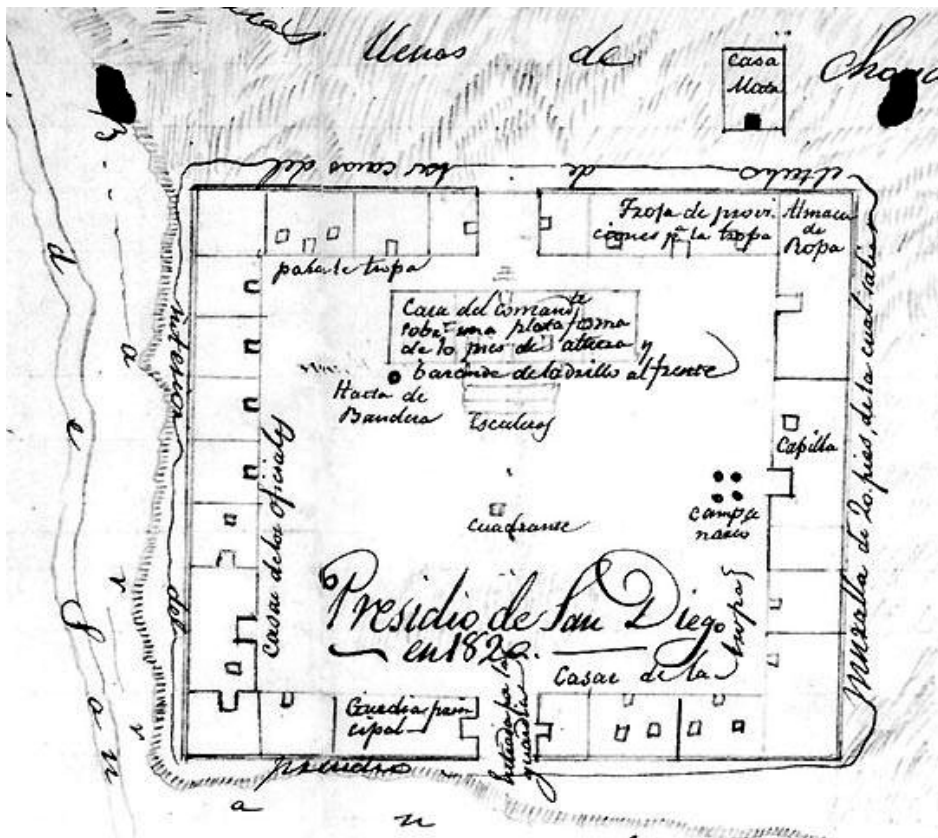
Matanza

In Spanish, the word *matanza* has a focal definition as a killing ground, a butchering place, particularly for slaughtering cattle.¹ The term also can be used for the action of slaughtering, the event itself, or even a butchering rack and equipment. The term typically is utilized for the slaughtering of cattle, but other animals are included such as sheep, goats, pigs, and even chickens. The word is still common among Spanish speakers in modern California.

The archaeology of a *matanza* would involve a concentration of animal bones, with the slaughtering marks of primary butchering. A *matanza* was often in a shallow wide pit in a convenient locale that could be utilized repeatedly, even over years, so there could be numerous layers of butchered bones. Any accumulation of waste and meat scraps could be quite smelly and attractive to insects, so the *matanza* waste might often be intentionally incinerated. The resulting bones could be altered into tiny calcined fragments, mixed with darkly incinerated meat residue, ash, and possibly wood charcoal. This incineration or pit cleansing would occur particularly if the *matanza* was located close to a residential locale. In this case it would have been the Pueblo of San Diego. Alternatively, if the bony waste in the *matanza* somehow was quickly covered over by a soil deposition, the odor could be eliminated and the bones might appear almost as if freshly butchered and preserved. Thus, a *matanza* locale might include multiple layers of calcined bone fragments, with darkly stained soils, ash, charcoal, and even layers of preserved bones.

This article describes a locale outside the San Diego Presidio that was partially explored in a brief archaeological test excavation in 2000.² This site contained multiple layers of calcined bony remains; fortunately, it also contained some identifiable unburned bones. In interpreting this partially exposed archaeological feature, it is proposed that this was a *matanza*, a slaughtering station utilized during the occupation of the San Diego Presidio. For comparisons, two similar *matanza* archaeological features from Mexican era *ranchos* are known, one from the Ontiveros Rancho³ and one from Rancho Los Cerritos.⁴

In California, the term *matanza*, as a special case, was applied also to the annual summer slaughter of cattle by the hundreds and even thousands for their hides and tallow, products exported in the international maritime trade of the 1820s to the 1860s. Historical descriptions indicate that the cattle were rounded up, typically in an open field at a considerable distance from habitations, where they were slaughtered, the hides removed, and the carcasses often simply left on the ground to rot.⁵



An 1820 architectural rendering of the Presidio of San Diego. Courtesy of Santa Barbara Research Archives.

The Project Locale Below Presidio Hill

The project locale interpreted here as a *matanza* is at the base of the hill below the former San Diego Presidio, and has been officially recorded as the P-37-019194 site in the State’s archaeological inventory. This location is approximately 45 meters distant and west of the Presidio gateway in the center of its western defensive wall. At the Presidio gateway, the ground surface is about 22 meters in elevation, while this meat-butchering station is at the base of a steep hillside, approximately 15 meters lower in elevation. In its time, this locale would have been very near the bank of the San Diego River, probably on a bench or river terrace about 3 to 6 meters higher than the nearby river.

This site was discovered in early 2000 during archaeological monitoring of a narrow trench for a proposed City of San Diego sewer alignment project along Taylor Street. Observable in the upper portions of the mechanical backhoe excavated trench were the current Taylor Street pavement and its foundation

materials. Underlying this modern roadbed were what appeared to be earlier soil strata representing older constructed roadways along the base of the hill. These multiple deposits were essentially sterile and extended to a depth of slightly more than a meter below the modern paved surface of Taylor Street.

The Archaeological Program

When important archaeological resources were revealed beginning at a depth of nearly a meter, professional archaeological hand excavations were initiated within the project trench. The hand excavations were carried downward in arbitrary 10-centimeter levels, essentially from 90 to 170 centimeters in depth from an established data, and the recognized archaeological resources were recovered for recording. The soils were wet-screened over one-eighth-inch mesh screens, and the recovered archaeological materials were transported to the consultant's laboratory for careful sorting and analyses. For the hand excavations, the project trench was 19 meters long but just 65 centimeters wide. The narrow trench and its archaeological contents were arbitrarily divided into meter-long units for recording and analysis.

Upon recognizing the potential for further disruption of significant cultural resources from the planned sewer project, San Diego city officials determined that this portion of the proposed project alignment should be abandoned. The initial work trench was carefully back filled and sealed, and the contracted archaeological mitigation and recording program was curtailed. The lower levels of the trench units were not completely excavated.⁶ Virtually all of the recovered cultural materials recorded were in the seven levels from 90 to 160 centimeters in depth. Due to budget constraints, however, only certain portions of the recovered bone materials were sorted and analyzed in the laboratory. Also, as the project trench was very narrow, the lateral dimensions and full extent of the encountered archaeological depositions were not determined. Certainly, it would have been challenging to recognize and define distinct cultural strata within this confined deep trench. Notwithstanding these challenges, a good report on the archaeology accomplished was authored in 2001 by Johanna Buysse and Brian Smith of the firm of Brian F. Smith and Associates.

The Initially Recognized Archaeology

The archaeological program recognized and reported on two distinct features: (1) a concentration of "floor tiles" near the middle of the trench; and (2) an intense "trash scatter" at the northern end of the excavated trench. In addition, there were

recovered a variety of archaeological materials scattered throughout the 19-meter length of the trench: faunal food bones, many ceramic sherds (from fancy Majolica to plain Native brown ware), fragments of glass bottles and pieces of one drinking glass, as well as many other artifacts.⁷ The distinctive characteristics of a *matanza*, as such, and its extent, were not fully recognized in the initial archaeology report.

The stratigraphy of soil deposits encountered showed that each retained a “good” degree of integrity. Three metal utility pipe installations that crossed the project trench were revealed, largely in the lower portions of the roadway soil strata or just slightly lower. The report detailed that these intrusive pipelines “appear to have missed both the tile feature and the trash pit, although these pipelines have disturbed the general scatter of historic artifacts between the two features and the southwest of the tile feature.”⁸

The exposed tile feature was composed of at least two layers of rather intact, fired, flat, floor tiles built up from a depth of approximately 115 centimeters. The surrounding soil was stained dark reddish brown, as though by intense heat. Over the top and near the two horizontal layers of exposed tiles was virtually no trash. It would be reasonable to suggest that for this construction and activity area, any local rubble would have been cleared and the ground surface leveled. This feature may represent the latest Presidio archaeologic stratum encountered. The obvious tile pavement feature was preserved in place and, importantly, the strata beneath it were not investigated. The purpose of this tile feature was not obvious from the small area exposed, but it was posed that it might be part of a kiln or a Presidio workshop.⁹

The described “trash scatter” feature in the northern portion of the project trench was comprised of one zone of historic artifacts overlying several broader strata of burned bone and charcoal. The lower strata represented “several dumping and burning episodes, evidenced by multiple layers of burned bone and charcoal.”¹⁰ The description of this feature is focused upon the deeper strata of intensively burned material, mostly bone.

The artifact materials present within the upper portion of the “trash scatter” feature essentially were similar to those encountered throughout the entire trench.¹¹ This artifact material included household trash and architectural debris, almost all of which was highly fragmented. The household trash elements, such as fragments of ceramic tablewares and glass items, actually were more frequent in the southern portion of the project trench.¹² A review of the catalog for all units suggests that the vast majority, well over three-quarters, of this household trash and architectural rubble occurred in the levels directly below the sterile roadbed strata, between the depth levels of 90 to 130 centimeters.¹³ Indeed, much of this jumble of household trash and architectural rubble may have tumbled down the steep hillside and would

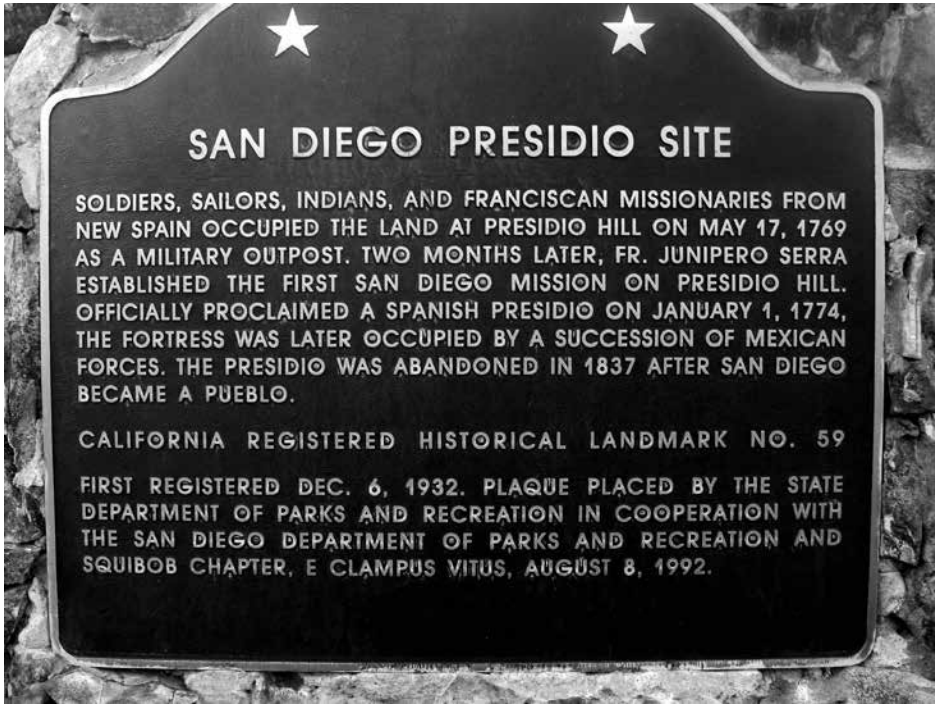
represent a secondary deposition. Very little household trash was recovered in the lower excavation levels, those levels below 130 centimeters, where bony debris may have been the common “trash” element. Due to project constraints, the lowest levels were not fully excavated, and the bone materials recovered from most of the units in the trench were not sorted or cataloged.

The recovered artifacts of household trash were typical of late Presidio era materials. Over 1,600 fragmented Native ceramics, Tizon Brown Ware, dominated the assemblage, along with somewhat less than 100 sherds of fancy Majolica Wares, mostly Pueblo Blue-on White tablewares, with some possible San Elizario Polychrome and Aranama Polychrome types.¹⁴ The additional presence both of (a) European/American white tableware ceramics, and (b) imported glass bottles suggests that this trash includes materials dating from 1820-1830 when the Presidio inhabitants began participating in international maritime trade. A considerable amount of weighty, broken, architectural rubble was recovered here also, including floor and roof tile fragments, plus small pieces of adobe blocks.¹⁵ These architectural materials suggest that much of this deposition may have developed in the 1830s when the Presidio structures were abandoned and salvaged for building materials for newer homes in Old Town.

A *Matanza*, A Meat-Butchering Station Newly Interpreted

A re-examination of the report’s lowest archaeological depositional episodes and the vertical distribution of recovered materials revealed the partial extent of the possible *matanza*, a Presidio meat-butcher station. Actually, the deeper portions of the trench were not excavated, so the full extent of this *matanza* feature was unrevealed. The lower portions of the recognized “trash scatter” feature in the northern portion of the project trench was comprised of several strata of burned bone and charcoal. Yet, only the bone debris in the two northernmost units was fully sorted and cataloged; the bone material in the other units was not analyzed.¹⁶ Additional bone material was recovered in the deeper levels of the units at the southern portion of the trench,¹⁷ while the middle portion of the trench beneath the tile feature was not investigated. Thus, it can be suggested that debris from the *matanza* possibly extended through the breadth and the entire length of the project trench.

Only in the deeper levels of the northern portion of the project trench were remnant strata of the meat-butcher feature detailed in the report: “concentrations of burned bone and charcoal lenses scattered throughout the units between 130 and 150 centimeters...bone is also associated with the trash scatter, but is concentrated directly below 140 centimeters...charcoal lens...extends...to a depth



California registered historical landmark No. 59. Photo courtesy editor's collection.

of 170 centimeters...and is associated throughout with small fragments of burned animal bone," and "several dumping and burning episodes, evidenced by multiple layers of burned bone and charcoal."¹⁸ These intense burning episodes often resulted in much of the bone debris becoming highly fragmented. Commenting generally, the report stated, "most bone recovered was very fragmented and generally incinerated and thus categorized as unidentifiable bone."¹⁹ Some bone specimens, however, could be classified as cow and pig.²⁰

Mixed with the bones within the deep strata of the presumed *matanza* were a number of sherds of Tizon Brown Ware.²¹ Therefore, bowls of Native pottery might have been associated with the butchering operations, occasionally breaking at this locale. It can be supposed that such ceramic containers were utilized to hold the fatty scraps to be rendered into tallow.

Two Comparable *Matanza* Sites

Two very similar *matanza* sites from Mexican era ranchos are known, one from the Ontiveros Rancho and one from Rancho Los Cerritos.

Patricio Ontiveros was a soldier on the San Diego Presidio roster and retired

after 20 years of service in 1809. Shortly afterwards he was appointed as the *mayordomo* of Mission San Juan Capistrano, an esteemed position to oversee the mission's vast cattle herds and manage its economy. Soon thereafter he had workers build the large Ontiveros Rancho *hacienda*, which the family occupied until about 1835.²² Located about 100 miles to the north of the San Diego Presidio, south of Mission San Gabriel, it is recorded as the LAN-1016aH site. Feature 1 at the Ontiveros Adobe was a meat-butcherer pit recognized as a *matanza*. This pit deposit extended over seven meters and was located about 25 meters distant from the house. The pit contained multiple strata of highly calcined, as well as unburned, bones and skull parts, plus blackly stained soil. Interestingly, as at the San Diego Presidio feature, sherds of Native ceramics also were common, as well as some household trash.²³ Cow bones dominated the identifiable assemblage, with at least 16 individual cows represented (MNI=16); horn cores, skulls, jaws, and teeth were present.²⁴ The bones of sheep, pig, and chicken also were represented.²⁵

Jonathan Temple sailed from the East Coast as a maritime trader, arrived in Los Angeles in 1827, and prospered as a highly successful Los Angeles trader and merchant. He became a naturalized Mexican citizen, was baptized a Catholic at Mission San Diego, and married into the prominent Cota family. Temple traded in and appreciated the cattle economy and the land it supported. In 1843 he purchased Rancho Los Cerritos along the Los Angeles River, in modern Long Beach, about 100 miles west-northwest of the San Diego Presidio. Temple initiated the construction of a grand adobe *hacienda*.²⁶ The "Island" trash pit about 15 meters west of this big house was utilized as a *matanza*, as well as an open pit for household trash. This pit was filled with multiple layers of calcined and unburned bone and slag-like material, along with domestic trash. This big pit feature was five meters or more in width; it may have been circular, but it was incompletely investigated. The depositions dated from the mid-1840s through the late-1850s. From one middle stratum of unburned bones, about 700 identifiable faunal bone specimens were cataloged. Cattle bones dominated this analyzed sample, with at least five individuals represented (MNI=5); horn core fragments also were present. Many bones evidenced hacking and butchering marks but no saw marks. Other domestic animals, smaller mammals, and avian bones remain to be analyzed.²⁷ Sherds of Tizon Brown Ware, Native ceramics, were common throughout the pit;²⁸ and their direct association with the bone debris is probable but unproven.²⁹

Commentary and Conclusions

This analysis of the Taylor Street report on the P-37-019194 site investigation has reinterpreted the archaeology encountered beneath the current and earlier

roadway strata. Deep beneath the Taylor Street pavement were well preserved archaeological strata rich in artifactual resources and retaining good integrity. There were three types of historic Presidio episodes preserved beneath the roadbeds. Thus, the P-37-019194 locale and its investigation are an important part of the Presidio heritage story.

The stratigraphically highest and most recent Presidio episode is represented by the remnants of double layers of fired floor tiles. This tile pavement was situated at a depth of about 105 to 115 centimeters below the project data. Possibly this was part of a firing kiln for the production of architectural floor tiles but it may have been just a paved walkway, or a portion of a workshop or even a much larger structure. Only a small portion of this tile feature was investigated.

Somewhat earlier in time and probably underlying the tile feature were deposits of a "trash scatter" that probably extended the length of the entire excavated trench. This scatter of artifactual material included highly fragmented household trash plus architectural debris. Over three-quarters of this trash and rubble occurred between the levels of 90 to 130 centimeters in the project trench. This trash includes imported materials from the international maritime trade of the 1820s-30s. It also included architectural debris probably developed in the 1830s when the Presidio structures were salvaged for building materials. It is proposed here that much of this jumbled rubble simply may have tumbled down the steep hillside and represent a secondary deposition.

Still deeper in the project trench, essentially in the levels between 120 and 170 centimeters and probably extending deeper and through the entire length of the project trench, was only partially uncovered archaeological remnants of an earlier use of the locale as a *matanza*, a Presidio era meat butchering station. Although not directly dated, the remnants of this *matanza* underlie the "trash scatter" with materials dating from the 1830s, so this *matanza* probably was in use prior to 1830. The nature of this lowest and earliest archaeology was not fully recognized in the original project report. It is proposed here that the multiple exposed strata of highly incinerated bones, darkened soil and charcoal, and some preserved bones can be interpreted as the archaeological remnants of multiple episodes in the use of the locale as a *matanza*, a butchering station. Fortunately, preserved in some soil strata were a few unburnt and identifiable bones; about two-thirds represented cattle, while one-third could be identified as pig.

These deepest layers of the Taylor Street locale, a proposed Presidio *matanza*, have the following *matanza* characteristics: (1) multiple layers of highly incinerated bone; (2) darkly stained soil layers, probably burned meat scrapes; (3) charcoal and ash layers; (4) some sherds of broken Native ceramics containers; (5) some identifiable bones preserved under soil layers; and (6) a location within only a

modest distance from residential structures. The Taylor Street archaeological *matanza* feature shares these six characteristics with the *matanza* features archaeologically investigated at the Ontiveros Rancho and at Rancho Los Cerritos. Being a modest distance from a habitation, sometimes kitchen garbage may be added to such trash pits, but it appears that household debris is not directly associated with the layers of incinerated bone. Within the Presidio, in interesting contrast, most of the abundant cattle bones encountered in deposits of household garbage, as most of the other kinds of animal bones present, were unburned.³⁰

A key characteristic in appreciating *matanza* features would appear to be the relational distance to residential structures. As a *matanza* for slaughtering and butchering meat for household consumption, such a *matanza* apparently would be located only a modest distance from kitchen facilities. Yet, that nearness would be smelly and attract flies, insects, and other vermin to the scrappy butchering debris; thus, it was necessary to fully incinerate the debris, or cover it with soil, or both. The smell and the incineration smoke would be within a modest distance from the residence but quite temporary. The relational distances for these three examples range from about 15 to 45 meters distant from residences. In general agreement, two historical accounts of pre-1848 California household's slaughtering for meat consumption mention the distance as "not over sixty feet" and "about 100 feet distant."³¹ In contrast, the California *matanzas* for the slaughtering of hundreds of cattle for their leather hides typically were located in open fields apparently quite distance from residences, and often no extra efforts to incineration of the rotting carcasses were exerted.

In conclusion, the Taylor Street report on the P-37-019194 site investigation, even though only a very limited project, represents a superb example of a Presidio era slaughtering locale for household meat consumption, a *matanza* located just a modest distance outside the citadel walls of the San Diego Presidio.

NOTES

1. Mariano Velázquez de la Cadena, Edward Gray, and Juan L. Iribas, *New Revised Velazquez Spanish and English Dictionary* (Chicago and New York: Follett Publishing Co., 1962), 449.
2. Johanna L. Buysse and Brian F. Smith, *An Archaeological Report for the Mitigation, Monitoring, and Reporting Program at the Water & Sewer Group Job 530A, Old Town San Diego, DEP #94-0663* (2001), report prepared by Brian F. Smith and Associates, San Diego.
3. Vance G. Bente, *Test Excavation of LAN-101aH: The Ontiveros Adobe, Santa Fe Springs, California* (1980), report prepared by Greenwood and Associates, [Pacific Palisades]; Jay D. Frierman, *The Ontiveros Adobe: Early Rancho Life in Alta California* (1982), report prepared by Greenwood and Associates, Pacific Palisades.

THE JOURNAL OF SAN DIEGO HISTORY

4. Iris H.W. Engstrand, *Rancho Los Cerritos, A Southern California Legacy Preserved* (Los Angeles, Friends of Rancho Los Cerritos, 2000); William S. Evans, Jr., Glen Benveniste, Rusty Rhodes, and Mike Sampson, "Cattle Bone at Rancho Los Cerritos: Preliminary Observations," *Archaeological Research Associates Bulletin* 15, no. 2 (1970): 4-7.
5. Frierman, *The Ontiveros Adobe*, 121-125.
6. Buysse and Smith, *An Archaeological Report*, 2.0-1, 6.0-10, 6.0-12.
7. *Ibid.*, 6.0-2 and 6.0-11-12.
8. *Ibid.*, 6.0-1.
9. *Ibid.*, 6.0-11-12; Figure 6.0-1; Plate 6.0-4, Plate 6.0-8.
10. *Ibid.*, 6.0-11-12, 6.0-14, Figures 6.0-1 and 6.0-2.
11. *Ibid.*, Tables 6.0-7 and 6.0-8.
12. *Ibid.*, 6.0-9-11, Tables 6.0-7 and 6.0-8.
13. *Ibid.*, Table 6.0-2.
14. *Ibid.*, 6.0-4-5; Tables 6.0-3, 6.0-4, and 6.0-8.
15. *Ibid.*, 6.0-3, Tables 6.0-2 and 6.0-9.
16. *Ibid.*, 5.0-2, 6.0-2, 6.0-8-11, and Table 6.0-9.
17. *Ibid.*, Table 6.0-5.
18. *Ibid.*, 6.0-11-12, 6.0-14; and Figure 6.0-2.
19. *Ibid.*, 5.0-2.
20. *Ibid.*, 6.0-8, and Table 6.0-5.
21. *Ibid.*, Tables 6.0-2 and 6.0-9.
22. Bente, *Test Excavation of LAN-101aH*; Frierman, *The Ontiveros Adobe*, 146-148.
23. Bente, *Test Excavation of LAN-101aH*, 44, 82-83, 118; Frierman, *The Ontiveros Adobe*, 13.
24. Bente, *Test Excavation of LAN-101aH*, 85; Frierman, *The Ontiveros Adobe*, 101-138.
25. Bente, *Test Excavation of LAN-101aH*, 82-83; Frierman, *The Ontiveros Adobe*, 138-140.
26. Engstrand, *Rancho Los Cerritos*.
27. Evans, Jr., et al., "Cattle Bone at Rancho Los Cerritos: Preliminary Observations."
28. William S. Evans, Jr., "California Indian Pottery: A Native Contribution to the Culture of the Ranchos," *Pacific Coast Archaeological Society Quarterly*, 5 no. 3 (1969): 71-81.
29. For additional aspects of this Cerritos "Island" feature, see William S. Evans, Jr., and Paul G. Chace, *Rancho Los Cerritos Archaeological Collection Transfer to The City of Long Beach*, report prepared by Paul G. Chace, Escondido, 2005.
30. Dayle Marie Cheever, "An Historical Faunal Analysis: Large Mammal Utilization at the San Diego Presidio" (Master's Thesis, San Diego State University, 1983); Connor Buitenhuys, "Investigating Faunal Remains from the San Diego Presidio Chapel: Problems of Ethnicity and Creolization during the Mexican Era" (Master's thesis, California State University, Chico, 2014); Paul G. Chace, "Animals Bones Can Talk, Interpreting San Diego Presidio Faunal," Paper presented at the 2015 Annual Conference of the California Mission Studies Association, Ventura.
31. Frierman, *The Ontiveros Adobe*, 121-125.