

The

EXPLORER

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

A Meeting of Two Worlds



Over the years, *the Explorer* has carefully told the story of Juan Rodriguez Cabrillo and the Age of Exploration. This issue addresses the remarkable chain of events that the 15th and 16th-century explorers, conquerors, and colonists set into motion in their quest for wealth in newly discovered lands and their search for expeditious trade routes to the Far East. Certainly most of these people did not have the slightest idea of what the consequences of their actions would be.

Some results of the encounter between the New and Old Worlds were mutually beneficial; others were disastrous. We have chosen examples of both and hope that as you read you will be stimulated to look further into this monumental cultural, biological, and commercial exchange.

The Aroma of Money

by Emily Troxell

Aroma: ancient Greek word meaning spice!



Editor's Note

We have heard from a number of readers concerning the last issue. Lucky for us, all the comments were good. Several people commented on the diverse coverage as well as the stimulating information presented.

Gary Cummins, Cabrillo NM superintendent from 1986 to 1990—the founder of *The Explorer*—was here at the park in May for an informal visit, and commented that he found the publication fresh and alive, and that it kept him informed about the monument's activities and people. Keep the comments coming, for we need to know what kinds of articles and features you like and what we can do to make it better.

Emily Troxell

Spices have played a significant part in peoples' lives for much of recorded history. Pepper, cinnamon, cassia, cardamom, ginger and turmeric were important to the people of China for at least four thousand years and eventually became an important item of commerce in the evolution of trade. During early times, Arab traders guarded the source of these spices with every imaginable method. The secret of the spice trade was simple: great demand and a highly controlled supply! These controls were the result of political power, creative merchandising, and "the way things grew."

The transportation of these precious commodities is the real story. Very simple beginnings brought about a more complex structure that resulted in the transportation of spices over hazardous lands and fickle seas. At first, lone travelers might have skirted hazardous deserts that blocked the way from India and other Asian sources to the west. But the transportation of most spices was by sea. In the Far East, the Chinese sailed through waters of the Malay Archipelago and traded in the Moluccas (Spice Islands). Calcutta was a gateway to the pepper-growing region. These early Asian sailors understood how to use monsoon winds to make the journey from the production areas to other ports in a single year.

In early Roman times, a Greek merchant discovered that the monsoons, which nourished India's pepper vines, reverse direction mid-year. The trip from Egypt's Red Sea coast to India and back could be short and easy. The Arabian trade monopoly was broken as Roman trade flourished. In Egypt, Ptolemy XI bequeathed the city of Alexandria to Rome in about 80 BC. Under Roman rule, Alexandria became the greatest commercial center of the world, and proceeded to extract a significant tax

on all spices traveling through their port. Spices then moved from Alexandria to all locations in Europe. Peppercorns were used as a form of convenient currency. Gradually Rome's desire for the luxuries of China became insatiable. As the empire was declining, the price of pepper was so inflated that the balance of trade with Asia was upset. Roman wealth flowed to the Orient while the major import was pepper. The dramatic drain of Roman gold increased, and money became severely devalued to the point that a measure of wheat that took six drachmae to buy in the first century sold for two million drachmae in the fourth century. Trade subsequently retreated to a barter economy that helped ruin international trade. This outflow of wealth was a major contributor to the decline and ultimate fall of Roman society.

Assisted by the fall of Alexandria in 641 AD, the Arabs seized and maintained control of the spice trade.

During the Middle Ages, European spice supplies became scarce and prices rose dramatically. The Arabs controlled and manipulated the supply, but they did not have a firm hold on the system throughout Europe. The merchants in Venice understood this and were able to strike a deal that made them the exclusive distributor of spices transported west. As the control of Venetian merchants increased, so did the control of spice shipments into all parts of Europe. This brought wealth to those in Venice, though it caused those paying the inflated prices, along with their governments, to become envious of the enterprising merchants. In 1453, the Ottoman Turks conquered Constantinople, shutting down the small overland trade that had previously skirted the control of Venice and the Arabs. The last uncontrolled source of spices ceased to exist. Egypt, being the transfer point from the source of spices to Vienna, saw

fit to impose a huge tax of one third of the value on spices traveling through their hands. Others wished to cash in on this source of income.

Spain and Portugal led the nobility of Europe in their desire to control at least a portion of this trade. They understood that a sea route to the Spice Islands was the highway to success. These countries were willing to expend resources in the form of sponsorship, money and materials to develop such a route. The reason was simple: "He who is lord of Malacca has his hand on the throat of Venice." The goal was to purchase spices directly from the source. If only control could be wrenched away from Venice!

And so the race to be the first to control a route to Asian waters began between Spain and Portugal.

The Cabrillo Story occurs near the end of this *race for control*. But people could not travel to unknown worlds without bringing profound change.

Four major spices drove the spice trade:

Pepper



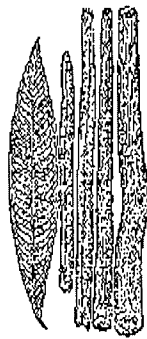
Pepper was the most significant spice of the four, playing a major role in the economies of many cultures. It was well known in Greece by the fifth century BC for its use in the pharmacopoeia. However, it soon found its way into the common foods of the era and continues today to play a significant role in food preparation. It no longer is used as a preservative, nor is it used to cover the taste of spoiled foods.

Black peppercorns (*Piper nigrum*) are berries that grow on vines, picked while green and dried with their skins on. White pepper is prepared from the same berries, but the outer skins are removed by soaking in water for several weeks. Calicut, on the south-

west coast of India, was the distribution center of the pepper trade. Pepper is native to India and Sri Lanka, as well as the Spice Islands (Moluccas.)

Legend has it that during Vasco Da Gama's visit to Calicut in 1498 he asked the *zamorin* whether he could take a stalk of pepper to replant in Europe. The reply was, "You can take our pepper, but you will never be able to take our rains." He was referring to the region's unusual twin monsoon seasons, both of which bring heavy rains that make this difficult crop possible.

Cinnamon



Today Kerala, also on India's southwest coast, is the location where the best pepper is grown, and its product dominates the high-end market.

Cinnamon

is the bark of the cinnamon tree (*Cinnamomum zeylanicum*), native to India and Sri Lanka. It is harvested by incising the outer bark in two places on young trees. The outer bark is peeled away and discarded, the inner bark harvested and dried. Today we can buy cinnamon ground or in small curls.

In ancient Egypt, cinnamon and cassia, a more intense version of cinnamon, commanded a high price because they were essential for embalming, the spices used to rinse the innards of the worthy dead. The cassia leaf was well known in Rome.

The leaves were bundled for use throughout China and shipped to other parts of India and the West.

Nutmeg and mace are the fruit

Nutmeg



of the same plant, native to the Moluccas. At maturity, the fruit opens, yielding a large round aromatic seed (the nutmeg) surrounded by fleshy red strands.

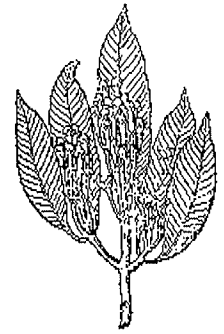
These strands, when dried, are mace. Nutmeg is known to be toxic in large quantities and can also be hallucinogenic in lesser dosages.

Cloves are the dried flower buds of a tropical tree in the myrtle family, *Eugenia caryophyllata*. They are often used in cooking, as well as perfumes. Archaeologists suggest that cloves were popular in Syria around 2500 BC, even though they are indigenous to the Moluccas.

A legend of cinnamon harvest: "Where it comes from and what country produced it, they do not know. What they say is that the dry sticks, which we have learned from the Phoenicians to call cinnamon, are brought by large birds which carry them to their nests, made of mud, on mountain precipices which no man can climb, and that the method the Arabians have invented for getting hold of them is to cut up bodies of dead oxen, or donkeys, or other animals into very large joints which they carry to the spot in question and leave on the ground near the nests. They then retire to a safe distance and the birds fly down and carry off the joints of meat to their nests which, not being strong enough to bear the weight, break and fall to the ground. Then the men come along and pick up the cinnamon, which is subsequently exported to other countries."

Herodotus

Cloves



From the Superintendent

By Terry DiMattio

Greetings. I hope you are having an enjoyable summer.

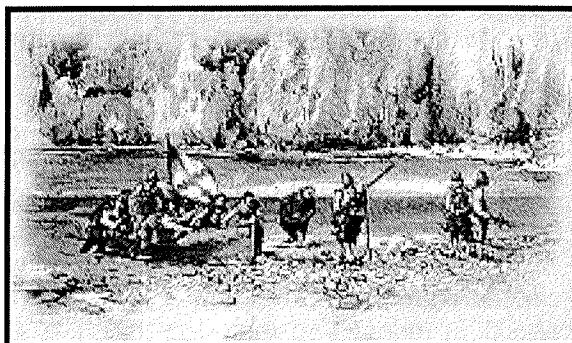
The park is bustling with activity. The Youth Conservation Corps program is in full swing. Twenty young people, ages 15–18, are hard at work removing exotic vegetation from the Point Loma Ecological Reserve under the direction of Ranger Marty Lane and Site Supervisors Marcy Park and Josh Hermsmeier. Ed Caudillo and his crew are busy making repairs to the lighthouse prior to its being painted on the outside and the doors, baseboards, and windows on the inside being “grained” to look like oak. Karl Pierce and the interpretive rangers are trying to put the finishing touches on the plan for new exhibits on Cabrillo and the Age of Exploration, while telling the park story to the growing number of visitors from around the country and the world who are on summer vacation. Carol and her folks—Marty, Ely, and Chris—are patrolling the park, making sure the resources and visitors are protected. Samantha and Bonnie are continuing their studies of the vital signs of the terrestrial and marine habitats under our care so we will know what kind of condition they are in. Carol Ann and Tonja are greeting our visitors as they arrive and doing a great job of collecting and accounting for the entrance fees that we will be using to complete several projects that will make Cabrillo NM a better park to visit. And Anna and Terry are making sure our operation keeps running smoothly; that we get the training we need; that everyone gets paid; that we buy the things we need to protect the park and serve our visitors; and that we are accounting for the funds allocated

to us. All these good folks, and others I have not mentioned by name, are working hard to ensure the preservation of the resources entrusted to our care, and to serve those who “discover” this park and come to visit.

I think you will enjoy this issue of *The Explorer*. As you can see from the titles of the articles, its focus is on the Age of Exploration and the exchange of information, of new knowledge and new technologies between Europe and the Americas. This was an exciting time of discovery for the people on both continents. I wonder if they felt overwhelmed by the tidal wave of information about the strange new plants, animals, foods, and cultures that swept the Atlantic? I wonder too, if they pondered how these new things might affect their society and values?

Ranger Emily Troxell, the editor of *The Explorer*, asked me for some “words of wisdom” about the information age at the dawn of this new millennium. I am flattered that she would ask. But like some of you, I often struggle to make sense of it all. There are times when we seem to be flooded with information about the world in which we live, and the almost daily advances being made in technology, medicine, and bioengineering. Just trying to keep up with all that is happening in the National Park Service and around the National Park System is daunting. There are times when it is a challenge to decide what I need to read to do my job as superintendent, and what I should read because it sounds interesting.

I often marvel at the difference between what we had to work with in 1974 when I started with the National Park Service and the tools we have at our disposal today. There is all



We have come a long way since
Cabrillo landed on Point Loma
in 1542.

this wonderful new technology (maybe it is old by now) that helps us communicate more effectively and work more efficiently—e-mail, Geographic Information Systems (GIS), GPS, laptop computers, Palm Pilots, scanners, digital cameras, desktop publishing. The list goes on and on. Cabrillo and his contemporaries were living in an age of new “discoveries” and advances in technology, especially in the science of navigation. I think they would be stunned by the information we have at our fingertips today and the technology and science we employ to improve the quality of life on this planet.

We have come a long way since Cabrillo landed on Point Loma in 1542. We have come a long way since 1974! And in the next few decades we will progress even further and, if the experts are right, at an even faster pace. Even though I sometimes cannot make sense out of the world today, I know that whatever information and technology we have at our disposal in the future, dedicated people like those mentioned above will be using it to preserve this special place that is Cabrillo National Monument for the next generation to enjoy.

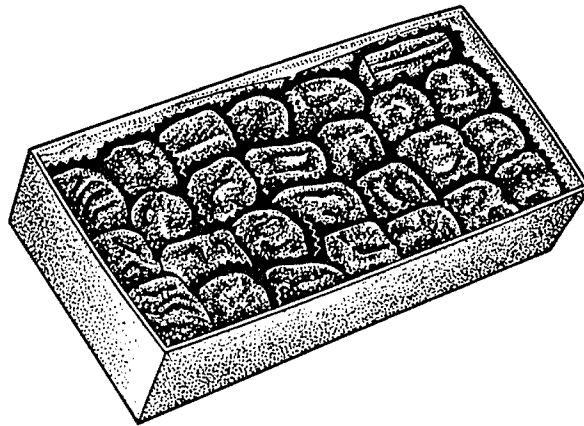
Chocolate, Food of the Gods

by Carol Ann Vallee

You gingerly lift the lid off the shallow rectangular box to unveil its titillating treasures. Excitement pulses deep in your soul as your eyes dance across several rows of dark decadence and your taste buds anxiously anticipate their ultimate reward. Each sumptuous morsel is delicately nestled in its own individual abode. You attempt to determine which sweet indulgence could possibly satiate your voracious appetite.

Maybe you think this sounds a bit extreme. I mean, who really feels this passionate about chocolate? So passionate, in fact, that they believe chocolate to be a religious experience; an experience so treasured it is reserved only for the gods.

Swedish naturalist Carolus Linnaeus certainly was passionate about the confection. In 1753 he renamed the pod-producing cacao tree—which produces the bean necessary to make chocolate—*Theobroma cacao*. Theobroma is a Greek term meaning “food of the gods.” However, years before Linnaeus was around, native people of Central and South America thought only gods were worthy enough to partake of its fruit. The Aztecs believed the cacao tree was brought down to earth by the god of learning and the wind, Quetzalcoatl. They believed the tree was a bridge between heaven and earth and that by drinking a beverage made from its crushed beans, mortals would gain Quetzalcoatl’s universal wisdom and knowledge. This drink was also thought to promote wisdom and power and to enhance libido. The Aztecs created the bitter drink that they called *xocolatl* by taking beans that had been roasted in the sun and crushing them



to form a paste-like ball of chocolate. They would then break pieces off the ball and add cold water and spices, such as crushed chiles, flowers, or even cornmeal. In the early 1500s, Emperor Moctezuma II served his Spanish guests the unsweetened concoction in golden goblets that were thrown away after only one use, treating it as nectar for the gods.

The Spanish *conquistadores* thought little of the drink: “It seemed more a drink for pigs, than a drink for humanity....The taste is somewhat bitter; it satisfies and refreshes the body, but does not inebriate...”¹

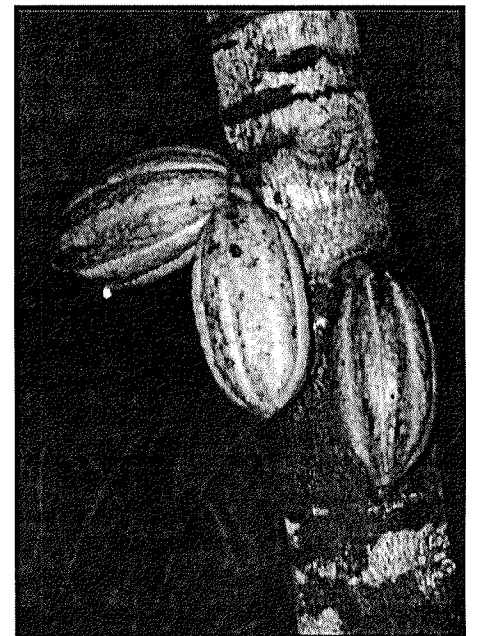
Hernán Cortés was the first Spaniard to take interest in the bean as a food. He was interested in the drink due to its stimulating properties, and not so much for its flavor. He wrote, “One beaker keeps a soldier fresh for the whole day.”² Back in Europe, Cortés presented Charles V with cacao beans and the tools necessary for preparing chocolate. Cortés believed that by adding sugar, vanilla, nutmeg, cloves, cinnamon, and other spices the flavor of the bitter beverage could be dramatically improved. The result was the first non-alcoholic stimulant drink on the European continent. Since the countries where the cacao tree prospered belonged to Spain and Portugal, the Spanish were able to keep chocolate a secret from the rest of Europe for nearly 100 years by using monks to process the

bean. It wasn’t long after the secret was divulged that all of Europe was touting its delicious flavor and health-giving benefits which are carried over to our lives today. Amazingly, chocolate contains potassium, sodium, iron, fluorine, and vitamins A, B1, C, D, and E. If you add nuts to your milk chocolate, your nutrient intake will include protein, calcium, iron, and riboflavin. In fact, if eaten in moderation, chocolate may actually be good for you. Cocoa butter, the naturally occurring fat found in chocolate, contains high amounts of stearic acid. Some believe that stearic acid may reduce levels of cholesterol in the blood. That is good news to us Americans who each consume more than 11 pounds of chocolate per year.

So, the next time you bite into that chocolate fudge layer cake or chocolate butter cream truffle close your eyes and taste pure perfection. As the chocolate slowly melts in your mouth, remember that this delicacy truly is food fit for the gods. A food delivered to earth by the gods for the gods. A religious experience, definitely!

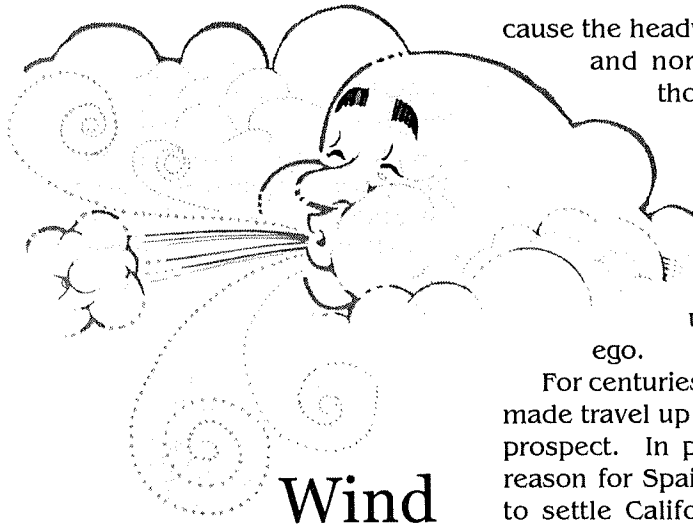
¹www.robwildridge.pwp.blueyonder.co.uk

² The Chocolate Bible, pg.10



CAROL KNIPPER

Seed-bearing fruit of the cacao plant *Theobroma cacao*



Wind

by George Herring

As Cabrillo inched up the California coast he noted the winds with concern. With rare exception, the prevailing wind blew from the northwest, forcing him to sail against the wind. Forward progress was slow. The farther north Cabrillo traveled, the stronger the prevailing headwinds blew.

These winds have shaped California's history for centuries.

After Cabrillo's death, his second in command, Bartolomé Ferrer, did not even try to sail against the northwest winds that funneled between Point Conception and San Miguel Island. Instead he tacked over 500 miles to the west-southwest, then tacked back to the northeast, in order to reach Monterey Bay.

Nearly three centuries later, Richard Henry Dana described a similar voyage between Santa Barbara and Monterey. Like Ferrer, his ship took a long tack to the west then back to the east. It took 19 days. Fortunately, tailwinds made the return faster. Dana reported a trip from Monterey to Santa Barbara that took only 30 hours!

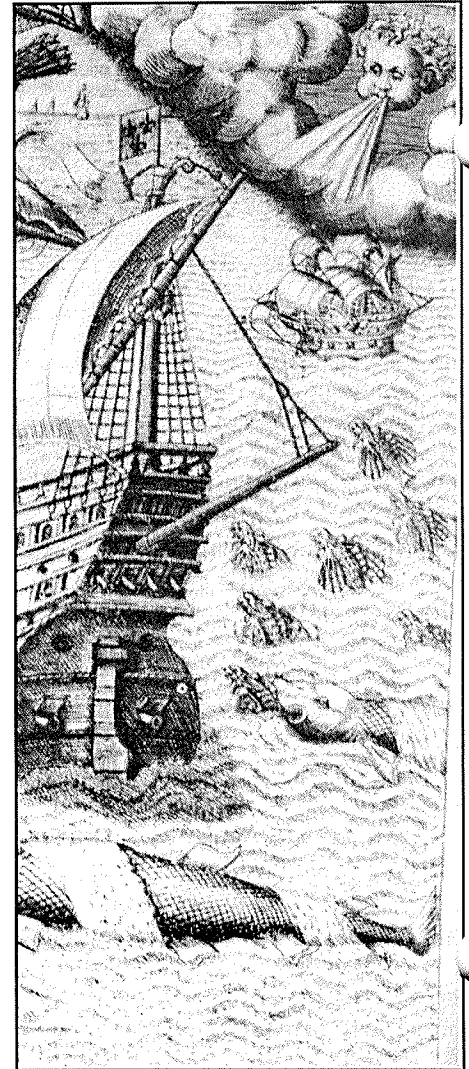
A sailing ship leaving the central coast of Mexico—the nearest market for a colony in California—needed two at least two months to reach San Diego. In 1769, Gaspar de Portolá wrote that the ship *San Carlos*, en route to San Diego Bay, "had been 110 days and her consort 59 days, in sailing 150 leagues, (675 miles) be-

cause the headwinds from the north and northwest are lords of those coasts throughout the year. Being attacked by scurvy, thirty-four persons died on the two vessels (out of 91)." More died upon reaching San Diego.

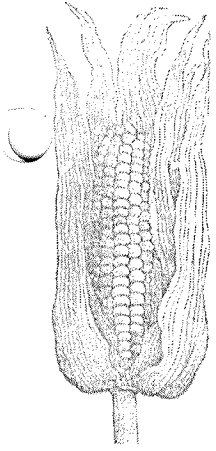
For centuries, the northwest wind made travel up the coast a daunting prospect. In part this served as a reason for Spain waiting until 1769 to settle California. Not until the 1840s with the invention of clipper ships, ocean-going steamships, and the prospect of a transcontinental railroad, make access and commerce in the region practical.

Unfortunately, Mexico lacked the capital or industrial base to take advantage of steam power. Meanwhile the United States increasingly coveted California for herself. In 1846 U.S. armies entered Mexico and secured what is now the American Southwest and California. A treaty formally recognized the transfer of land in 1848. Within weeks of the war's conclusion, gold was found at Sutter's Mill. As the "49ers" rushed west, the federal government moved to develop infrastructure to support commerce on the West Coast ports. This included construction of eight lighthouses, one being the Old Point Loma Lighthouse in San Diego. The discovery of gold and advances in technology served to connect California to the world.

Juan Rodríguez Cabrillo could hardly have guessed what the future held in store. The wind that slowed his progress is comparable to gravity in our time. Escaping the earth's gravity is expensive and dangerous. Space exploration is difficult. Thus far settling the moon, mars, or the asteroids remains unrealistic. The same might be said of California 450 years ago. Perhaps a new anti-gravity technology will someday make space travel practical. In the meantime, for now, gravity poses an obstacle akin to the wind in the Age of Sail.



The farther north
Cabrillo traveled,
the stronger the
prevailing headwinds
blew.



How Maize Spread Across the World

By Fred Andrews

By the time Christopher Columbus arrived in the New World, maize (corn) was a well-established agricultural crop, grown by native peoples throughout much of North and South America. Domestication of maize probably began at least 4,700 years ago in central Mexico, but it was unknown outside of the Americas until European explorers introduced it into much of the world. Maize would eventually have a profound effect in many areas such as China, Africa, the Balkans, and New Zealand.

Maize reached China by the 1550s. Within 50 years, it and other New World crops such as potatoes, sweet potatoes, and peanuts spread throughout much of that country. Maize was important enough to be mentioned in 1555 in a history of China's Hunan province. Chinese agriculture was highly developed by this time. Multiple crops were grown, including rice, which produces more calories per acre than corn. However, corn was grown on high ground above flooded rice paddies and took less work to grow than rice. Several crops of corn could be grown in the wetter areas of Southern China. In the 17th century corn would transform China by providing food for migrants forced out onto the hills from the overpopulated Yangtze delta. The introduction of American food crops (especially corn) allowed for the incredible population growth of China, its population reaching 450 million by 1850. In 1997, 105,395,400 met-

ric tons of corn was produced in China, second only to the United States in annual yield.

The development of maize in Africa was slow and spotty compared to China. As early as 1538, maize was introduced into Africa by Portuguese or Spanish explorers. Much of Africa above the equator is too dry for corn to grow. Southern Africa provided a more suitable climate for it to flourish. African farmers accepted maize because it was easy to grow, farmers simply scattering seeds by hand and waiting until harvest time. Maize was fed to African slaves while on the long voyage to the Americas. Corn, along with the cassava root (from the Amazon), fueled much of the African human population explosion in the 19th and 20th centuries.

Corn thrived in areas in Southern Europe with sufficient rainfall. Greeks and Serbs, fleeing from Turkish oppression, found that they could live in high mountain valleys of the Balkans where corn would grow. It allowed mountain Greeks and Serbs to expand their population and political power.

Europeans brought maize to New Zealand in late 18th century where the indigenous Maori people adopted it. It was three-quartered husked, and put in a bag in a running stream for up to six months. The mushy grains were scraped off, and cooked with salt. The grains were then eaten with more salt. This Maori dish is known as *kaanga-pirau*.

An especially important example of the biological expansion of the Americas, maize has spread to all areas of the earth suitable to its cultivation; it feeds many of the world's people, especially in China. Cornstarch is converted into sugar used in food for human consumption. Corn is also used to feed livestock, especially in the United States, Canada, and Europe. Industrial nations use inedible parts of the plant, the stalks made into paper, cobs used to make fuel.

For more information on maize I recommend *Maize*, an in-depth article by Ricardo J. Salvador, Agronomy Department, Iowa State University. To learn more about how New World plants spread across the globe, I recommend *Indian Givers: How the Indians of the Americas Transformed the World* written by Jack Weatherford.

A Seed—An Idea

by Joe Wilson

For a long time, Point Loma was just dirt and stone. On the wind, seeds arrived and plants began to grow. Point Loma changed. Plants are good to eat. Searching for food, animals found the plants. Searching for food, people found Point Loma. Searching for food was a good idea. Point Loma was a good place. Point Loma changed.

An idea, a seed, in the mind of another man; another wind and the *man* arrived on Point Loma. He raised a flag and stated, "I claim this land for Spain." History says he was Juan Rodríguez Cabrillo.

Point Loma was changed by the seed of discovery. Discovery spreads. It has covered the earth. It starts the tree of knowledge. Change is the seed of life. Both are found on Point Loma at Cabrillo National Monument.

Every day Cabrillo National Monument is discovered by another woman, another child, another man. Arizona, Utah, New York, Germany, Mexico—the world brought to Point Loma on the wind; Cabrillo will change you. Your life will be enriched. You will leave with knowledge. Perhaps this seed of change, this seed of discovery will help you see the world in a different way; in a more detailed picture. A small, new experience in life, a memory to grow, a seed to share, nourish and change into history.

Perhaps, perhaps the discovery and change planted and grown by hunters, sailors, soldiers, scientists, artists, builders, and other visitors will be part of your tree of life.

Visitors, come to Cabrillo. Pick what you like. Discover the lighthouse. Find a bunker. See a gray whale. Look into a tidepool. Hear a bird. Touch a cactus. Smell the ocean. Feel the wind.

A seed, an idea. A change. A lighthouse. A statue. Cabrillo National Monument. The Cabrillo Festival. Feel the wind—the wind and the seed of change.

Cabrillo's Sinister Shipmate

by Jim Nauman



Historians generally agree that Juan Rodríguez Cabrillo arrived in New Spain in 1520 with the expedition of Pánfilo de Nárvaez that was sent by Cuban Governor Diego Velásquez to capture the maverick Hernán Cortés and return him to Cuba. But another member of that expedition—identified in certain Spanish, Mesoamerican, and even modern accounts as a black slave named Francisco Esquíu—was to have an impact on history much greater than Cabrillo's: he was infected with the smallpox virus.

Europeans had brought smallpox to Hispaniola (present-day Dominican Republic and Haiti) in 1518, decimating the native population, and by 1520 it had arrived in Cuba.

It is difficult for us to imagine the rapidity with which smallpox spread through the New World natives. The virus reached the Aztec capital, Tenochtitlán, even before Cortés, and by the time the capital fell, the disease had spread throughout the Aztec empire. Within three years it had spread south, wreaking havoc through Guatemala and Panama, and even into the land of the Incas. All segments of the population—men, women, children, the poor and the wealthy, leaders and peasants—were affected. The population of Tenochtitlán, where the people lived in crowded conditions, was especially reduced by smallpox, many Aztec leaders dying in the epidemic.

Even the Spaniards were astonished by the virulence of the disease. In 16th-Century Spain, smallpox was a relatively mild disease classified with chicken pox and measles, principally affecting children who were scarred but usually survived (this would no longer be true in the 17th century). The illness conferred on its victims a lifelong immunity. This im-

munity, of course, was not shared by residents of the New World who had had no prior experience with the disease, leaving them vulnerable to its ravages. Smallpox is a highly communicable disease, spread by direct contact with the victims via respiratory dis-

charges or skin lesions. The virus can survive for a year or more on inanimate objects such as textiles, allowing it to be spread along trade routes. In general, the virus moves with the population, so as the conquerors and colonists spread into northwestern New Spain and into what is now the southwestern United States they carried the deadly disease with them.

Effects of the epidemic were chronicled in both Spanish and Nahuatl (the Aztec language). Perhaps the most complete Nahuatl account of the Aztec world is Franciscan friar



Bernardino de Sahagún's exhaustive multi-volume work, *General History of the Things of New Spain*, known today as the Florentine Codex. Sahagún, around 1555, worked with indigenous informants, prominent elders, scribes, and artists to produce this remarkable work (his original purpose was to help his fellow missionaries recognize and abolish native religious practices). Descriptions of smallpox appear in the codex, as in this example:

"...Large bumps spread on people, some were entirely covered....They could no longer walk about, but lay in their dwellings and sleeping places, no longer able to move or stir....And when they made a motion, they called out loudly. The pustules that covered people caused great desolation; very many people

died of them, and many just starved to death, starvation reigned, and no one took care of others any longer."

The last statement is telling. In many households everyone was ill or dying, sparing no one who might have been a caregiver. In Europe, at the same time, patients would be bathed, fed, and made as comfortable as possible, and given whatever medicines were available. In the New World, in contrast, even if a caregiver was available, no one had a clue about how to care for smallpox victims. Many just accepted the disease as their fate.

For Spaniards, the epidemic had contradictory results. One of Cortés's men, Bernardino Vázquez de Tapia wrote in 1540:

"...there died a great quantity of men and warriors and many lords and captains and valiant men against whom we would have had to fight and deal with as enemies, and miraculously Our Lord killed them and removed them from before us."

At the same time there was a great loss of Indian manpower to carry out the mining, construction, and agricultural development necessary to accomplish Spain's goals.

It is impossible to measure the exact degree of depopulation resulting from smallpox in the New World. First of all, estimates of the pre-contact population vary widely. The mortality is reported in a range of from 10 to 90 percent by various authors, and of course it varied from place to place. Also, many deaths occurred concomitantly from such other introduced diseases as measles, malaria, typhus, influenza and diphtheria. Other factors must also be considered as contributing to the demographic catastrophe: killing of the natives in combat, enslavement, abusive treatment, forced labor, devastation of the land, and demoralization.

In telling the Cabrillo story we would do well to remember that while his was an important role in the history of the New World, the sinister part played by one of his unwitting shipmates on the Nárvaez expedition had a far greater impact.

Illustration of smallpox plague from Florentine Codex, Book 12

What Does Cabrillo's "Marker" Mark?

by George Herring

Is the Cabrillo "grave marker" really his headstone? It seems just as likely that it marks a "claiming" of land by Cabrillo, a later burial with the initials "JR," or a land grant marker. What do you think?

The discovery of this inscribed stone, found on Santa Rosa Island in 1901, led some researchers to speculate that it was Cabrillo's grave marker. Many visitors at Cabrillo National Monument do not question this speculation. But *The Account of the Voyage of Juan Rodríguez Cabrillo* does not report where, or if, Cabrillo was buried.

Antonio de Herrera's 1620 account of Cabrillo's interment is interesting in this regard. Based on documents since lost, he wrote that "At Night the Commodore vanish'd."

Vanished? According to Pablo E. Pérez-Mallaina in *Spain's Men of the Sea*, it was normal in that era to put the body of the deceased over the side of the ship. Might Cabrillo have "vanished" over the side in a burial at sea? The Spanish likely feared that the grave site might be disturbed after their leaving. (It was, after all, common for Europeans to disturb Native burials.) Ultimately, we don't know what became of Cabrillo's remains.

As for the stone "marker," it may have marked something else. In Cabrillo's time, Spanish explorers

took great care to perform prescribed rituals when claiming land. The "Act of Possession" was witnessed and recorded by a notary as evidence of the claim. The expedition leader, "cut trees with his 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."

If the Santa Rosa stone is associ-

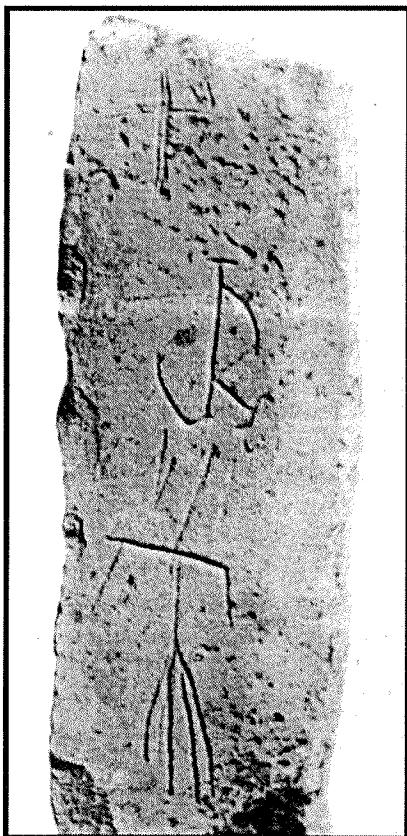
ated with the expedition, then it may mark Cabrillo's "Act of Possession." The discovery of a similar stone might someday add weight to this interpretation. If it is a burial marker, it might just as easily be the burial of any person whose initials are "JR." Someone buried between 1542 and 1901? We have nothing directly connecting it to the expedition, nor anything to date the stone.

Perhaps it is a land-grant marker. During my tenure at Pecos NHP a squared stone with unrecognizable

marks was found by archaeologists. They speculated for many days about its purpose and even contemplated that it was the grave marker of a rancher's prize bull. Finally, an old ranch hand heard about the confusion. He laughed. It was common knowledge to area old timers that the stone marked the boundaries of an old Spanish land grant dating back

200 years.

So, having speculated about the stone myself, and before doing any further research on these speculations, what do you think?



I would very much like to know your thoughts about this interesting artifact—especially those of friends familiar with the history and geography of the Channel Islands. Send me a message.

George Herring
Park Ranger
Cabrillo National Monument
Telephone:
(619) 557-5450, ext. 2227
e-mail:
George_Herring@nps.gov

Cabrillo People

By Christopher Anderson

Again, the forces of change have exerted their pressure on Cabrillo NM, thus bringing many changes to the people who shape our park.

Extend a warm welcome to the following new Cabrillo staff members:

- **Tonja Gaye Campbell** has been working in the entrance station and on resource management projects for about two months now. She hails from Denver, Colorado, but has called the world her home. Travel and work have taken her all over Europe and North America. She attended Campbell University, where she earned her degree in history and social science. Tonja has also served in the Navy, stationed in the Great Lakes area and Bermuda. While living in Bermuda, she met Jack Campbell. They have been married for six years and have two children: Emma, 3, and Charlie, 11 months. Jack's transfers have moved the family to North Carolina and most recently to Iceland. The Campbells moved to San Diego so that Jack could attend IDC training (an IDC is the naval equivalent of a physician's assistant). Tonja's hobbies include traveling, reading, sewing, and baking. Her ambition is to become an ethicist or a teacher.

- **Marcy Cristina Marquez** started working at Cabrillo in February 2000 as a volunteer. In March of 2001, she accepted a paid interpretative position within the park. Marcy was born in Burbank, California, and grew up in Simi Valley. She moved to San Diego because it was far enough away from home to be independent of her family, but close enough to visit. She is a full-time student at San Diego State University, majoring in geography with a minor in history, emphasis on Latin America. When not working or attending class, she enjoys dancing, hiking, and spending time outside. As to the future, she

would like to be a professor of geography.

- **James Lovell Carey** was born in Philadelphia and raised in Westchester, PA. He attended Shippensburg University, outside of Harrisburg, where he majored in environmental science. While there, he not only studied hard, but played hard as a linebacker for their football team. He would like to pursue graduate work at some point. Before coming to San Diego, James worked at Boston National Historical Park, doing interpretation. He also served in the United States Marine Corps, where he was assigned to Camp Lejeune, NC. James's journey to Cabrillo marks his first venture to the West Coast of the United States. His hobbies include various sports (football, basketball, baseball, fishing, hunting, and hiking.) In the future, James would like to be a biologist.

- Welcome to all the new and returning crewmembers, crew leaders, and site supervisors of this summer's **YCC (Youth Conservation Corp)** program. They will be working on various projects both within the park and adjoining naval property.

There have also been several changes within the existing staff.

- Congratulations to **Carol Ann Vallee**. She has officially become a permanent member of the NPS and Cabrillo Family. Effective May 20, 2001, Carol Ann was hired as a permanent Visitor Use Assistant (VUA), here at Cabrillo.

- Cabrillo welcomes back **Mark Mattivi**, who has resumed working for the maintenance division of the park.

- **Traci Miles** accepted a summer seasonal interpretative position at Mesa Verde National Park in Colorado. We wish her the best of luck and look forward to seeing her back in San Diego sometime this fall.

- After nearly 32 years of service to Cabrillo and the National Park Service, **Bob Hayes** retired in April of 2001.

- In June, **Susie Qashu** returned to Olympic National Park, as a permanent interpretative ranger. She will be working in the Kalaloch District, which is in the Southwestern Coastal portion of the park.

Volunteers at Cabrillo

by Mary Beth Vygrala

The summer months have brought changes in the volunteer ranks. Five-year veteran, **Ulla Kordel**, will be leaving us for the wetter climate of Washington state. Ulla was one of the original tidepool volunteers and also participated in costumed interpretation at the lighthouse. We will miss her, but she has promised to volunteer when she visits back here on vacation. Volunteer **Susan Dagwell** has also left us. Susan worked in the tidepools and at the visitor center. Just as we thought she might work as a seasonal here she was stolen by another park. Susan is now a permanent interpretive ranger at Roosevelt-Vanderbilt NHS in upstate New York. You go girl! Volunteer **Marcy Marquez** who worked in the visitor center is now an employee here. She is working in the interpretation division through SCEP (Student Career Experience Program). **Emily Lawlor**, one of our younger volunteers, is currently working with the YCC (Youth Conservation Corps) at Cabrillo. After her four-week stint here she will work the rest of the summer at Yosemite. Luckily for us she will be back in the fall to help in the tidepools and visitor center.

We are still recruiting volunteers to work in the tidepools this fall. Also, we need volunteers to do costumed interpretation in the lighthouse all year.



Cabrillo National Monument Foundation

One of the ways the Foundation supports Cabrillo National Monument is by publishing and selling media relating to the themes of the park. This provides visitors with additional information to further enhance their visit by taking a book or video home to enjoy or to send to friends and relatives.

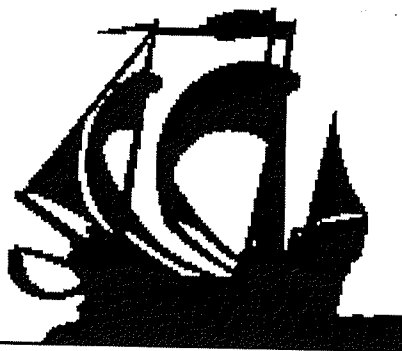
- *In Search of Cabrillo*, a 27-minute video produced by the NPS and sold by CNMF, follows Cabrillo's voyage in modern times with narration that really makes history come alive.
- In 1999, CNMF published *An Account of the Voyage of Juan Rodriguez Cabrillo*, \$14.95, paperback. This 97-page book features a new translation of the account of the voyage by Thomas Case, maps, photographs, illustrations and a center foldout of an original painting of Cabrillo's landing as well as a cross-section of their ship.
- A new book about Cabrillo National Monument, published by KC Publications as part of their Story Behind the Scenery series, just came out in June and retails for \$7.95. The book, written by Dr. Raymond Starr, a former chair of the CNMF Board of Trustees, features beautiful photographs of the park.

Karen Eccles, Executive Director

Make a Lasting Legacy

The CNMF Endowment Fund, established in 1997 with the San Diego Foundation, is another way you can support the endeavors of Cabrillo National Monument.

Interested donors can call
(619) 222-4747
or log onto
www.sdfoundation.org
for more information.



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Emily Troxell, Editor
Jim Nauman, Production

1800 Cabrillo Memorial Drive
San Diego, California 92106
(619) 222-4747
www.CNMFKaren@aol.com

CALENDAR

August 19, 2001
America's Finest City
Half Marathon Starts at Cabrillo
National Monument

August 25, 2001
Annual Meeting/National
Park Service Anniversary

September 30, 2001
Cabrillo Festival

October 2, 2001
Second Annual Moonwalk

November 15, 2001
Old Point Loma Lighthouse
Anniversary

On Sunday, July 1, CNMF
members attended a preview
of the Cabrillo drama that is shown
at the park during the summer.

William Virchis,
producer/director of the
drama, presented Terry
DiMattio and Jack Damson
with plaques in appreciation
of the support of
CNM and CNMF.

New Members

We welcome these new mem-
bers, joining CNMF between
March 15 and June 29, 2001.
We are grateful for your
support.

John & Melissa Beeman
Angela Ecker
Carl Grahn
Tom & Jan Howarth
Christopher Anderson
Mr. & Mrs. Gary Correia
Dr. Walter Hileman
Mr. & Mrs. Charles Hudiburgh
Susan M. Baker
Diana Brotherton-Ware
J & R Collins
Dr. & Mrs. Quintous Crews, Jr.
Jim & Laura Hinton

continued on next page



New Members, cont'd

Kip & Susan Howard
Barbara Jones
Welton H. Jones, Jr.
Tracey Kennedy
Henry Kohler
Mary Lou LoPreste

Helen Long
Mrs. Edgar Luce, Jr.
Patti & Michael Luedke
Robert Mainiero
Mr. & Mrs. Joe Medina
Stan & Shelley Miller
Kevin & Miriam Munnelly
Rosemary Nelson
Robert V. Niemann
Henry Niles
Audra Parnell
Mrs. Carl C. Plain
Ron Quinn
Mr. & Mrs. Robert E. Radcliffe

Flo Reynante
Dale O'Day Robison
Rosemary McClary
Mr. & Mrs. Norman Rubin
Benjamin Saltzer
Ann Silliman
Mr. & Mrs. George Silva
Donald Smith
Tricia Takacs & Ron George
Ned A. Titlow
Doug & Laura Vickery
William Wallace
Mr. & Mrs. Larry L. Willette
Mr. & Mrs. Rolla Williams



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1800 Cabrillo Memorial Drive
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