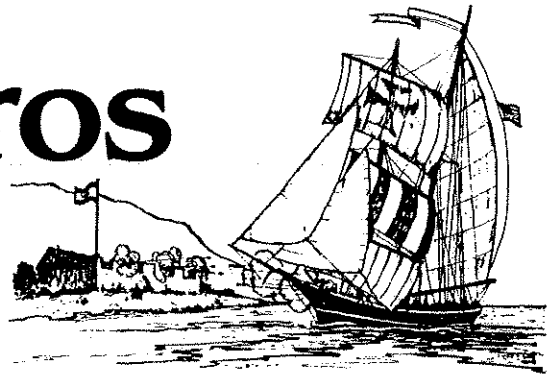
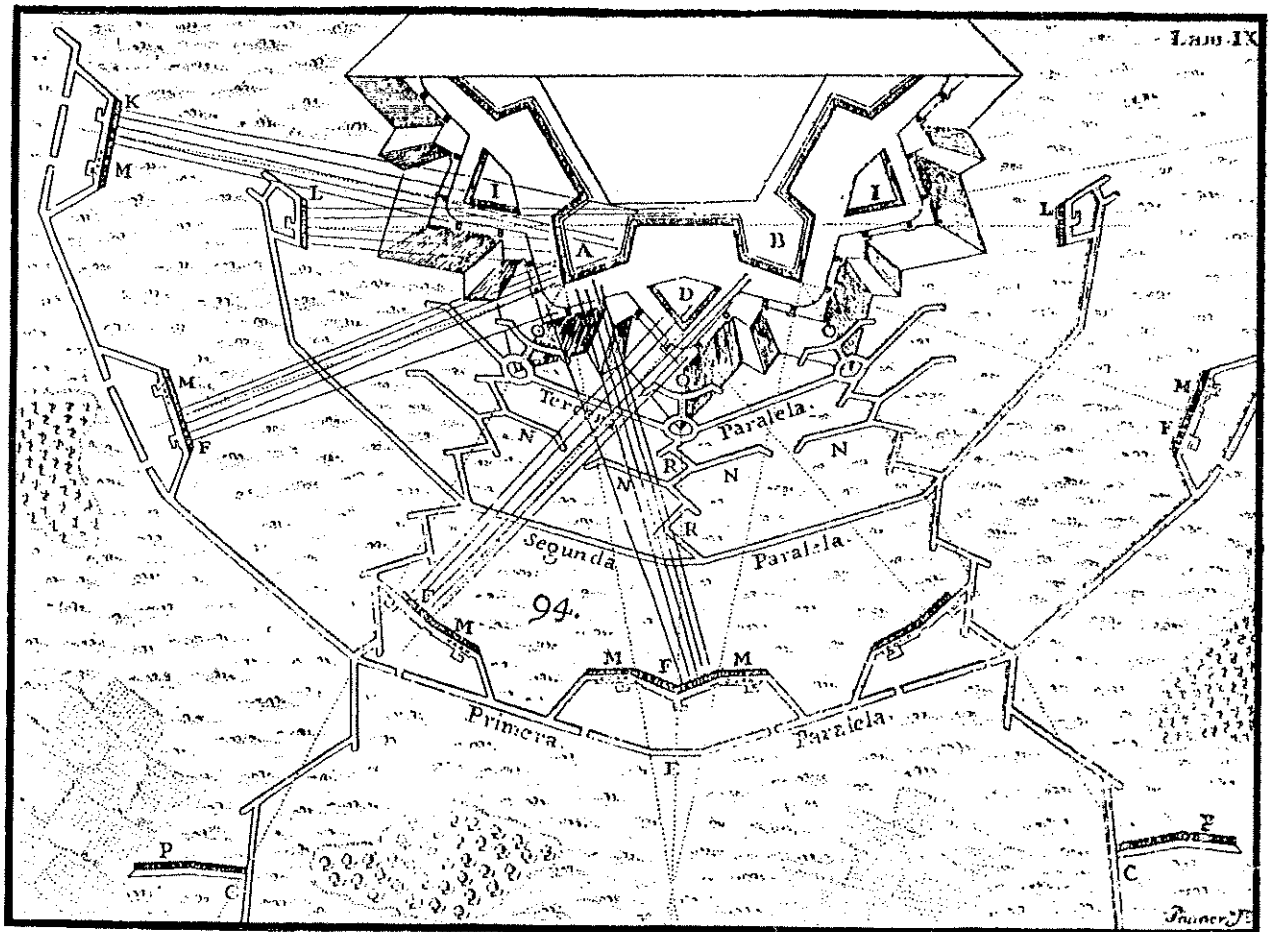


# Fort Guijarros Quarterly



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## FORT GUIJARROS QUARTERLY

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COVER: Figure 94 of Don Pedro De Lucuze's 1772 Principios de Fortificacion was selected to depict the strategies of defending a fortified city. The cover figure illustrates a series of defensive lines, outpost forts, and a citadel above the walls of the fortress. Fort Guijarros is equivalent to one of the outpost forts.

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# BATTLE OF SAN DIEGO BAY KEYNOTE SPEECH

March 22, 1988

by Brad Bartel

Fort Guijarros Museum Foundation Advisor

Dr. Bartel is a Professor of Anthropology at San Diego State University where he currently leads the excavations at the Presidio de San Diego. He is also the Associate Dean of the Graduate Division and Research at San Diego State University.



Madame President, Mr. Ambassador, Captain Klintworth, Reverend Waite, Mr. May, and fellow citizens of San Diego; as an anthropologist who has studied many different ceremonies in other cultures, it is a refreshing change of pace to be able to participate in a ceremony, especially in one's own country, and as important as this one has become.

I found it interesting that the Battle of San Diego Bay is one of the only historic ceremonies to be found in San Diego on an annual basis. In all societies, ceremonies are used for renewal, as a time to reflect on what is important to a group of people. Ceremonies are also extremely important to the education of the future generations. This is the theme I want to stress today.

When the epic poetry was recited in Greece and Rome thousands of years ago, or even today in parts of Albania and Yugoslavia, the main purpose was historical education. To allow adults and the young to understand, discuss, and ponder the implications of past historic episodes, no matter how some are laced with exaggeration and the supernatural.

This ceremony is no different. The visual stimuli of the reenactment, coupled with the written word and speeches, allows all of us to understand the past in a very effective way. One only hopes there will be many more years of this ceremony, along with others in San Diego that include parts of our heritage.

The education of the citizens of San Diego about our history is presently at a critical juncture. For so many years we have had to rely upon the written word for an understanding of the events of the past two hundred years. It is only during the last decade that modern archaeological research has opened a new vista into what the past was like.

Historical written documents give us one interpretation of past events; often with a filter of bias towards a specific individual or societal class. The archaeological record gives us confirmation of the historical writings, or, in many instances, conflicting interpretations. The understanding and integration of these two data sources is what really aids us in bringing a true history alive.



Brad Bartel addresses those attending the Battle of San Diego Bay.

There are presently two very exciting and important archaeological projects taking place here in San Diego. The two earliest Spanish forts established in San Diego during the 18th century, here at Fort Guijarros, being excavated by Mr. Ron May and volunteers from the [Fort Guijarros Museum Foundation and the] San Diego Archaeological Society with support of the United States Navy; and the new excavations at the San Diego Royal Presidio in what is now known as Presidio Park, being excavated by San Diego State University under my direction and with support from the San Diego Historical Society.

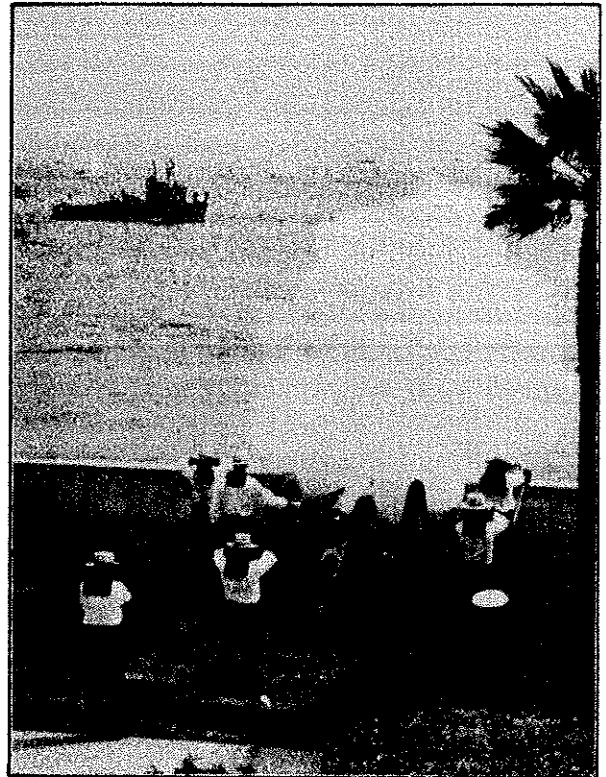
Using new field techniques and computer applications, these two excavations are uncovering the origin or San Diego. They are telling us about the facets of everyday life so important to the young and old of our city; how people worked, played, and went about their daily round of activities. Important to the scientific community, these projects are answering questions about the social process of colonialism: the interaction between Spanish colonists and Native American. These new excavations are finding thousands of important artifacts, showing the richness and diversity of the lifestyle of the first Europeans in California.

The Presidio excavation is also trying to aid in the education of the school children of San Diego by offering loaner artifact kits to schools, representative of the material found at the site, as well as teacher training guides about the objectives of history and archaeology.

The community of archaeologists and historians in this city are looking forward to a revitalization of interest in ceremonies such as this one, along with renewed concern about the past of our beautiful city and state. As the noted historical archaeologist Ivor Noel Hume said:

We must all surely agree that there can be no substitute for historical truth, even if the acceptance of it requires that we change our cherished concepts of the past. But if we do not seek it now, the opportunity will be lost and our misconceptions will be propagated until the end of time. The responsibility of this generation is to see that it is not allowed to happen.

The Presidio and Fort Guijarros archaeological projects welcome your interest. I present all of you an open invitation to visit the Presidio excavation any Saturday during the mornings and early afternoon in Presidio Park to watch us uncover our past. Thank you for sharing today in an important ceremony.



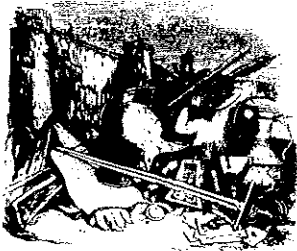
The U.S. Navy Cannon Team exchanges cannon fire with a Torpedo Retriever to reenact the Battle.

A TRANSLATION OF CHAPTER VI OF DON PEDRO DE LUCUZE'S 1772  
PRINCIPIOS DE FORTIFICACION AS IT RELATES TO THE DESIGN  
 OF THE FORT AT PUNTA DE GUIJARROS, SAN DIEGO, CALIFORNIA

Translated by  
 Col. Frank Quillin, U.S. Army (ret.)  
 and Margarett Quillin

Introduction by  
 Ronald V. May  
 Director of Archaeology Programs

Introduction



The greatest challenge to the Fort Guijarros Museum Foundation has been to recreate an image of how the 1796-1835 Spanish fort on Punta de Guijarros, San Diego Bay, California physically appeared. No known sketches or plans have been found in archival research by Research Associates Steve Colston or Linda Roth. Archaeological excavations have produced one good cross-section of only a small part of one of the walls. No overall aerial illustration or description has been found that explains the layout of walls, cannon, ramps, barracks, kitchen, storage areas, powder house, corrals, water sources, or the parade ground.

Monterey historian Amelia Elkinton and Santa Cruz historian Edna Kimbro reported a discovery of a conceptual plan for a sister fort built in Monterey in 1794. Spanish historian Eric Beerman copied the plan from the Archives of Segovia, Spain in 1984, and Elkinton forwarded the copy to the Fort Guijarros Museum Foundation. The Board of Directors of the Foundation then approved \$200 to retain Beerman to research the Archives of Segovia for plans of Fort Guijarros.

Foundation Vice Chairman Jesus Benayas met Beerman in 1985 in Madrid, but did not receive any documents concerning San Diego.

Beerman did copy the 1772 book by Don Pedro de Lucuze entitled Principios de Fortificacion and Benayas brought the copy back to the Foundation. Review of the Lucuze book revealed direct correlations with architectural elements exposed in the archaeological excavations.

Later that year, Founding Life Member Fred Buchanan assumed research interest in analyzing the hundreds of tiles, mortar, plaster, and other pieces of the puzzle housed in a security room at the U.S. Naval Submarine Base, San Diego, near the ruins of the fort. Buchanan drew from thirty years experience as an engineer for the Department of Public Works, U.S. Navy and on the principles of practical construction to examine, sketch, and work out solutions to how the pieces might have functioned. Researchers in the Foundation have assumed that Lucuze's work would have been mandatory reading for Spanish engineers in the 18th century.

Buchanan enticed Colonel Frank Quillin, U.S. Army (ret.) to join in the project by translating Chapter VI of Principios de Fortificacion. Col. and Mrs. Quillin completed that work and have gone on to complete most of the balance of the book.

Future issues of the Fort Guijarros Quarterly will include reports by Buchanan on the progress of his research. Quillin's translation of Chapter VI is provided in this issue to introduce this project. It should be noted that Don Pedro de

Lucuze intended that the book instruct in the strategies of fortifying entire cities along waterways. He provided detailed plans for "star forts" that surrounded buildings and homes. Outlying defense walls and cannon forts provided the front line of defense. Fort Guijarros was the first line to defend a maritime assault against the Royal Presidio de San Diego de Cosoy, some five miles inland.

## PRINCIPLES OF FORTIFICATION

### VI

#### "Division of the Works in Essentials, Conveniences, Accidentals, and Accessories."

"The works of a fort are considered to be in four classifications according to their importance, in respect to their essentials, conveniences, outbuildings, and accessories.

The essentials are understood to be the ramparts, the moat, covered way, and esplanade.

The conveniences, at whatever place the terrain permits, are: retired flanks, rear guards, observation posts, counter guards, places for entrenched arms or lunettes, multi-directional firing ports, serpent's tongues, and counter-mines.

The Accidentals (that only apply in particular cases according to requirement) are: mounds of earth, places high and low, low ramparts, crown works, horn-works, claws, bonnets, staked bastions, redoubts, and barriers.

The Accessories in all forts are: sentry boxes, guard house, gates, bridges, portcullises, brigs, message center (P.B.) barracks, storerooms, cisterns, hospital, arsenal, church, and other minor buildings.

### VII

#### "The Rampart and its Parts."

By rampart is understood the work which girds or closes the plaza: consists of a thick mound of dirt (faced with) revetted on the outside by sod, stone, or brick work on the exterior.

The revetment is called the (skirt, jacket) casing of the (wall) rampart: when it is of stone or brick it takes the name of muro, ordinarily.

The "terraplein" is a mass of earth, whose regular height is seven varas\*; of sufficient height to cover the buildings of the plaza. Its upper width is proportioned in such a way that the parapet and the bank is formed leaving space for the artillery, and passage of the troops. This way is called the "adarve" (parapet walk) for being covered by the parapet, and is given a slight inclination toward the plaza so that the water may run (off) without detention.

[\* Vara is about 33" or a (approx.) yard. (American Heritage Dictionary says 32" to 43".)]

The ground takes its natural slope to the interior part, in all the fort there are smooth inclines, for common use, and ease in transporting cannons. A street is left between the houses and the terraplein in order that the troops may go quickly to where (they may be) needed.

The revetment is regularly made of rubble, of stone, or of brick, with buttresses that may enter (join) the terraplein. This facing serves principally to prevent continuous repairs that would be necessary to the conservation of the terraplein, if it were not revetted, like the defenders will want it, in the occasion of an attack; will the cannon makes greater damage in the rubble-work than in the earth.

From the plane of the moat the revetment rises to the upper (surface) area of the terraplein, forming in the outer part the

escarpment, whose base is (usually) regularly the sixth part of the height. For the purpose of making it with this slope, and accompanied with reinforcements, it resists more, and with less material both the pressure of the earth, as well as the batteries of the besieger.

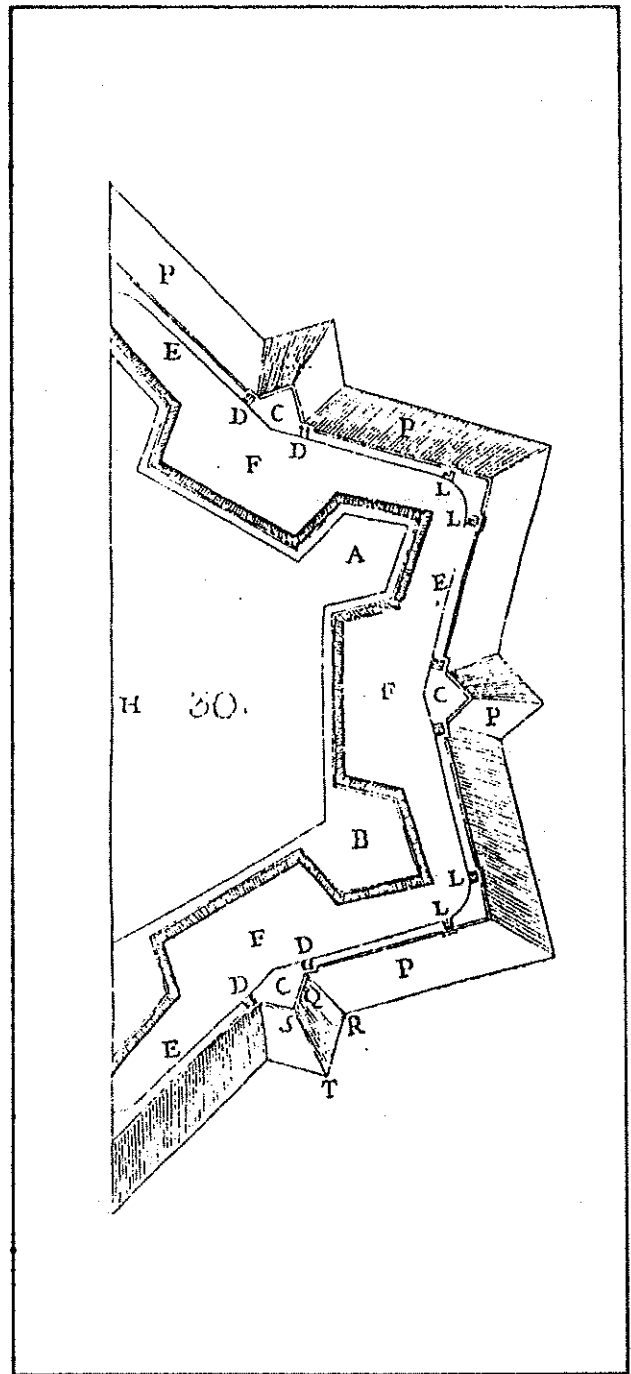
All the rubble work, both wall and buttresses require firm foundation, that is deepened, more or less, according to the terrain; but it is made of greater width in order to allow a skirting board to each side with which to make more secure the foundation of the wall and buttress.

In countries that lack good rubble and have good meadows (abound in good pastures, sods) revet the wall of rubble and dirt with sods or grasses, leaving between this and the moat a space of 5 or 6 feet, called the bank or berm, in which they put stakes in order that ruins from the rampart do not fall in the moat.

The 'cordon' is an adornment or molding, semi-circular in figure, that runs through the upper extreme of the revetment of stone or through the magistral line and distinguishes the exterior of the work from the interior; so it is understood through the 'cordon' is called the interior and the rest exterior.

The parapet is formed above the terraplein (mound rampart) following the line of the 'cordon,' good earth well rammed (tamped), not mixed with rocks, with its small revetment of brick to conserve it. It should be strong enough to resist a cannon ball; for which it is given a width of seven 'varas' or eight if (if it is not revetted) no revetment. The exterior height is 4 feet and the interior 8, sloped at the top so that it discloses the line of the counterscarp.

The 'banqueta' is a step of earth or stone made over the terraplein next to the parapet, four feet wide and the height proportioned in order that troops would be able to fire with chest covered.



The figure 30 represents the plan of a half-hexagon fortified, with lines necessary to the intelligence of the rampart, moat, covered way, and esplanade.

The space H indicates the body of the plaza, closed by the four parallel lines.

The exterior (always thicker - wider - than the others) represents the magistral line or the 'cordon.'



The first space between this line and the one that follows indicates the width of the parapet.

The second small space, between the second and third line delineates the "banqueta."

Finally the 3rd and 4th line indicates the terraplein.

Omitted are other lines that should represent the escarpment, slopes of the parapet, banqueta, and terraplein, not to confuse the figure. When this is formed by a single line it is understood to be the magistral, or the 'cordon.'

### VIII

#### "Of the Batteries on the Rampart."

In the rampart are batteries that are made with gunports, merlons, and esplanades for cannon.

The gunport is an opening, arranged in the parapet in order to fire the cannon. The gunport begins three feet high through the interior part, which is called "rodillera," and with slope toward the exterior where it has a width of ten feet in order that the muzzle blast does not destroy the sides: the interior width is 2 1/2 feet.

It is known that the air is violently agitated by the blast of the piece through the ignited powder whose expansion destroys whatever it opposes.

Merlon is the portion of the parapet that is left between two embrasures. These are made ordinarily 15 to 18 feet distant from center to center, in order that the merlon remains strong, and to enable the artillerymen to serve the pieces.

Bateria is whatever place, covered by the parapet, appointed to a number of pieces of artillery, in order to fire on the enemy. The diverse types of batteries will be seen in Section II.

When there are no merlons the bateria is called the 'barbeta': might be disposed so in case of situating itself on an eminence, whose height naturally covers or in a

front that corresponds to the sea, in order to direct the fire with freedom no where suitable. Never-the-less, if the (site) siege is very low or at water level it is important to cover it with merlons, then the freedom of firing to whatever part is gained by making the gunports wider than ordinary.

Barbetas also are made in the flanked angles of the bastions, and other exterior works, raising the 'bateria' 4 1/2 feet above the terraplein so that the cannon is able to shoot without damaging the parapet: this manner of firing took the name of 'barba,' or 'barbeta.'

The cannon esplanade consists in a firm pavement of stone or wood so that the wheels of the gun-carriage do not bury themselves by the heavy weight of the piece: its figure is trapezoidal with a gradient very gentle toward the parapet, in order to lessen the backward movement or recoil of the cannon, and to facilitate its return to battery.

On the flanks and other places where there should be some cannon the esplanade is tiled with square hewn stone.

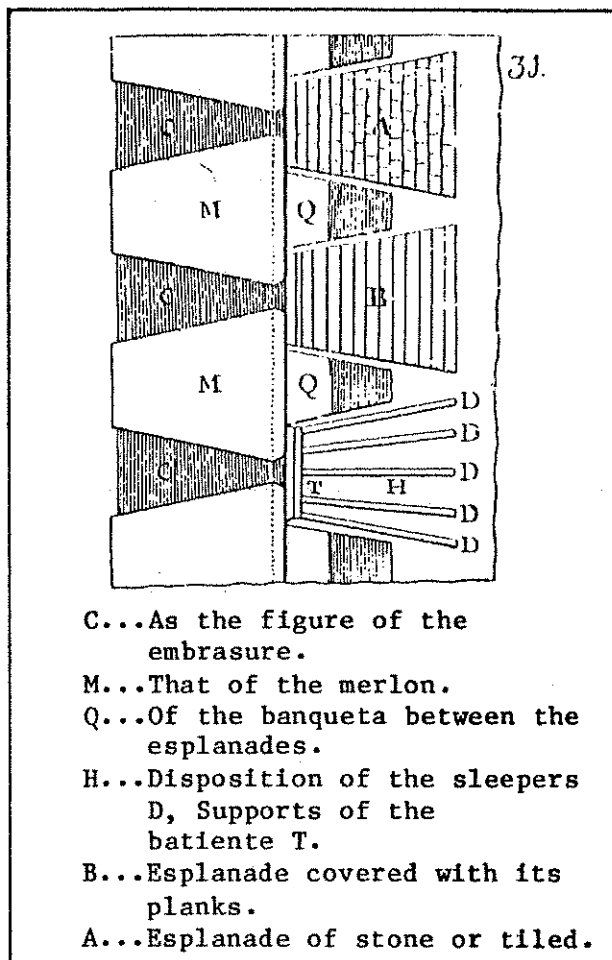
If it has to be of wood a 'batiante' is needed, 5 (girders) sleepers, 18 planks, of 180 nails (spikes).

The 'bastiente' is a rather thick wood of 9 ft. in length, that makes the front of the esplanade, and it is positioned near and parallel to the parapet.

The sleepers are five woods, 18 ft. long, whose heads support (prop)(stay) the batiants; and separated equally one from the other, occupying the space of the esplanade, forming its gradient.

The space between the sleepers is made firm by well-tamped earth, then the planks are placed nailing each one to all the sleepers.

It should be noted that saying 'esplanade' it is understood that it is of the plaza if it is not distinguished by the expression 'esplanade of cannon.'



'Road of rounds' is a space 5 feet wide that, in ancient constructions, was left between the cordon and parapet provided with a guardrail for the security of the rounds (patrols, beat, or ammo). In modern works this way is omitted as unnecessary (useless), and the rounds are made by the terraplein with greater convenience.

The murralla forms, in its diverse directions all the bastions (bulwarks) and curtains of the enclosure.

#### IX

#### "Of the Bulwarks and Curtains."

The principal part of the fort is the bulwark (bastion), because of its disposition, shape, magnitude and construction the defense of the plaza is depending. It can be full, vacant, united, separated, double,

(chopped), cut, and level.

If the terraplein occupies all the space of facings, flanks, and demi-gorges one has the full bastion; when it only follows the direction of flanks and facings it is called empty.

The full bastion is preferable to the empty vacant; because in it a mound of dirt can be raised that dominate the works of the besieger, and defend the pass of the moat; and in case a breach is opened in the facing, it offers the convenience of cutting that is not easy to do in the 'vacio.' This question is decided by the excavation of the moat (fosa); if there is not enough dirt to fill the bulwark, it remains vacant, usually advantageous to situate a warehouse. It is certain that the (lleno) "full" is exposed more to the cannon than the mine, and the "vacant," (vacio) more to the mine than to the cannon.

'Baluarte unido' (united bastion) is that which has its flanks, and demi-gorges united to the curtains; in contradiction from the 'separado' (separated), that some want to separate from the body of the plaza by a small, intervening moat...

#### X

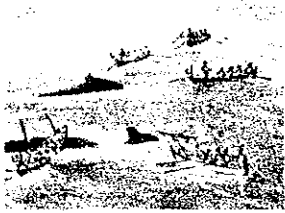
#### "Of the Low Rampart, and Moat."

Low rampart is a forewall below the level of the plaza, similar to the ancient barbican, ten varas wide, covered by parapet, order to better defend the moat, and to destroy lodgements of the besieger in the covered way. It has the defect that the ruins of the main wall deter usefulness especially in the facings: by reason of not being (allowing admittance) generally admitted, but doesn't stop being useful in some particular cases.

The moat is a deep space, which circles the plaza and makes an essential part of its defense: it can be of water, or dry, whatever mode is good, though with some diversity (differences--distinction). (Lucuze 1772:24-35)."

FORT GUIJARROS MUSEUM FOUNDATION VOLUNTEERS TO ASSIST THE U.S. NAVY IN  
ASSESSING AN ARCHAEOLOGICAL DEPOSIT IN THE PATH OF A MILITARY CONSTRUCTION  
PROJECT AT BALLAST POINT

Ronald V. May  
Director of Archaeology Programs



The Fort Guijarros Museum Foundation Board of Directors approved a research project for the summer of 1988 that would assist the U.S. Navy in a 1989 military construction project. Private contract archaeologist Brian Smith found the site during the summer of 1987 while conducting excavations for the Navy.

The proposed construction zone involved an area covered by a layer of soil that Smith interpreted as a whaler's camp. Consultation with the State Historic Preservation Office (SHPO) in Sacramento in accordance with 36 CFR 800 did not provide satisfactory resolution as to whether or not the layer of soil was scientifically significant.

While the Fort Guijarros Museum Foundation investigated the ruins of the walls of Fort Guijarros, Smith conducted trench and test pit excavations in various places at the tip of Ballast Point. Although he did not examine the whaler's soil layer at the Fort Guijarros site, Smith found white clay pipe fragments and glass that dated in the 1860 to 1880s. He concluded that he had found another place where the whalers had boiled whale oil.

Smith recommended that further archaeological work be done to resolve the question of importance or salvage of the material before construction. At issue with the SHPO is whether or not the Presidential Advisory Council's 106 Procedures under the National Historic Preservation Act of 1966 would apply to the construction project. If the deposit turns out not to be

significant enough to be eligible for inclusion on the National Register of Historic Sites, then the review process can be considerably shortened.

However, the expense of a contract archaeology dig could adversely affect the plans of the U.S. Navy. The Board of Directors of the Foundation reasoned that the value of obtaining comparable scientific information to assist in the study of the whaler's deposit atop the ruins of Fort Guijarros would be worth expending the 1988 Summer dig time at the construction site.

Analyses of bones, glass, ceramics, metal, and other materials could be published in the Fort Guijarros Quarterly. More exciting, perhaps, is the presence of Spanish clay tiles among the gray soil at the new site. The mystery of these tiles is a direct relationship to the research on the Spanish fort.

Although Foundation directors were uncertain of the SHPO's position on the deposit at the tip of Ballast Point, they went ahead and applied for the 1989 Archaeological Resource Protection Act (ARPA) permit through the Naval Facilities Engineering Command (NAV FAC ENG COM) in Arlington, Virginia. That permit included a research design for excavation in U.S. Army, whaler's, and Spanish deposits along the walls of Fort Guijarros.

A new arrangement with Dr. Brad Bartel and the new Anthropology Museum at San Diego State University was agreed upon for the future curation of the collection. In April, Dr. John Bernard Murphy, NAV FAC ENG COM, informed the Foundation that the ARPA permit had been

FAC ENG COM, informed the Foundation that the ARPA permit had been approved. The section of the ARPA permit that addressed the whaler deposit for Fort Guijarros will be applied at the military construction site. The only changes will be in the field strategy.

#### Problem Orientation of a Shore Whaling Station

The Fall 1987 issue of the Fort Guijarros Quarterly featured an article entitled "The Maritime Tradition of Shore Whaling: Research Implications From Ballast Point in San Diego Bay," by Ronald V. May. That twelve page article reviewed the history of shore whaling over a period of 150 years in the Pacific Ocean. It was proposed that the strategy for establishing outpost shore stations linked along remote coastal shorelines originated in Australia and New Zealand and was carried on to Mexico and California in the early 1850s. The economy and adaptive lifestyle of those men and their families who occupied the stations remains largely undefined in either the historical or archaeological record.

The discovery of the whaler's midden atop the ruins of Fort Guijarros was a major find. It provided the first opportunity to examine the remains of a nineteenth century maritime community uniquely adapted to isolated coastal ecozones.

The dietary patterns of the mariners, selections in consumer goods from major ports, and interactions with local communities can be examined from analyses of items recovered in the midden. An example of such information was provided by Paul E. Langenwalter and Daniel A. Guthrie in, "Avian Remains From The Field III Excavations at San Joaquin De La Punta De Los Guijarros" in the Fall 1987 issue of the Fort Guijarros Quarterly. Langenwalter and Guthrie revealed that twenty-seven species of birds were

represented in the whaler's midden and that "these specimens provide a unique example of bird use" in a maritime site (Idem. 1987:24).

The marine shell and fish bone are still undergoing analysis. The domesticated animal bone has been analyzed and will be published in a future issue of the Fort Guijarros Quarterly.

The ceramics recovered in the excavation were of particular interest. All were English earthenware and many were transfer prints. This analysis is under re-examination and will be published at a future date. Several hypotheses have been advanced, one being that the whalers brought their families who decorated their tables with traditional Victorian ceramics familiar to their native homes back in New England. Another is that the 1840 trend in the age of the ceramics indicated inability to purchase contemporary ceramics in the 1860-1870 era during which the whalers occupied Ballast Point. Both hypotheses require further examination of documentary and archaeological materials.

#### TESTABLE MODELS

Figures 2 and 3 in the Fall 1987 Fort Guijarros Quarterly illustrated models for "the economic network" and "the whaling station system" (May 1987:8,9). Information on these models is provided in Michael Pearson's paper "Shore Based Whaling at Twofold Bay, 100 Years of Enterprise," (manuscript in the National Parks and Wildlife Service, New South Wales, Australia) and Peter J.F. Coutts' article "An Archaeological Perspective of a Whaling Station on Taiari Island, New Zealand" (paper delivered to the Society for Historical Archaeology/Council on Underwater Archaeology Annual Meeting, Sacramento, California, January 9, 1986), in comparison with Charles M. Scammon's 1875 publication, The Marine Mammals

of the Northwestern Coast of North America (New York: Dover Publications, Inc. 1986). These models provide an excellent basis for archaeological testing of maritime adaptation to shore environments on the California frontier.

#### The Economic Network Model

Shore stations were outposts established on remote coastlines where whales passed close to shore. Financial backers outfitted \$3,000 worth of equipment and supplies to sustain ten or twelve men for eight months between October and May on the California coast. These backers would appoint an agent at a major maritime port who would receive oil from the base station and send back funds and supplies. A "captain" or other agent would keep the books at the base station. These men would meet and send out chartered or owned transport vessels to the major port, base station, and outpost stations. Small boats such as sloops would ferry oil, men, and supplies between the base station and the outposts.

The source for the financial backing of the various station systems remains a mystery. A chain of circumstantial evidence was provided in the Fall 1987 issue of the Fort Guijarros Quarterly (pages 9,10) that led to the hypothesis that Captain John Pope Davenport developed California shore whaling from bay whaling experience in the South Pacific. His intricate investments in \$500 to \$1000 bonds and licenses for schooners involved in Mexican and Californian whaling was cited as a pattern of behavior that could well have included co-investing in the Ballast Point whaling station. This is indicated by a note in Package 61 of the U.S. Custom House records from Monterey (Bancroft Library) that Master Eliju Avery of the schooner Sovereign sailed for Mexico via San Diego in 1857 to engage in foreign trade in Mexico.

That same year, brothers Alpheus

and Prince William Packard arrived in San Diego to set up the first whaling station. Research on these whalers revealed that most of the men registered to vote with the notation that they were born in New England. Most of the men were 30 to 45 years of age and listed their occupations as mariners.

At least three of the main companies that shared Ballast Point settled for the season with their wives and children. One of those men married an Indian woman from Santo Tomas, Baja California, Mexico.

Newspaper accounts also stated that replacements generally came from San Francisco, as did regular supplies on the Pacific Mail Steamship Lines.

The success of the stations is difficult to measure. However, in 1865, a court seizure of property at Ballast Point hauled in 200 barrels of oil to pay off an outstanding debt (May 1985:1-14). Due to the effect of the American Civil War, oil sold in Boston at that time at \$1.65 a gallon or about \$512 a barrel. The confiscation represented only a small part of that year's oil recovery from the entire season.

On the surface, this would suggest an incredible amount of money in the whaling business. However, the value of oil in California would have been considerably less than in Boston. Moreover, the various companies that owned shares in the co-mingled assets all shipped their oil on the same company transports. Still, the agents and the backers probably recovered a great deal for their investments.

Archaeological research at this outpost community on Ballast Point affords an almost unique opportunity to study the processes of adaptation by Victorian New Englanders to isolated environments. Shipping networks across the seas and overland transportation of goods can be compared to other frontier situations where Victorian Americans adapted to desert and mountain environments.

The evidence of diversification of species of edible birds reported by Langenwalter and Gutherie should be examined in the studies of fish, mammal, and other food materials. It would be ideal, as well, to compare these data with food practices of Victorian Americans in other coastal communities such as fishing and lumber sites.

#### Whaling Station System Model

The brief review of the economics of the greater network has shown that the whaling stations were very complicated operations. Ballast Point usually had two separate companies side by side. The Packard Company consisted of at least one married family and about ten men. The Johnson Company consisted of one married family, two Johnson cousins, and a crew of seven to ten men.

Over the years, other companies joined or left the two primary companies. It is likely that only one agent managed the transshipping of oil, men, and supplies between San Francisco and Ballast Point.

The base station was usually a large residential community, which in the case of the New Zealand stations consisted of local Maori villagers. At Ballast Point, it seems to have consisted mainly of New Englanders and a few Chinese fishermen.

The community would have consisted of a warehouse, cooper and blacksmith shops, small boatyard, several barracks, several homes for the married families, an office and a store, gardens, and livestock areas. Water at Ballast Point was hauled from a spring across the bay.

At least two outpost stations were regularly maintained in the whaling station system linked to Ballast Point. About 100 miles south was a point of land called Punta Banda and fifty miles more distant was Santo Tomas. Each was repeatedly mentioned in newspaper accounts of the period.

In 1872, the Johnson Company

operated at Punta Banda and the Packard brothers split between Ballast Point and Santo Tomas. That year more oil than ever before had been recorded in shipments to San Francisco. Unfortunately for the whalers, the U.S. Army evicted them in 1873 to construct an artillery fortress on Ballast Point.

Both the base station at Ballast Point and the outpost stations had "tryworks" operations where the blubber from the whales was boiled into oil. The dead whales were towed around to the calm waters of the bay and then hooked up to a capstan that was secured on the beach. Men would wind the capstan and haul the animals into the shallow water.

A team with long knives would then cut the blubber into chunks, haul it to a work area to be minced into thin slices, and then feed it into huge iron pots. Those cauldrons were usually set in masonry ovens heated by burned whale skin and fried out blubber. The oil was then skimmed in ladles and poured into oak barrels of a variety of sizes and capacities.

Coopers constructed and sealed the casks. Other men would roll the barrels to the warehouse area to be marked and accounted by the station agent or captain.

#### HYPOTHESES

1. The economic network model provides a framework within which artifactual collections of supply containers, metal hardware, and personal goods can be analyzed to study the quality of life experienced by the inhabitants of remote base and outpost stations. This level of information is not available in the documentary record.
2. The economic network model provides an explanatory method to discriminate supplies from the major supply center in San Francisco from the local supplies

obtained in Old Town San Diego. The quantity of outside goods purchased and used by the whalers should hint at the level of dependence upon the agents in San Francisco. For example, the documentary record has not revealed if the whalers received payment incrementally over the season or at the end. The key would be to distinguish container goods that were exclusively supplied from sources in San Francisco.

High frequencies of tinned and glass food containers and low frequencies of domesticated meats would suggest that the whalers did not purchase perishable food from the local markets, but rather subsisted on preserved foods. While this would not prove the source as San Francisco, it would suggest lesser interaction with local markets.

Conversely, low frequencies of commercial containers and high frequencies of domesticated meats, wild game, and marine foods might suggest greater dependence upon the local markets for food sources. This latter inference would also indicate affluence among the whalers.

3. The whaling station system model provides a framework to test the functional organization of the use of Ballast Point by the whalers. Excavation in various points should reveal if the community was as complicated as portrayed earlier in this research design or more localized and less of a residential community than in New Zealand.
4. The whaling station model provides an opportunity to examine an isolated community of New England maritime families in the early frontier period of

California. Their selection of personal items, decorations, and food consumption varieties should reveal Victorian values transported from distant homes. English earthenwares recovered from the 1983 excavation supported this hypothesis. The Summer 1987 issue of the Fort Guijarros Quarterly explains this hypothesis in more detail.

5. The whaling station model provides a unique opportunity to examine the adaptive dietary patterns of mariners in the 19th century. Since most whaling operations were ocean-going, the residue from their meals was pitched overboard and lost. However, the men who lived in the barracks and in the private residences at Ballast Point dumped their refuse out entrances and on the beach around their homes and work areas.

The greasy gray sand exposed in Fields I and III contained bird and fish bone, marine shell, and saw-cut animal bones from the meals of the whalers. Statistical counts of these specimen collections can provide direct evidence that can not be found in the documentary record. The report by Langenwalter and Guthrie in the Fall 1987 issue of the Quarterly has revealed an astounding variety of shore and pelagic species of birds that were clearly consumed.

#### Field Strategy

The field strategy selected for the deposit of midden or sand mixed with artifacts and food remains has been based upon Brian Smith's test units. These one meter square pits revealed that about fifteen centimeters of yellow sand fill lay between the parking lot and the suspected whaler's camp debris. An oval-shaped area was hypothesized for

to expose the surface entirely before proceeding to cut units through it.

A grid of two meter blocks separated by one meter "balk units" was designed on paper to wrap around the building. The large squares are will be excavated by teams of volunteer archaeologists. The balk units will provide cross-sections to illustrate the midden as though it were one large feature.

All soil recovered by hand-trowels will be poured into buckets, screened, and the artifacts and food remains recovered for the laboratory. The unit number, layer, and map reference will be entered into the catalog book and an accession number will be placed on the object before it goes off to a specialist for analysis.

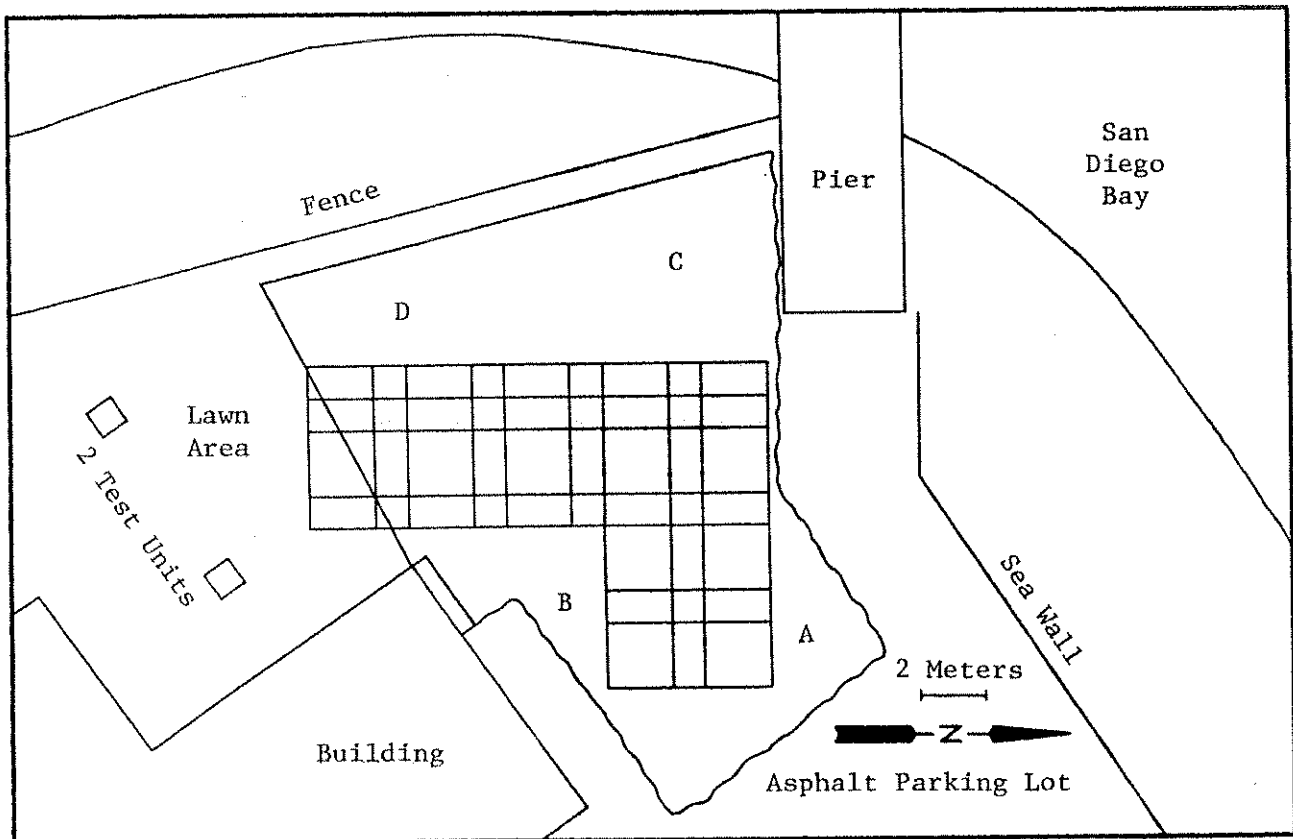
The teams will fill out field note forms for each of the units and count the artifacts in their field

bags. This cross-reference system will assist in managing all the recoveries. Photographs of architecture, pipes, old refuse pits, or other internal features will be keyed to the notes and catalog book.

The photography team will consist of Mike Nabholz and Don Lyons. Mike will photograph each unit and balk unit from above as they are exposed to form a mosaic of the site feature. Don Lyons will videotape the features and capture the opinions of the field teams and note takers as they work. A video program of the field season may be edited in the fall. All of this photography will be available for the final report and for future scholastic studies.

#### An Early Field Season Report

Prior to the commencement of the field project, a meeting was held at



Map of the 1988 excavation area showing initial grid of excavation blocks.



the County of San Diego office building to orient the twenty-five volunteers who signed up to dig, screen, clean, and catalog the summer's recoveries. Each person was given a copy of the research design for the whaler's deposit.

A combination lecture and slide show on the background of the scientific problem then followed. Other background materials such as past Quarterlies, books on archaeological excavation techniques, and reference materials were also provided.

Preparations had also been made with the Submarine Base to ready the dig area for excavation. A large area of asphalt was removed with a backhoe and a fence area was opened for soil piling and screening. The Navy also installed a metal storage shed to house the excavation equipment and supplies. Protocol for this project has been arranged through the Sub Base Command.

The dig began on Saturday, June 4, 1988 at 10:00 A.M. Volunteers received an on-site orientation lecture and introduction to the dig. Sixteen people arrived that first day to haul out the equipment from the bunker at Battery Wilkeson and set up in the "Ballast Point" dig area. The crew spent the first day removing asphalt and fill sand from the work area.

A project by Mike Nabholz to seek the buried whaler's deposit under a

lawn will involve the use of a soil resistivity meter. This device was made by Mike from a design published in The Journal of Field Archaeology. The meter consists of four metal probes that are linked by wires to an electronic circuit that measures the electrical resistance of the soil in the area where the probes are inserted. Higher values of soil resistance may indicate the presence of the midden because it is denser than other soils.

Mike plotted the first series of measurements onto a graph. The measurements appear to delineate the limits of the midden. The results of this experiment will be reported in a future issue of the Fort Guijarros Quarterly.

Stan Berryman arrived early the second weekend, June 11, 1988, to set up the excavation grid around the parking area. Fifty units were defined and a map of the entire layout was completed. Ron May then assigned field crews to the individual units within the grid system.

A chain-of-command was established early in the project to maximize supervision over the large work area. Four teams were segregated into four quarters of the parking lot portion of the dig area. The lawn area will be excavated in the near future. Crew chiefs Mike Nabholz, Jim Royle, Don Lyons, and Andie McKee were each assigned crew



A June 11 view of the parking lot excavation area looking east, the A and B teams are in the foreground and C and D teams in the background and San Diego Bay in the distance.

members and dig areas A through D respectively, in which to work.

The type of work differs greatly between the west and the east portions of the parking lot. The east is at a higher elevation and the midden ranges from just below the asphalt to fifteen centimeters down. Somewhere in the middle of the parking lot area, the midden dips sharply down about forty centimeters to a cobble beach layer. This may be a bluff-like bank of the midden that was once eroded by the waters of San Diego Bay. Teams A and B first began clearing away a layer of yellow, sandy fill dirt that has been interpreted as the surface prior to construction of the parking lot. This layer is generally clean of artifacts until contact with the midden where cobbles and artifacts are found. The majority of artifacts found to date have been in this contact area.

The midden surface could have lain exposed for half a century before the parking lot was constructed. The mix of artifacts on that surface could range from the time of the formation of the midden up to the unknown date of the parking lot.

Both C and D teams have cut through deep yellow sand (parking lot fill) to find the cobbles. These teams are working east toward the midden. They have removed about eight cubic yards of yellow sand by 4:00 PM on June 18, 1988.

Several discoveries have been noted these first few days of the project. A cast-iron pipe was found at about the mid-point in the parking lot area. The pipe may have been a sewer or drain pipe that emptied into San Diego Bay. It is surrounded by heavily weathered concrete.

Near the pipe, excavators uncovered a line of redwood that was embedded in the midden. Excavation teams will take care to only excavate the artifact-bearing soil and leave the wood on a pedestal of earth.

The association of the redwood and pipe might indicate a decomposed structure associated with the whaling activities on the beach. It could also have been an undocumented building constructed by the U.S. Lighthouse Service at the turn of the century. Time and more work will enable the team to solve this puzzle.

Dating of the midden is essential to this current project. Key artifacts that would link the midden to the whalers in the 1858 to 1873 period are clay pipes, hand-blown glass bottles of certain varieties, square bronze spikes, and whale bones. Significantly high frequencies of these artifacts would confirm the age with confidence.

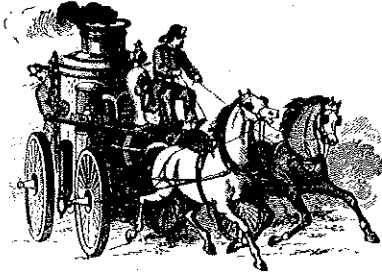
Alternate interpretations of the midden are that it was formed by prehistoric Indians or Chinese fisherfolk. The midden does not appear on the surface too much different from a prehistoric Indian camp. The presence of Indians at the U.S. Naval Submarine Base was confirmed in 1987 by an excavation by Westec Services.

Chinese families were known to have lived on Ballast Point in the 1860s, and Lucy Wentworth reported in her memoirs that Juk and Ah Sing sold fish to the whalers' families. Chinese habitation could have formed the midden as easily as Indians or whalers. The Chinese preferred to eat pickled foods and native sauces imported in brown-glazed stoneware vessels from China. Fragments of those containers are abundant in Chinese sites. Indian sites have broken stone tools mixed among the marine shell and charcoal-stained sand.

The whalers deposit atop Fort Guijarros lacked stone tools or brown-glazed stoneware ceramics, but did contain English pearlware pottery along with pipes and bronze nails mentioned earlier. Future issues of the Fort Guijarros Quarterly will include more information on this fascinating project.

## DOCUMENTS FROM THE ASHES: THE RESCUE OF THE NASATIR PAPERS

by Ronald V. May  
Director of Archaeology Programs



On June 30, 1985, the worst urban fire in living history in San Diego raced up the southern slopes of Mission Valley to overwhelm sixty-four homes in the suburb of Normal Heights. This is the story of how archaeology was used to meet a unique challenge left from the aftermath of that disaster.

At first unaware of the flames at his doorstep, Dr. Abraham Nasatir, a retired history professor from San Diego State University, sat in his living room editing the first draft of a book on the Anglo-Spanish frontier of the Upper Mississippi. He and Dr. Carl Eckberg of Illinois State University had been working on that book for twelve years.

Racing against time, police and firemen hurriedly evacuated people from their homes as neighboring vehicles, gas lines, and buildings exploded against a backdrop of smoke, flame-reddened sky, and billowing clouds of steam. No sooner had Nasatir seen the flames out in the canyon to the west of his Spanish-style bungalow than San Diego firemen rushed him and his wife out the door. Left with only the clothes on their backs and a pair of reading glasses, they turned to see sixty-two years of their life's work consumed in fire.

As urban fires go, the Normal Heights fire was a minor affair. Of the losses it inflicted, however, one of the most tragic was to the Nasatir home, which housed an estimated 500,000 rare or unique historical documents amassed by Dr. Nasatir over a period of sixty-two years. The irony of the event was that the collections were destined for archives at local universities where

Dr. Nasatir had taught for a total of fifty years.

As the implications of the loss began to unfold, local and national news media focused upon the Nasatirs as an example of the tragedy. The true meaning of their life history became exemplified by such stories as "Professor's Life Work, A History of California, Goes Up in Smoke." Dr. Nasatir's files, note cards, manuscripts, notebooks, and rare book library were his legacy from a lifetime of scholarly research.

Abraham Nasatir began his outstanding academic career in 1921 with an A.B. degree with honors in history at the University of California at Berkeley. A year later he earned an M.A. from that same institution. His doctorate followed in 1926 with a dissertation entitled "Indian Trade and Diplomacy in Spanish Illinois Country, 1763-1792."

Nasatir travelled to France and Spain where he began to work with the papers of the Captain General of Cuba overseeing Louisiana. He later accepted a professorship in history at San Diego State College where he taught from 1928 until 1974.

Dr. Nasatir's library of rare books, microfilms, and duplicates of important documents was carefully acquired over his career. An important part of that library included duplicate copies of documents from France. Scholars have long been deprived of microfilm copies because the French tourist industry feared that general distribution of the materials would negatively impact their business. Nasatir's materials were mostly obtained through lengthy and frustrating meetings with French officials on diplomatic levels. Personal trust and professional exchanges eventually enabled him to copy documents on the California Gold

Rush which were located at the Paris Police Department.

Some of Nasatir's work was summarized into eighty-seven articles or studies in historical journals, newspapers, book contributions, handbooks, encyclopedias and bibliographic dictionaries. He had also published thirteen books. His collections were so important that he often would allow colleagues to use his research notes and library to benefit their own individual research projects.

Fellow researchers recognized that the distinction of the many books and journal articles Nasatir produced in his lifetime lay in his unique ability to piece historical facts into supportive evidence. To simply purchase replacement copies of rare books, microfilm rolls, and professional journals that had been destroyed by the fire would never substitute for the personal insights and understandings in the mind of the man. For this reason, friends, former students, and fellow researchers all over the country shared in the loss, while contemplating the contents of their own homes.

To the average person viewing the June 30 and July 1 telecasts of blackened rubble from the fire, few would suspect that anything of real value could have survived. But to those whose professional training involved interpreting the ruins of the past, hope for survival was a reality.

Following news reports after the fire, a grass-roots community effort arose to save the "Nasatir Papers." Volunteer archaeologists from the Fort Guijarros Museum Foundation and the San Diego County Archaeological Society joined together for the benefit of the Nasatirs and posterity to rescue the burned remains of Nasatir's sixty-two years of work.

The idea is not as improbable as it might first appear. Archaeologists often excavate the burned ruins of homes in ancient and modern set-

tings. To do this, a knowledge of the physical properties of the behavior of fires is necessary to completely understand and interpret the discrete layers of ash and charred things in the context of structures. Moreover, archaeologists anticipate organic survival to the extent that prior to excavation, laboratory teams are well-equipped with chemicals, non-corrosive containers, and photography equipment to save such delicate recoveries as charred basketry, papyrus, and bits of leather.

The year of the Normal Heights Fire, the Fort Guijarros Museum Foundation was in its fifth season of research at the ruins of Fort Guijarros. Foundation archaeologists had experience with fire-damaged things. Atop the tumbled architecture of the old fort lay burned debris from the contents of a U.S. Army layer. This debris suggested a strong possibility for the survival of important personal objects in the ruins of residential fires.

The idea to rescue the Nasatir Papers was conceived after Foundation members viewed news broadcasts of the fire. The plan involved the recruitment of a team of historic archaeologists who had the training and composure to carefully dissect the debris in order to recover as much as possible from the remains of the fire.

In addition to the author, key persons in organizing the rescue operation included Mrs. Libby Hurlich, who by coincidence, was an old friend of the Nasatirs and an acquaintance of the author and his wife. In tracking down Dr. Nasatir to gain his approval in the venture, Mrs. Hurlich accepted a role as communication link. This was critical to the rescue operation, since the Nasatirs were busy establishing temporary housing, talking, to well-wishers, and settling insurance matters. Once contact was made, Dr. Nasatir agreed to the rescue.

Calling upon the network of professional archaeologists around San Diego county for logistical support and advice on paper conservation, Fort Guijarros archaeologists prepared an excavation plan and schedule for fieldwork. Judy Berryman of TMI Environmental Services, an archaeological consulting firm, her husband, Stan Berryman, and their son R.J. were vital to the operation. Stan was 1985 president of the San Diego County Archaeological Society (SDCAS) and Judy is the Fort Guijarros curator for collections. R.J. had obtained more experience on his parent's archaeology projects than most professionals in the county.

SDCAS had loaned archaeological equipment for the Fort Guijarros excavation and that equipment was borrowed for the rescue operation. Supplies and equipment for the project were arranged through the efforts of the Berrymans. Ms. Linda Roth, an historic archaeologist with extensive experience in Old Town State Park also agreed to join the team.

In addition, the project involved Professor Dennis Berge, who was Chairman of the Department of History at San Diego State University. Berge was coordinating a special fund for friends of the Nasatirs who wanted to make contributions in their behalf. Berge agreed to use a portion of that fund to duplicate documents rescued from the fire.

Shortly after the Nasatirs agreed to the project, a potentially serious problem arose when TV news stations announced that the City of San Diego was bulldozing house ruins in Normal Heights to assist the victims. After a disturbing and sleepless night, Mrs. Hurlich and the author contacted Mayor Roger Hedgecock's office, which replied that Dr. and Mrs. Nasatir must sign their permission prior to bulldozing. Libby Hurlich called upon an old friend of the Nasatir's, Mr. Robert Michaels, to drive down to the ruins early on the July 5th to

make certain that no bulldozers moved on the Nasatir house.

Later that day, Michaels reported that when he had arrived a small bulldozer was parked next door in the Nasatir's front yard. As it turned out, the police only allowed bulldozing where owners had given written approval. Michaels notified the San Diego Police Department of the plan to excavate the ruins and then took release forms to pass on to the Nasatirs.

While inspecting the property, Michaels discovered that no one had shut off the municipal water line and that the interior of the house foundation was flooded. A professional plumber, Michaels shut off the water, removed the outer pipes, and excavated a drainage trench. Using a sledgehammer, he then knocked a hole in the foundation to release water from the crawl space of the building.

Word of the need for a trained crew spread through the archaeology community. When the Mesa College Archaeology class met at the Royal Presidio de Cosoy in Presidio Park on Saturday, July 6, Professor Diane Barbolla-Rolland and her Mesa College field school volunteered to join the rescue team. Barbolla-Roland coordinated much of the telephone communication Saturday evening on July 6 and agreed to bring more screens and additional shovels.

During the excavation of the Fort Guijarros site at the U.S. Naval Submarine Base that same day, Mike Nabholz, Carl Comstock, and Andie McKee were also recruited. By Saturday evening, July 6, screens, shovels, buckets, bags, marking pens, and the laboratory supplies were diverted from the Fort Guijarros Museum Foundation storage area and packed into a pick-up truck. With this crew of trained volunteers, the rescue commenced on Sunday, July 7, 1985.

Following breakfast and a review of the rescue plan, the author and his wife arrived at the Nasatir's

temporary apartment to meet with Libby Hurlich and the Nasatirs. From there Hurlich, the Nasatirs, and the Mays caravanned to the ruins where they were met by the volunteer crew to commence the field phase of the rescue operation.

Shortly thereafter, the site of the Nasatir home became the scene of a busy encampment. Archaeology screens were strategically placed at stations outside the foundations. Paper bags, shovels, and other necessary materials were placed by the screens. Dr. Nasatir and Mrs. Hurlich escorted the author around the house foundation and explained the location of furniture, walls, precious items, and the document archive.

As a first step, Dr. Nasatir answered questions as to where in the library certain kinds of documents and furniture had once lay. Stan Berryman was assigned into the closet area between the bathroom and file cabinets and instructed to prohibit foot traffic to the room. Judy Berryman and Linda Roth were posted along the west wall where religious books had once rested in a glass and wood bookshelf. That area of the room was obscured by two metal bookshelves that had fallen inward as a result of the fire.

Dr. Nasatir and Mrs. Hurlich were then escorted to lawn chairs in the front yard where rescue equipment was stockpiled. Barbolla-Roland's crew was assigned to the dining room to screen for dish fragments, silver remains and other remnants of the china cabinet. Crew members were to follow the north wall westward to the kitchen. Another screen team supervised by Mike Nabholz and Andie McKee excavated a 4 x 8 foot strip of floor in the front bedroom in search of jewelry that may have fallen through the burning bedroom dresser.

The team of four people working around the edges of the archives library were supported by Dale May and Carl Comstock, who bagged or boxed recovered documents that were

passed back by the excavators. Boxes were catalogued with marking pens showing the portion of the library from which they had come. Comstock, Barbolla-Rolland, and Hurlich made frequent trips to local stores for empty boxes. Eventually, forty-five boxes were filled with recovered materials.

Throughout the hot day, Red Cross volunteers stationed themselves alongside the house to provide refreshments and support for the workers. Indeed, on both sides of the Nasatir house, friends and family of other fire victims were on hand to dig through the remains of the other homes along North Mountain View Drive. The destruction had been devastating.

Layer by layer the team retrieved documents and passed them back to the packagers. Pointer trowels were used to scrape back charred shelving and furniture parts to expose reams of charred pages, white ash, and occasional legible documents. The larger manuscripts, which probably measured ten inches thick, were water-logged and had to be lifted out on a flat shovel, with two people hefting the specimen. The first specimen was found to be bright yellow, and almost lacking singe-marks. Paper clips and rubber bands remained, although the heap had sloughed to one side when the wooden floor of the closet had collapsed to the earthen crawl space under the house. A cardboard box was found under the slurry of cement and tile of the bathroom wall. That box yielded a soggy pile of correspondence from Dr. Nasatir's research.

At the bottom of the library closet lay a melted manual typewriter, an assortment of pen cases, a tube of pencil leads, and small tin boxes of various charred things. Fragments of radio and television components were widely scattered near the doorway and hall, suggesting a volatile end.

A four drawer file cabinet was still standing in the library. Two

of the drawers had been pried open before the archaeology crew had arrived, but the water-logged and charred files remained. As the excavators pried open the other two drawers, two singed, but otherwise nonchalant alligator lizards crawled out of the ashes to once again breathe fresh air. When the two metal bookshelves were lifted, heaps of white ash were all that remained of most of the contents. Again, the best preserved materials were on the lower shelves. The remains of the couch lay below one of the shelves. Dr. Nasatir had recalled stacking a number of manuscripts there before the fire.

It was late afternoon when the crew finally stood back from the foundation walls to realize that all the recoverable Nasatir Papers were now boxed outside in the lumpy earthen field that had once been the Nasatir's garden. As the team turned to loading the boxes into trucks, the Mesa College group completed their work in the living room and kitchen area. Their yield was a box of metal objects, glass doorknobs, two Band-Aid boxes of wrapped coins, and jewelry.

Once they had salvaged the dining room and kitchen, the Mesa College crew had moved to the fireplace and hall area. Their boxes of recoveries were filled with broken crockery and dishes, semi-melted silverware and serving trays, knick-knacks, and small personal items. The work area had been a minefield of shattered glass and fire-corroded metal edges. Heaps of charred books were in evidence about the rooms. Around the fireplace, the screeners had retrieved a few plaques from awards to the Nasatir's many accomplishments as teachers and researchers.

As the last vehicle was loaded with equipment and supplies, the area was cleaned of debris as best as possible and the field crew departed. Four trucks hauled the boxes of archives and artifacts to Libby Hurlich's garage in El Cajon with the

intention of air-drying the assemblage in the hot July weather. By 5:30 P.M., the boxes were laid on the garage floor and the crew departed for much needed showers and sleep.

On the morning of July 8, 1985, Rhoda Kruse, who was then the librarian for the California Room at the San Diego Public Library, was contacted for advice. The library had in recent years suffered several disastrous floods and undergone emergency archival conservation procedures.

Kruse strongly advised that all the wet documents be immediately frozen to prevent mildew and mold. Fearful that the effort would have been wasted if the documents were not frozen, the author and Hurlich devised a plan to freezer-wrap the papers and place the archives in a rented freezer in Lemon Grove.

All day on July 8, the team sorted through charred documents to decide which were salvageable and which needed freezing. The packages were wrapped in freezer paper and gently packaged in sealable cardboard boxes. Many of the badly charred materials were discarded as unsalvageable. In the end, thirty-five boxes were trucked to the Lemon Grove freezer.

On Tuesday, July 9, contact was made between the author and Richard Esparza, who was the Executive Director of the San Diego Historical Society, to inform him of the rescue operation. Esparza then spoke to Gary Alden of the Balboa Art Conservation Center in Balboa Park. Alden, in turn, recommended that their paper conservator be contacted for advice with the preservation effort.

Janet Ruggles, a conservator with the center, then called back and concurred that freezing or air-drying were the only options to save the papers. She and her sister Ann Ruggles, of the National Gallery of Ottawa, Canada, agreed to meet with the author that evening and together the team went to Libby Hurlich's

home. Stan Berryman and Dale May continued working with Libby to cull and wrap more of the documents for the freezer.

That evening the rescue team worked on the papers while Janet and Ann Ruggles decided upon the best course of action for most of the remaining material. Janet Ruggles offered to loan an infra-red viewer to examine charred documents for legible ink traces once the specimens had been dried.

The collection fell into four basic classes: (1) totally unsalvageable, (2) documents to be frozen and freeze dried, (3) documents to be photocopied, and (4) documents which could be photocopied with infra-red film after drying but were otherwise unuseable. Later that day Stan Berryman transported more of the boxes to the freezer and the balance of the materials were air-dried for further work scheduled for July 17.

On July 10 the author made a series of telephone calls to arrange a brainstorming session on the project. The intent was to spread the responsibility more evenly among the archivists and historians who knew the Nasatirs and were knowledgeable in disaster salvage work. The meeting was scheduled for the evening of July 17th at the park and Recreation Department headquarters. The attendees were Alexa Luberski, a state historian for the California Department of Parks and Recreation, Sylvia Arden, Head Archivist for the San Diego Historical Society Research Archives, and the author. After a briefing on the progress of the project, Arden presented a list of questions concerning the Nasatir's insurance, ability to finance the document recovery, and the variety of materials that had been recovered.

On July 17, the author and Dale May met Stan Berryman at Hurlich's house to package the balance of the materials. The dried documents were placed in file folders and then boxed to transport to the Department of

History at San Diego State University for photocopying. The remainder of the wet materials were taken by Berryman to the Lemon Grove freezer.

Members of the community generously offered to help with the next stage of the project. Charles Bull, president of RECON, a local consulting company, offered to contact the Port District to see if work space was available. Richard Carrico, Cultural Resources Manager for Westec Services, offered work space at their new Sorrento Valley offices if the Port District could not help.

Sylvia Arden called to pass on the name and number of Gene Butler of Convair corporation. Butler had arranged the freeze drying operations for the San Diego Public Library. He agreed to recommend the project to his superiors at General Dynamics, although he cautioned that any decision might be months away and patience would be necessary.

The break in the process came several months later when Neal Matthews of The San Diego Reader arranged for a plea to the community for assistance with freeze-drying. A person volunteered the name of Joyce Anderson, a Leucadia taxidermist who was interested in giving assistance.

Anderson offered to freeze dry the papers at cost. Stan Berryman and the author spent several months ferrying boxes of the papers from the freezer in Lemon Grove to Leucadia and then to the Department of History at San Diego State University.

The process required the documents to be stacked inside the large freeze drying chamber. Each document pile had been weighed and recorded prior to stacking. Every few days, Anderson would warm up the drier and remove the bundles, weigh them, and replace the materials. Eventually, the weights would stabilize and the measurements would indicate that the papers were free of water.

Both before, during, and after drying, Anderson examined the stacks.

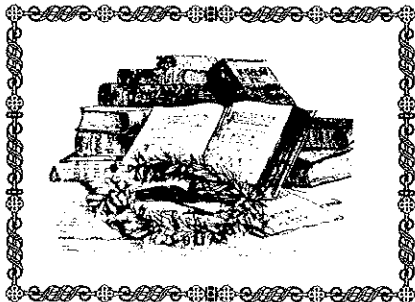


Some of the material, obscured by ice and charred paper, turned out to be tax records, duplicate fliers for old symposia, and magazines. To economize, these less valuable materials were discarded.

The final haul was about twelve boxes of books, manuscripts, letters, and hand-copies of documents. No attempt was made to survey the value of the recoveries due to the immense time the project had already consumed. However, some of the copies of letters carried dates in the 1790s and the contents concerned Spanish military correspondence in the New World.

Eventually, in 1987 the surviving Nasatir Papers were turned over to Dr. Nasatir. He and his assistants have been copying some of the materials and re-filing others. The bulk of his research collection for the future will come from re-tracing his pathways through archives and libraries around the Southwest.

In the end, it was not the value of the documents that made the project worthwhile. The value of what was saved will only be known to Dr. Nasatir. The value to those who donated time, money, and resources to the rescue of the Nasatir Papers is in the personal satisfaction that something has been done for a fellow human being.



## RESEARCH NOTES

### EARLY LETTER DISCOVERED IN THE CITY OF SAN DIEGO RECORDS FILES

An important letter concerning the history of Ballast Point and Fort Guijarros has recently been discovered in the Miscellaneous Files of the City of San Diego. Foundation member Paul Waterlander brought a copy of the January 23, 1850 letter to the editorial staff of the Fort Guijarros Quarterly on June 18, 1988 shortly after the find. As best as can be interpreted from the old handwriting, a transcription has been reproduced as follows:

San Diego, Cal.  
Jan. 23, 1850

Sir:

Your communication of the 19th, of the present month has been received.

I have received information from the commanding general that Punta Guijarros has been selected for permanent works for the defense of this harbor--- to select a cite, [sic] fulfilling certain conditions, for temporary quarters for the garrison. The cite [sic] selected by me has been approved; but the precise limits have not yet been designated & until then I deem it advisable to prevent difficulty hereafter that no sales be made south of Colorado Street.

I am Sir

Very Respectfully  
Your Off. Svt.

S. Heintzleman  
Bvt. Major & by  
(?) Port.

[copies to]

W.C. Lomore, Esq.  
Secretary &c. &c.  
Wm. of San Diego, Cal.

COMPARATIVE RESEARCH REQUESTED  
FROM ITALY

Several months back, an inquiry for information on old American forts was received from Italy. Members of the Foundation interested in corresponding to assist the gentleman in obtaining historical materials on dimensions, form, and the like can write to:

Pierino Maestroni  
48, Via Pozzuolo  
19036 = San Terenzo (La Spezia)  
Italy

FORT GUIJARROS PROJECT INCLUDED IN  
NEW PUBLICATION

The Baltimore Center for Urban Archaeology recently released a new book entitled Captivating The Public Through The Media While Digging The Past, Kristen Stevens Peters, Elizabeth Anderson Comer, and Roger Kelly (eds.), Technical Series No. 1, 1987. Ronald V. May was able to include "Programmed Mass Education Through The Media: A Case Study of The Old Spanish Fort on Point Loma."

The December 1987 publication contains fifty-three pages of single-spaced text with five photographs. Eight articles were written by archaeologists from across the United States who used case examples to illustrate the value of proper news coordination for public education. Roger Kelly, National Park Service in San Francisco, introduced the setting. Among the other authors was Douglas D. Scott, National Park Service in Nebraska, who explained how news coverage was beneficial to his excavation of the Little Bighorn Battlefield in Montana. Scott shared his discoveries with the Fort Guijarros Museum Foundation in 1986.

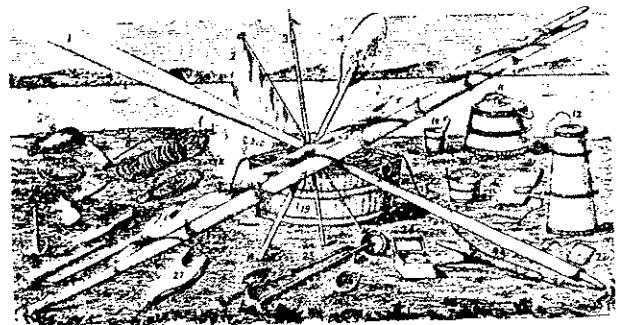
Copies of this publication can be obtained from The Baltimore Center for Urban Archaeology, Baltimore City Life Museums, 800 E. Lombard Street, Baltimore MD 21202, for \$5.00.

NEW PUBLICATION AVAILABLE  
CONCERNING WHALING

During the Society for Historical Archaeology Annual Conference in Sacramento, California in January of 1986, the Fort Guijarros Museum Foundation sponsored a Symposium on International Whaling. Among the papers submitted from Holland, Australia, Canada, and the United States was a presentation on the industry in the northwest Pacific by Robert Lloyd Webb. He has now published On The Northwest; Commercial Whaling in the Pacific Northwest, 1790-1967.

Webb is Curator of Research at the Kendall Whaling Museum in Sharon, Massachusetts. In 1985, he assisted the Fort Guijarros Museum Foundation in research concerning whaling off the California coast. His own interests coincided with the mid 19th century development of harpoon guns and advances in technology that turned whaling from individual skills to factory ship operations.

Webb exposed the lives of the Japanese, Chinese, Norwegians, and Newfoundlanders who drifted to the maritime communities of the Northwest in the final chapter of the whaling industry. The book contains 360 pages, sixteen with illustrations, line drawings, and maps. Cloth covers sell for \$25.00 and can be ordered from The University of British Columbia Press, 6344 Memorial Road, Vancouver, B.C. Canada V6T 1W5. Postage and handling is an additional \$3.50.



FOUNDATION NOTES

## 1988 MEMBERSHIP DRIVE REPORT

Mike Nabholz  
Membership Chair

Thank you again to those of you who have joined the Foundation or renewed your membership in response to the 1988 Membership Drive. If you have not sent in your renewal, please return the form in the back of this Fort Guijarros Quarterly with your check today or use the reply envelope which was enclosed with your renewal letter.

The following have contributed to the Membership Drive as of June 19, 1988 (new members are indicated by \*):

Individual

Mrs. Fausto S. Acosta  
Gilmer Boggs  
Bonnie Bowman  
Daniel Brown  
Angie Burnell  
Cabrillo National Monument \* (Inst.)  
Todd Caffo  
Julia Costello  
Marie Cottrell \*  
Leigh R. Coulter \*  
Beatrice Cox \*  
Michael J. Curren  
Diana Dessel  
John Paul Dooley  
Eileen Dreyspring  
Mrs. T.R. Eller \*  
Patricia A. Fay  
Nicholas M. Fintzelberg \*  
Susan Floyd  
Carol E. Fuller \*  
Donald J. Hartley  
Philip L. Hinshaw  
Kathy Jenkins  
Orlyn L. Jones \*  
Sister Catherine Louise La Coste  
Gerald F. Lamb \*  
Alexa Luberski-Clausen  
Denton W. Luke \*  
Jennie Marks  
Mrs. Melba S. McCormack \*  
Andrea J. McKee  
June Moeser

Maisie Morris  
A.P. Nasatir \*  
Anne Peter \*  
Patricia Schaelchlin  
Harvey Serenco  
Dorothy Sites  
Ann Steinriede \*  
Ruth Stinson  
Judy Swink  
Carlie Urban  
Dr. Paul Vanderwood  
Paul Waterlander \*  
R.L. Willcoxson \*  
Robert C. Wilson

Family

Davis and Barbara Bell \*  
Richard, Anne, and Nathan Bogardt \*  
Art and Fran Bovee  
Phil and Audrey S. Franklin \*  
Bob and Marigold Gorton  
John and Irene Hannibal \*  
Charlene and Andrew Hennan  
John and Sharon Hinkle  
Philip and Kathryn Klintworth \*  
Mr. and Mrs. R.C. McKee \*  
Laurie and Michael Orange-Bishop \*  
Angelo and Barbara Pugliese  
Frank and Margarette Quillin  
Lou and Carol Ridgeway  
Alan and Arlene Riedinger \*  
Barbara and Jim Sack  
Roland and Virginia Smith  
Marvin L. Stevens and Family  
Hugh and Marilyn Story  
Tom and Erlene Surber  
Ann, Eric, Wendy, and Lorna Swanson  
Lcdr. and Mrs. C. Everly Terry  
John and Carol Vandegrift  
Mr. and Mrs. Frederick Warn

Corporal of the Guard

Jane W. Ellis  
John H. Ellis  
J.U. Lemke \*  
Agustin Lucas  
Bill Maier  
Dale Ballou May  
John W. Miller  
Lois M. Miller  
Jim Mottern \*  
Michael J. Nabholz

Giving credit to our long-term supporters, several members were noted in the 1987 issues of the Fort Guijarros Quarterly as "new" members, when in fact they had joined as early as 1981. We hope that the "\*" system in this issue will keep the record straight.

I would also like to take this opportunity to again thank our Founding Life Members of the Commandante's Circle for their support and acknowledge them, along with our Honorary Life Members:

**Founding Life Members**

- Edward D. Breck
- Fred and Mary Buchanan
- Mr. and Mrs. Harry Crosby
- Caroline Crosby
- Mr. and Mrs. R.G. Drolette
- Ed Duling
- Hazel Duling
- Roy E. and Pat Harper
- Wayne Kenaston Jr.
- Mr. and Mrs. Philip Klauber
- Margaret D. Knetzer
- Betty Knoff
- Dr. and Mrs. Peter Leon
- Donald J. Lyons
- Ronald V. May
- Herb Minshall
- Jim Royle
- Dr. Raymond G. Starr
- Kenhelm W. Stott, Jr.
- Juan Suros, M.D.

**Honorary Members**

- Sr. Don Joaquin Munoz Del Castillo
- Colonel Wade C. Gatchell (ret.)
- Stan Jones
- Doris Omundson

**COMMUNITY ENHANCEMENT GRANT PROGRAM**

In July of 1987, the County of San Diego awarded \$1,000 from the Community Enhancement Fund to the Fort Guijarros Museum Foundation. Though the award was far less than the \$3800 requested, the Board of Directors directed that it be used for distribution of copies of the

Fort Guijarros Quarterly and a new five and a half minute video on "The Search for Fort Guijarros" to be sent to schools and community libraries. The board also authorized some of the money to go toward a special exhibit on whaling.

The four issues of the Quarterly were bound into one single volume and 100 copies were re-printed. A master copy video was made and copies of the video were then made from the master. The distribution of the Quarterlies was as follows:

- San Diego County High Schools....(25)
- San Diego Unified High Schools...(15)
- County Office of Education.....(11)
- City Libraries.....(16)
- County Libraries.....(16)
- Colleges and Universities.....(4)
- Community Colleges.....(5)
- Other.....(9)

The "Search for Fort Guijarros," is a five minute slide/sound program that outlines the history of Fort Guijarros and shows scenes from the Foundation's 1987 archaeological excavation. It was produced by Steve Siebert and Dale Ballou May in a class at San Diego State University. Distribution of thirty-four copies was as follows:

- County Office of Education.....(6)
- San Diego Unified School District.(1)
- City Libraries.....(7)
- County Libraries.....(8)
- Other.....(12)

Some of the grant was used to improve exhibits. The exhibit on 19th century shore whaling at Ballast Point has been on display at Security Pacific Bank in Point Loma and at the March 20 Annual Battle of San Diego Bay Fiesta. It is presently at the Bachelor Officer's Quarters (BOQ) on the U.S. Navy Submarine Base on Ballast Point.

On June 13, 1988 Vice Chairman Jesus Benayas made a presentation to the County of San Diego Board of Supervisors requesting a new grant

for 1988-1989. He distributed bound copies of the three minute presentation along with news clippings, covers of the Quarterly, and other information on the history of the Foundation. The success of that application will be reported in the up-coming Summer issue.

#### CAROLINE CROSBY DAY

On March 23, 1988, the Peninsula Chamber of Commerce honored their retiring president, Caroline Crosby for ten years of outstanding service. The Chamber invited numerous organizations to join in the commemoration. The Fort Guijarros Museum Foundation discreetly approved a proclamation to be printed on simulated parchment and framed for the event (see text below). As Ron May read the document at the appropriate moment, Mike Nabholz brought up a miniature brass cannon mounted on a red clay tile with a small inscription.

In her capacity as Chamber President in 1981, Caroline included the Foundation in her activities and soon became a Founding Life Member and held a seat on the board of directors of the Fort Guijarros Museum Foundation. She retains that seat as delegate from the Peninsula Chamber of Commerce.



Ron May presents Caroline Crosby Day proclamation to Caroline.

#### Resolution by the Board of Directors of the Fort Guijarros Museum Foundation

#### CAROLINE CROSBY DAY

WHEREAS, the celebration of Caroline Crosby Day will provide an opportunity for the Fort Guijarros Museum Foundation to recognize the many contributions Caroline Crosby has made to commemorate the history of San Diego's old Spanish fort on Point Loma and the subsequent history of Ballast Point; and

WHEREAS, the Fort Guijarros Museum Foundation is an organization of several volunteer groups that have bonded together to dedicate and commemorate the history of the Peninsula region; and

WHEREAS, Caroline Crosby has distinguished herself since 1981 in her role as a member of the board of directors of the Fort Guijarros Museum Foundation; and

WHEREAS, she has served as an active member of the Fort Guijarros archaeological field crew; and

WHEREAS, she is a Founder and Life Member in the Commandante's Circle of that Foundation; and

WHEREAS, she has arranged numerous public outreach and traveling community exhibits to educate the San Diego community; and

WHEREAS, she has authored an article in Volume I, Number 1 of the Fort Guijarros Quarterly to promote public involvement in community history; and

WHEREAS, she has promoted the celebrations of the Battle of San Diego Bay and the Fort Guijarros Fiesta in the Peninsula Chamber of Commerce Newsletter; and

WHEREAS, Caroline Crosby has enhanced the festive atmosphere of the many Fort Guijarros Fiestas by introducing guests from the Peninsula community and selflessly donating gifts and door prizes at these events; now, therefore, be it

RESOLVED BY the Board of Directors of the Fort Guijarros

Museum Foundation, that we take great pleasure in joining with the Peninsula Chamber of Commerce in honoring Caroline Crosby's contributions to her community, and urges all San Diegans to join in the celebration; be it further

RESOLVED, that this proclamation be presented to Caroline Crosby on this date.

Dated: March 23, 1988

#### SAN DIEGO-TIJUANA INTERNATIONAL HISTORY FAIR

On August 12, 1987, the Board of Directors of the Fort Guijarros Museum Foundation elected to contribute to the San Diego-Tijuana International History Fair. The International History Fair is an annual community education project that encourages junior and senior high school students in the San Diego-Tijuana area to gain a better understanding of the history of their communities by means of independent research projects.

The first History Fair was held in 1983 by San Diego State University, the San Diego Historical Society, and their counterpart institutions in Tijuana. It now involves hundreds of students. Participation is in the form of table-top exhibits, research papers, slide or video shows, and dramatic performances. About 600 entries are accepted for display at the Fair, which is alternately hosted in San Diego and Tijuana. The 1988 Fair was held between March 4 and March 6, 1988 at the Cultural Center in Tijuana.

The Foundation offered one T-shirt and a \$50 award for the best Senior Table-top and one T-shirt and \$50.00 for the best Junior High School exhibit. Although no entries were made for Fort Guijarros or the Ballast Point Whaling Station, exhibits on Fort Rosecrans and the U.S. Navy Submarine Base won this year's awards.



Foundation members and guests enjoy dancing by Casa de Espana at the 1988 Battle of San Diego Bay Fiesta.