

The Explorer

*Newsletter of Cabrillo National Monument
and the
Cabrillo National Monument Foundation*

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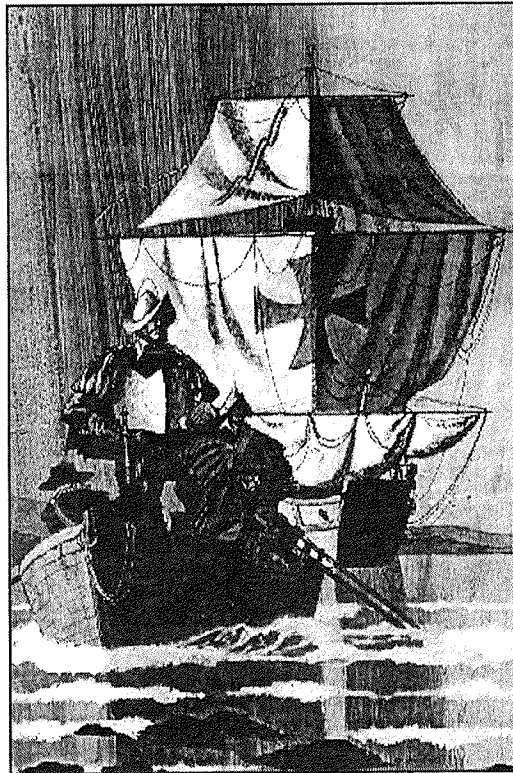
Summer 1998



A New Account of Cabrillo's Voyage

Thirty years ago, the Cabrillo Historical Association (now Cabrillo National Monument Foundation) published a summary account of Juan Rodríguez Cabrillo's 1542 voyage in its journal *The Western Explorer*, in a translation by James R. Moriarty and Mary Keistman. This was followed by a separate publication of the account entitled *Cabrillo's Log*, with a brief introduction by park historian Paige Lawrence. That title is misleading because the document is not the actual record kept during the voyage; it is a compilation of information obtained from crew members after their return to Mexico. This summary account is the only known document providing details of Cabrillo's historic voyage; the fate of the log itself is unknown.

Cabrillo National Monument



Foundation's new and expanded edition of the account is now in preparation and will be published later this year. Dr. Thomas Case of San Diego State University has provided a fresh translation. An introduction by Cabrillo National

Monument Superintendent Terry DiMattio will provide the reader with information about Juan Rodríguez Cabrillo's life, his times, and the purpose of the voyage. A preface to the account will explain the origin of the document, based on the research carried out by Harry Kelsey for his 1986 biography of Cabrillo.

The Foundation believes that the introductory material for the new publication will help place the summary account within the context of its historic period, making it more meaningful and easier for the reader to understand. Augmenting this information will be short "breakout" articles by Cabrillo National Monument rangers on various facets of 16th-century exploration and shipboard life. In this issue of *The Explorer* we are giving our readers the benefit of the rangers' research with a "preview" of those articles.

An island called California and the attitude of conquest.

by George Herring

"I tell you that on the right-hand side of the Indies there was an island called California, which was very close to the region of Earthly Paradise. This island was inhabited by black women, and there were no males among them at all, for their life style was similar to that of the Amazons. The island was made up of the wildest cliffs and the sharpest precipices found anywhere in the world"

The novel *Las Sergas de Esplandián*, written in 1510 by Garci Rodríguez Montalvo, inspired Spanish explorers with a name for California—and more. *Esplandián* was one of several enormously popular works of fiction reflecting the attitudes of 16th-century Spanish explorers. Take this passage about Calafia, "Queen of California," cajoling her people to join her in a war of conquest, as an example:

"She encouraged them by holding up before them the great honor and profit that could redound to them by undertaking such a journey. Above all, she insisted on the very great fame they could achieve by having their glory bruited throughout the whole world. . . . Remaining on their island and doing nothing other than what their ancestors did would be tantamount to being buried alive like the living dead and to living out the rest of their days like dumb animals without fame or glory."

These words could have been used to describe Hernán Cortés encouraging his troops to march against the Aztecs (Cortés is known to have been a great fan of the book).

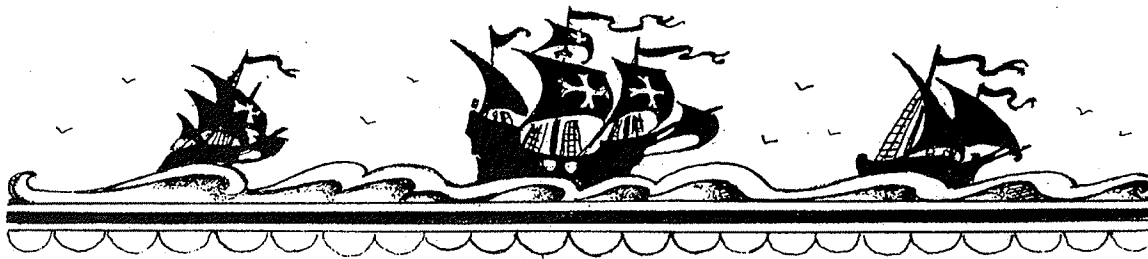
Life "without fame or glory" went



Granada, the last Islamic kingdom in Iberia. It also left them with the toughest soldiers in Europe and a desire for more conquest. Then, as if it were a reward from God, Columbus found America with its rich infidel kingdoms ripe for the taking. Thus explorers set out with a martial sense of glory, a thirst for wealth, and a ruthless belief in a religious and national destiny that justified their actions. It was an outlook that inspired a generation to write fictional accounts that reflected the reality of Spaniards with the drive to explore the globe and through their conquests to forge the largest empire known to history.



against Spain's history and sense of destiny. In 1492, that country's Christian rulers had capped seven hundred years of conflict with two decades of continual war that had left them in possession of



Cabrillo's Ships

by George Herring

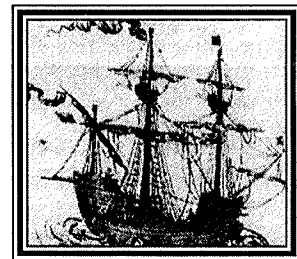
Early Spanish attempts to explore the Pacific Ocean and trade in the region relied heavily on ships built at remote West Coast ports in colonial America. Cabrillo built his flagship *San Salvador* at his own shipyard in Guatemala.

Though his ships were built far from Europe, they reflected two centuries of adaptive borrowing from Arab and Northern European sources. Triangular fore and aft "lateen" sails of Arab origin could catch the wind at almost any angle to help turn a ship at its bow or stern. These sails could also be set to hold a ship on an even course when the wind blew from the side. Meanwhile, large square sails placed amidships effectively caught the blustery winds of the open ocean in order to propel a vessel rapidly through the water.

This combination of sails, together with stable and maneuverable new hull designs, permitted 16th-century ships such as Cabrillo's three vessels, to travel in rough seas, to explore and trade in uncharted bays and inlets, or deal with an enemy on the horizon. *San Salvador* was a galleon approximately 100 feet long by 25 feet wide, capable of carrying 200 tons. Aboard her was a crew of about 100 sailors, soldiers, servants, slaves, a few merchants and a priest, plus sheep, pigs, and chickens for food, and probably a few horses. *San Salvador* was Cabrillo's personal property.

A second ship named *Victoria* was smaller, perhaps 100 tons. A round-bellied vessel known as a *nao*, she probably had a deep draft and was well suited as a cargo vessel. About 80 feet long, her crew was smaller, but similar in compo-

sition to that of *San Salvador*. The smallest vessel, *San Miguel*, was a *fragata*, probably what the British called a pin-nace. She had a single lateen sail and oars. Very maneuverable, she was well suited for coastal duties, but leaked badly and was miserable to handle in rough weather. On long voyages she probably was either towed behind or hoisted aboard *San Salvador*.



**"The Voyage of Cabrillo"
to be staged at CNM again
this summer**

Once again, Cabrillo National Monument will present "The Voyage of Cabrillo," a unique dramatization of the encounter between Cabrillo's crew and Native Americans in 1542. The script was written by Kaddiz González-Floro and the production is directed by noted local director William Virchis.

Performances will take place in the visitor center auditorium on Sundays at 12:00 noon and 1:30 PM on July 12, 19, and 26; August 2, 9, 16, 23, and 30; and September 6, 13, and 27. Performances are free with park admission.

Superintendent's report

by Terry DiMattio



As we move into the summer, there are a number of great things happening at Cabrillo National Monument. Many of these projects, some of which are large and some small, will improve the enjoyment of the park by our visitors for decades to come. I would like to tell you about a few of them.

In this issue we will be sharing with you what we are doing to improve the publication, *Cabrillo's Log*. This is an exciting project. The Cabrillo National Monument Foundation (then Cabrillo Historical Association) first published the log in the 1960s. After 30 years, however, we feel it is time to bring this publication up to date, and to make it more appealing, interesting, and meaningful to our visitors.

The log is the primary source of information about Cabrillo's voyage of exploration in 1542-43 and the first European description of life along the coast of the Californias. Professor Emeritus Thomas Case of San Diego State University has provided us with a fresh new translation of the original Spanish text. Park Rangers John Golda, George Herring, and Debbie Stetz have written short "breakouts" with new information about shipboard life and the people Cabrillo met. In addition, the book will be introduced by a biographical sketch of Cabrillo that sets the stage for his final expedition. The book is now being designed, and we are looking forward to having this new publication available to you by this fall.

There are a number of other projects that will be coming to fruition in the next several months. One of the most

significant is the creation of exhibits on the military history of Point Loma that will be installed in the historic Radio Station. The exhibit plan, which contains the text and the graphics and artifacts needed to tell this story, will be finished in June. Once it is done, the exhibits themselves can be fabricated. To get the Radio Station ready for the exhibits, our maintenance crew will be building and installing replica windows, repairing the ceiling, installing electrical power and new lighting, and patching and painting the inside and outside walls. Using funds from the Recreation Fee Demonstration Program, we will be constructing a ramp to the Radio Station to provide access for our mobility-impaired visitors, and replacing the existing asphalt walk through the Myoporum grove with a colored concrete walk with red brick

As we approach the 85th anniversary of the creation of Cabrillo National Monument on October 14, the future looks bright for the park.

edge. This exhibit on Fort Rosecrans during World War II will enable us to interpret to hundreds of thousands of visitors each year an important part of the park's history. It will also complement the book *A Harbor Worth Defending: A Military History of Point Loma*, written by Dr. Barry Joyce and published by the Foundation which recounts in detail the history of Fort Rosecrans and its role in defending San Diego, and the military history wayside

exhibits that the interpretive staff is preparing.

The staff is also working on several other projects that are being funded by the Recreation Fee Demonstration Program. In the months to come, we will be replacing the deteriorated roof on the restroom below the Old Point Loma Lighthouse, and the asphalt walkway between the entrance sign and Ocean View Scenic Overlook. Like the others in the park, this new walkway will be colored concrete with a red brick edge. We will also be building a brick patio at the Cabrillo biography audio station, purchasing and installing a solar-powered emergency phone for the tidepools, a stainless steel handrail for the ramp on the east side of the visitor center, and a greenhouse in which we will propagate the native plants needed to restore disturbed habitat.

As you can see, the Recreation Fee Demonstration Program is making a difference at Cabrillo National Monument. Money from the sale of entrance permits, Golden Eagle, Golden Age, and Annual Park Passes, is being returned to the park and used to improve visitor facilities and to care for our cultural and natural resources.

As we approach the 85th anniversary of the creation of Cabrillo National Monument on October 14, the future looks bright for the park. In addition to the projects from the Recreation Fee Demonstration Program, there are a number of other projects we are working on which, if they come to pass,

will make Cabrillo NM an even better place to learn about our history and the natural world that surrounds us, while enjoying one of the great harbor views of the world. I invite you to visit us so you too can enjoy these new facilities. If you have any questions about what is happening at your park, please contact me. I would like to share with you all the good things that are happening here at your national monument.

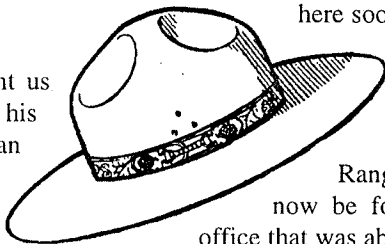
Cabrillo people

by Emily Troxell

It was with a great deal of sadness that we, the staff of Cabrillo National Monument, sent **Edmond Roberts** on his way to Alaska in April. Edmond had hoped for many years to find a post in the Alaska area, and he found just the right place in Wrangell-St. Elias National Park. While we miss his "What the heck is this?" (frequently spoken to no one in particular), and the mumbling so often emanating from his office, we know that he needed to move on and fulfill his dreams. So, Edmond: Know that you carry our fond remembrances and best wishes with you. We know you will bring a lot of great things to your new Alaskan assignment.

Edmond has just sent us some information about his new challenges; here is an excerpt from his letter:

"I am slowly getting adjusted to this spectacular place. I have spent the last two days in exhibit planning for our new visitor center. As part of the planning process, we met with the local native Alaskan representatives. Their political structure is complicated. Here is an example: Everything is done by consensus. The people, called Athna, live in seven villages. Some have one clan and others have several. All clans want to represent themselves. If they are a post-war generation, they want to be represented by village. If they are pre-war generation, they want to be represented by clan. So how does one begin? To further complicate matters, each group wants to have its history represented, but no member of the Athna people can use the name of a dead member unless the dead person gave permission while alive. If you were going to do an exhibit about these folks, how would you do it and how would you get approval?"



"The people in Glennallen have been great! Of course, I am the only African-American for 100 miles. I went to the telephone company today and the telephone operator greeted me by my first name when I approached her. As I was leaving, I asked her if she knew everyone in Glennallen, and she was so sweet. She responded that I was special. What the heck, it was great for my ego, even if that was not what she meant. I will have to go there often to make both our days.

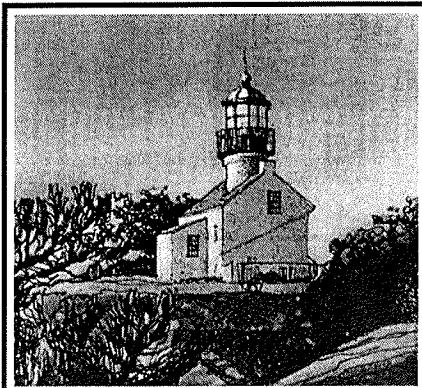
"It will take me a little time to learn all I need to know, but I've learned that it is not true that everything in Alaska is expensive. Many of the items have comparable prices with many Pacific Rim cities if you shop in the larger cities such as Anchorage. The problem is in the smaller towns, due to unavailability of items. If you have lived in remote areas before and purchased in quantities, then it isn't all that expensive.

"There was still some snow on my porch this morning. Summer will be here soon. It would be nice to see some of you. This is a fantastic place."

Ranger **John Golda** can now be found in the bayview office that was abandoned by Edmond; he has assumed the duties of Acting Chief of Interpretation.

We are happy to report that Chief Ranger **Carol Knipper** is making a remarkable recovery after undergoing emergency open-heart surgery in May. She will return to work later this summer.

Christiann Jeffcoat has accepted a seasonal appointment as fee collector for the summer. Christiann, a recent graduate of the Park and Recreation program at San Diego State University, was an intern at Cabrillo last spring.



National Park Service birthday celebration

Visitors to Cabrillo National Monument on August 25, 1998, will be able to join in the celebration of the 82nd birthday of the National Park Service. The tower and catwalk of the Old Point Loma Lighthouse will be open, offering visitors a spectacular view of the Bay and City of San Diego and the Pacific Ocean. Birthday cake will be served in the visitor center at 2:00 PM. There will be no charge for admission to the park on that day.

For further information, call the park at (619) 557-5450.

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A sailor's life

by John Golda



e often imagine what daily life was like on board ships like Cabrillo's: billowing sails, the tang of salt air, and sailors scanning the horizon for new lands.

The sailor's day was regulated by the schedule of ship's duties and the traditions of life at sea. There certainly must have been a sense of danger and adventure for these men, but from what we know of the times and the lives of sailors throughout history, there must have been a profound sense of boredom, too. The duties of the ship were of utmost importance. Crewmen were assigned watches to help navigate, spot hazards like shoals and reefs, and scan the horizon for land. Repair and maintenance of the sails, lines, and equipment took up time throughout the day. The sails had to be managed to make the best of prevailing winds. Songs and chanties would have helped to coordinate this heavy work and break up its monotony. Trips ashore provided the occasional chance to forage for fresh food and game.

These responsibilities must have grown heavy upon the crew day after day as the voyage dragged on. Free time gave the sailors the chance for a little entertainment. Musical instruments were taken out and the crew would join in familiar songs. Those sailors who could read related popular stories to the rest of the crew from printed books. And of course there was gambling. Card and dice games were popular, but priests and officers often tried to forbid such games because they could lead to discord among the crew.

Religious activities punctuated many aspects of life aboard ships. The hourglasses were turned to the invocation of prayers. Crew and passengers joined in to pray for divine guidance and a safe journey. The celebration of saints' feast days and holy days provided the opportunity for ceremony and special feasts with bet-

ter food and a break in the daily routine.

Their daily life was often one of monotonous hard work and a diet of stale biscuits and rancid water. Yet they found the bright side of this life where they could: in the simple entertainments of games and songs, the devotion of their faith, the opportunity to explore exotic new lands, and hope in the success of their journey.



The Act of Possession

Before a monarch could take possession of a newly discovered land it had to be proven to the International Courts of the time that an "Act of Possession" had occurred at the actual place in question. This was done by an expedition's commander on a beach, a hill, an Indian village — anywhere, so long as it was duly witnessed and recorded by a notary of the crown. Direct accounts of Cabrillo's "acts of possession" in upper California no longer exist, but his actions were probably similar to the words and deeds of Francisco de Ulloa three years earlier in southern Baja California:

"I, Pedro de Palencia, public notary of this armada bear witness and true testimony to all the gentlemen who might see these present (whom God Our Lord honor and preserve from evil) that on the eighteenth day of the month of September of the year thirty-nine the very Magnificent Señor Francisco de Ulloa, lieutenant governor and captain of this armada, for the Most Illustrious Señor Marques del Valle de Guaxaca, took possession in el Puerto de Los Puertos en La Baya de Posesyon for the said Señor Marques and in the name of the Emperor our Lord, King of Castille, this place being in latitude twenty-nine and two-thirds degrees. Placing his hand upon his sword, he said that if there were any person who might contradict him, he was ready to defend what he had done. He cut trees with the [sword], moved stones from one place to another, and took water from the sea, pouring it upon the land; all of this being done as a sign of possession."

George Herring

Food for the voyage

by Debbie Stetz



nce Cabrillo had finished construction of his ship *San Salvador*, he made plans for the voyage itself. The ship was fairly small with a carrying capacity of about 200 tons, and was quickly filled with the ship's supplies and riggings, the soldiers' armor and ammunition, and the crew's personal belongings. Cabrillo estimated the voyage would last approximately two years and was left with the task of calculating the amount of required to feed the one hundred men sailing on *San Salvador*.

Wooden ships absorbed moisture, making it virtually impossible to keep foods dry during a long voyage. This, combined with the lack of refrigeration and proper storage, caused foods to spoil quickly. In order to combat these elements, much of the food brought on board was dried and stored in heavy barrels. The ship's fare usu-

ally consisted of tons of salted beef, pork, and fish; dried beans, garbanzos, and peas; rice, cheese, onions, and garlic, and the staple of every ocean-going vessel—the ship's biscuit. Also known as hardtack, ship's biscuit was a flour-and-water cracker baked to a rock-hard consistency in order to stay edible for at least fifty years. Rats and weevils were also a contention aboard ship and often infested the food stores. Sailors discovered that weevils in the hardtack created a pattern of perforations in it, allowing them to break the biscuit up a bit easier. Since

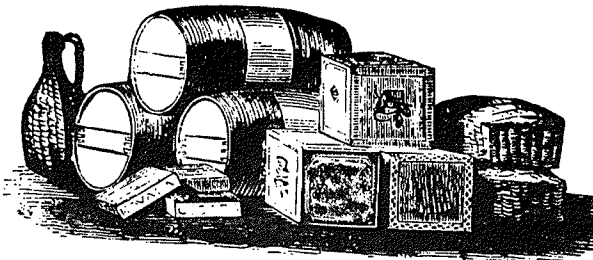
hardtack was nearly impossible to eat, soaking it in a little water created a porridge-like stew which was fortified with pieces of salt pork and a dash of vinegar to improve the flavor. Oil, salt and vinegar were the usual condiments for flavoring foods. Wine was also a staple but strictly rationed to one mug a day during the voyage.

To supplement the food supply, a foraging party would go ashore whenever possible for fresh water and perhaps hunt for deer, ducks or rabbits. But as Cabrillo's ship sailed along the desert coastline of Baja California, the hunting party would usually return to the ship empty-handed. Fishing would sometimes occupy their time, as well as hunting for seabirds. Because of the lack of fresh fruits and vegetables, ocean-going crews frequently suffered from scurvy, caus-

ing sore mouths and bleeding gums resulting in the loss of teeth. The officers were often spared, as they could

afford the few luxuries such as dried figs, raisins, and prunes, and pots of fruit preserves and chilies, which provided enough vitamin C to ward off the disease.

Honey, sugar, chickens, and chocolate were other luxury items that usually only the officers could afford and would easily be used up during the first few months of the voyage.



cacao

Before Juan Rodríguez Cabrillo embarked on his voyage of discovery, he maintained several

encomiendas in Guatemala that supplied a variety of foods, including the luxuries mentioned in the article. But the cash crop of the time—one of Cabrillo's

most productive—

was cacao, the bean from which chocolate is made. According to returns filed by his wife, Cabrillo received a yearly average of five hundred *xiquipeles* (equivalent to 4 million beans) of cacao from his encomienda in Xicalapa.

Cacao had been an important trade item for the Aztecs, even serving as a currency. The hot drink made from ground-up cacao beans was prized by Aztec royalty and was relished by the Spaniards after their introduction to chocolate at Emperor Moctezuma's court. During the 16th century, Spanish ladies of Guatemala are known to have fashioned the ground cacao into small chocolate cakes or tablets that could easily be dissolved in hot water or nibbled as candy. Since Cabrillo had traded heavily in cacao, maybe even he had some these small cakes with him on the voyage and enjoyed an occasional mug of hot chocolate while on the decks of *San Salvador*.



Debbie Stetz

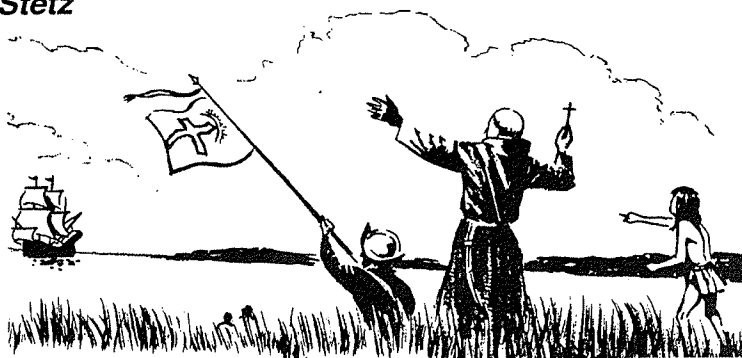
Religion on the sixteenth-century ship *by Debbie Stetz*



There were approximately one hundred people aboard the *San Salvador*, including a priest, Fray Julián de Lescanso, an Augustinian monk. He undoubtedly was charged with maintaining the Catholic faith among the crew members. He was the ship's minister of sacraments, confessor, and advisor, but watching over the moral values of the crew was probably the priest's greatest challenge. Swearing and blasphemy, viewed as greater offenses than shipboard brawls and gambling, resulted in disciplinary actions considered necessary to please God. Losing a daily wine ration could cause an intense disrespect for the ship's friar, leaving him victim to rude and insulting remarks for invoking the discipline.

But the same sailors would often wear pewter medallions of the Virgin Mary

as protection from hazards at sea. Naval traditions emphasized Marian devotion with daily prayer services followed by singing the "Pater Noster," "Salve Regina," and "Ave Maria." The prayers and songs were customary during the long voyage, and often provided a welcome break from the rigorous and mundane shipboard duties. The priest probably did not celebrate Mass on board; Spanish regulations forbade it on the grounds that the rolling of the ship might cause the Blessed Sacrament to fall or even be pitched into the sea.



Juan Rodríguez Cabrillo was on a voyage of exploration and had been instructed to adopt a friendly attitude and establish favorable relationships with any native people encountered during the voyage. The priest would accompany all shore expeditions to help establish positive relations with the natives and convert them to Christianity. The ceremony, rich in verse and prayer, served as the first act in taking possession of the newly discovered lands; it was undoubtedly confusing to the natives.

Cabrillo National Monument Foundation presents public lecture series



Cabrillo National Monument Foundation is sponsoring a public lecture series, "The Geological, Physical, and Ecological Setting of Point Loma," with talks by prominent San Diego scientists. In May, Dr. Patrick L. Abbott of SDSU gave the first presentation in the series, "The Geology and Tectonics of Point Loma." The June lecture, by Dr. Clive Dorman, a meteorologist with SDSU and Scripps Institution of Oceanography, was "Fog and the Marine Layer, or Why the Old Point Loma Lighthouse Didn't Work."

Future speakers and their topics will be:

Sunday, 19 July

Surf's up—Wave Storms and Wave Climate in Southern California

Dr. Richard J. Seymour
Ocean Engineering Research Group,
Scripps Institution of Oceanography

Sunday, 16 August

Ups and Downs of the Ocean: the Coastal Tides and Sea Level of San Diego

Dr. Reinhard E. Flick, Oceanographer
California Dept. of Boating and
Waterways & Scripps Institution of
Oceanography

Sunday, 13 September

The Amber Forest: History, Ecology, and Resource Values of the Point Loma Kelp Bed

Dr. Mia Tegner,
Research Marine Biologist
Scripps Institution of Oceanography

Sunday, 11 October

Point Loma Habitat Vulnerability to Human Impacts: the Case for Marine Reserves

Dr. Paul Dayton, Professor of
Oceanography
Scripps Institution of Oceanography

All lectures will be on Sunday at 3:00 PM in the CNM Visitor Center Auditorium and are free with park admission. For further information call CNMF at (619) 222 4747.

Trade and trade goods on 16th-century expeditions

by John Golda

Explorers like Cabrillo sailed not just for adventure and discovery, but in hopes of becoming rich through trade. The Orient offered commodities that could bring huge profits in Europe; Spanish expeditions brought goods of their own to trade for such luxury items as silk, satins, and porcelain from China and Japan. In addition, in Cabrillo's day spices could be worth their weight in gold. The little boxes and jars of spice we take for granted in our kitchen cupboards today could make a 16th-century merchant a very wealthy person. Spice was important for the preservation of meat in a world without refrigeration. Like today, it was valuable in flavoring foods, but in those days it was also useful in masking the taste of foods gone bad. Many spices also were believed to have medicinal value.

India produced cinnamon, Indonesia and the Moluccas Islands were rich in cloves, nutmeg, and mace, and southern Asia offered the most valuable of all spices: black pepper. Every ship and caravan that carried spices and every nation they passed through added extra cost that was ultimately paid for by European consumers. Men like Cabrillo and nations like Spain could make a considerable profit by cutting out, or at least reducing, the number of middlemen.

The goods that the Spanish carried to trade and barter with were varied. Today, many of these items seem like trinkets, but to the people these explorers encountered, they were often durable utilitarian objects and prized symbols of luxury and prestige. Most explorers recorded carrying iron knives and fish hooks, brass bells, and small mirrors. Cabrillo made gifts of cloth, hats, and shirts to win the favor of native peoples. Glass beads made in Spain and Venice were popular trade items among explorers and the native peoples they encountered. These beads



black pepper



nutmeg

*Spice, like today,
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taste of foods
gone bad.*

were used in bartering for food, furs, and other trade goods by most Europeans for more than three hundred years.

But items like these did not interest Chinese merchants. They found gold, silver, and some European luxury goods much more appealing. Cabrillo's own estates provided gold and cacao; Central America produced cochineal—a scarlet dye derived from insects, and silver was mined in Mexico. Spanish wine, oil, and manufactured goods were shipped to Mexico and were available for trade. These items were destined to become important to Spain's Manila Galleon trade with China in the 17th and 18th centuries. As a precursor of this trade, Cabrillo likely carried some, if not all, of these goods among his cargo in 1542.

From the Visitor Center Bookstore

by Karen Eccles

You can go along on Cabrillo's voyage with the video, "In Search Of Cabrillo." It is 27 minutes long and retraces his journey from Mexico to San Diego and beyond, offering a perspective on his place in history. Produced by the National Park Service, it is the same video shown daily in the auditorium at Cabrillo National Monument. You can also learn more about Juan Rodríguez Cabrillo, other explorers of his time, and the age in which they lived by reading some of the following publications which are available in the monument bookstore:

Cabrillo. Nancy Lemke. Paperback, \$8.95. Biography.

Cabrillo's Log 1542-1543. Cabrillo National Monument Foundation. Paperback, \$3.50.

Cabrillo's World. Cabrillo National Monument Foundation. Paperback, \$6.95. A collection of seminar papers on Cabrillo & Spanish exploration of the New World.

The Conquest of New Spain. Bernard Díaz. Paperback, \$10.95. Account of Cortés's conquest of the Aztec empire.

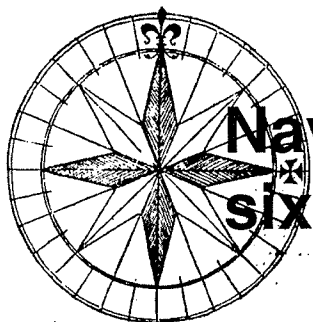
The Conquest of Paradise. Kirkpatrick Sale. Paperback, \$14.00. Consequences of European exploration in America.

The Conquistadors. Wise and McBride. Men at Arms Series #101. Paperback, \$11.95. An examination of arms and armor.

The Conquistadors. Patricia de Fuentes, ed. Paperback, \$17.95. A collection of first-person accounts of the conquest of Mexico.

DeSoto, Coronado, Cabrillo. David Lavender. Paperback, \$4.00. NPS Handbook.

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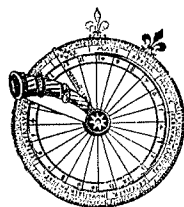


Navigation in the sixteenth century

by John Golda

During Cabrillo's lifetime, sailors set sail from Spain and Portugal in small, leaky ships with little more than simple tools and the desire to find their way to the riches of the Orient. Every expedition helped to push back the veil of the unknown and to bring back a better sense of just how big the world really is. Each expedition also helped to refine the tools and the philosophy of the navigator. In light of today's science of navigation, it is certainly remarkable that so many explorers reached the New World; it is even more amazing that so many returned to tell the tale. During the Renaissance, European theories on the nature of the world stemmed from a mixture of ancient Greek philosophy, medieval thought, and a large dose of superstition. Scholars, mapmakers, and navigators recognized that the world was round, but many clung to ancient Greek concepts that the world was significantly smaller in size. When the New World was discovered, philosophers argued that these lands were the extreme eastern edge of Asia or that, at most, Asia had to be nearby. Their view of the world did not allow for the existence of two unknown continents. It took considerable time and information from expeditions like Cabrillo's to challenge the preconceptions about the nature of the world.

The equipment navigators used was very simple in nature and limited in its accuracy. Longitude could not be determined, due to the lack of a precise time-keeping mechanism. Simple pieces of equipment like the astrolabe and the quadrant allowed navigators to read the position of the sun or the North Star in relation to the horizon. These readings could be compared to tables of the angle



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of the sun, and the navigator could determine the distance from the equator. The magnetic compass provided navigators with the ability to determine direction on the open sea without the benefit of the stars. With the compass and skill, mariners could prepare maps of their voyage and the coastline they sailed along. But even the most experienced navigators used a certain amount of guesswork in estimating their location.

The Native Americans Cabrillo Met

by George Herring

"Always there were many canoes because all the coast is heavily inhabited Their languages are many and different, and they have great wars with one another."

The coastal peoples encountered by Cabrillo were the maritime cultures of much larger nations: the Kumeyaay of San Diego, various Shoshonean tribes, and the Chumash northwest of present-day Los Angeles. The people he met gathered local resources: shells and mollusks from the tide pools, fish which they caught from reed or tar-pitched redwood canoes, seals hunted on the rocks and in the coves, and salt boiled from sea water. They traded these for acorn meal, seeds, venison, pine nuts, and other products from the nearby valley and mountain peoples.

The diversity of California's ecosystems supported the most heavily populated and culturally diverse region in North America. Virtually every day Cabrillo sailed north, he encountered new peoples with new languages and customs. Sometimes a language was as different from the last as English is from Japanese. Still, though outwardly different, each village shared similar technologies and some cultural traits. Everywhere, the people passed down stories that carried on the traditions, morals and values of the community; they enacted rituals to assure the harmonious coming and going of the seasons, and pursued activities to secure the well being of one's self and loved ones, very much like Cabrillo's people did, and as we do today.

Weapons of Cabrillo's time



by John Golda

The Conquistadors came to the New World to carve out new, richer lives for themselves. They searched for land that could provide wealth like gold and silver, and for people who would work that land for them.

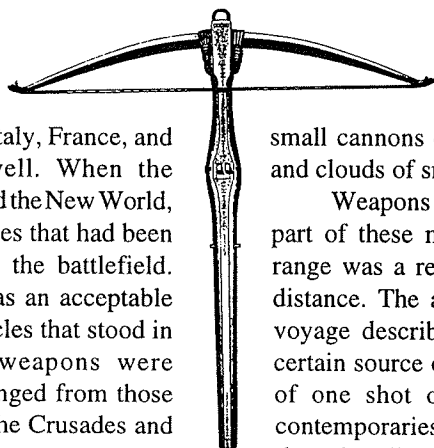
Weapons were an essential element in obtaining many of their desires. Europe was a war-torn continent in Cabrillo's day. Moslem had fought Christian for control of Spain in a war that lasted almost 800 years, ending in 1492.

There were wars in Italy, France, and North Africa as well. When the conquistadors reached the New World, many brought attitudes that had been instilled in them on the battlefield. Violence to them was an acceptable solution to the obstacles that stood in their way. Their weapons were medieval—little-changed from those used in the wars of the Crusades and between feudal kings.

But the style of warfare in the New World did not employ large armies as in Europe. Battles in the New World generally involved small groups of Europeans fighting against large numbers of native warriors. The conquistador style of warfare was dependent on the attack and an overwhelming sense of superiority. Soldiers mounted on horseback proved to be one of the most powerful weapons the conquerors had. Time and again, small groups of men, armored like knights, repeatedly charged into the midst of hundreds of warriors, killing many and driving the survivors before them. Behind the horsemen came men on foot, armed with halberds, spears, swords, and shields. For fighting at a distance and to support other troops, some conquistadors used the arquebus—a primitive matchlock musket—or the crossbow. Cabrillo himself started as a crossbowman with Hernán Cortés's army during the

campaigns against the Aztecs. His ability as a soldier helped him to rise to the position of authority that ultimately led him to California.

Some weapons had an incredible psychological impact. The war horse gave the Spanish an advantage in war against a people who had never before encountered such an animal. Gunpowder weapons were also terrifying to most native people. While not as accurate or



dependable as later gunpowder weapons, the arquebus and the small cannons created horrific noise and clouds of smoke.

Weapons were such an integral part of these men's lives that their range was a recognized measure of distance. The account of Cabrillo's voyage described the distance to a certain source of water as the length of one shot of an arquebus. His contemporaries would have known that the distance was about one hundred yards.

More important to the success of the conquistador, and Europeans as a whole, was the nature of politics of the New World. Native people did not see themselves as one unified people standing against an outside threat. They constantly allied with and fought each other over land, wealth, and prestige, much as people did in Europe. The conquistadors were able to manipulate such situations to their advantage. Weapons were a defining element of their lives: warfare in the New World often provided the opportunity for advancement and financial gain. But more important than the weapons, the willingness to use them helped to create the conquistador. These men came to the New World to make themselves a new life; in the process, they carved out a new empire for Spain.

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