Historical Archaeology of Baja California Sur

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Abstract

Bernard Fontana, Homer Aschmann, and W. Michael Mathes were staunch advocates of interdisciplinary research. All recognized the importance of historic sites archaeology for the study of Baja California’s recent past. Throughout their careers they encouraged colleagues to combine the fields of cultural geography, archival history, and archaeology for greater clarity and insight into the study of artifacts, sites, and cultures, and this is now standard practice in Baja California Sur. Most research, however, has been involved with prehistory, and historical archaeology has lagged behind. This paper describes historical site types and documentary evidence still awaiting intensive study. Historical archaeologists in Baja California Sur must now race to study our irreplaceable sites before they are lost to accelerating development and the inexorable forces of nature.

Introduction

Over the past six decades scholarly research in Baja California Sur has dramatically increased. This is a result of many things, including the construction of roads, communication systems, and new settlements. More recently, the online accessibility of books, maps, manuscripts, reports, and correspondences has brought much information out of regional obscurity and fostered a growing sense among scholars that Baja California Sur holds great potential for cultural historical research. The completion of the Carretera Transpeninsular Benito Juárez in 1973, running 1,711 km (1,063 mi) from Tijuana to Cabo San Lucas, opened the region to flocks of tourists. North American researchers, particularly Alta Californians, now found it easy to acquaint or reacquaint themselves with their oldest neighbor. More anthropologists, archaeologists, and geographers than ever before came to do field research in previously inaccessible parts of Baja California. Unfortunately, at the same time large-scale developments, road-building, hotel construction, and marina expansion posed significant threats to cultural and natural resources. The earliest archaeological salvage projects were reactions to coastal developments and their threat to prehistoric settlements, and the Instituto Nacional de Antropología e Historia (INAH) led attempts to ameliorate destruction of the state’s diverse archaeological sites. In the 1970s and 1980s relatively few trained archaeologists were available to meet this challenge, and there was neither time nor resources to conduct very many long-term, research-oriented investigation programs. As Baja California Sur blossomed into an international destination for tourists, a handful of professionals could do little more than salvage artifacts from archaeological sites while witnessing the wholesale destruction of natural and cultural resources.

Many archaeological rescate (rescue) projects along the Gulf of California, from Santa Rosalía south to Cabo San Lucas, have been completed in the past few decades. The Pacific coast of Baja California Sur, particularly in the strip between Todos Santos and Cabo San Lucas, has hosted fewer developments and, consequently, salvage efforts. Some of the best known rescate projects were conducted in La Paz, Ensenada de los Muertos, Cabo Pulmo, and the municipality of Los Cabos. Most investigations were of prehistoric sites, yet still incorporating comparative ethnohistoric information (Meigs 1935; Aschmann 1959; Massey 1966; Ritter 1979; Reygadas Dahl and Velázquez 1997).
1983, 1985; Laylander 1987; Rosales-López and Fujita 2000). Because most such research has been reactive, focused principally on prehistory, the region’s historical archaeology landscape remains largely unstudied.

Recognition of the historical archaeological potential of Baja California Sur is not new. For almost a half century Homer Aschmann, Bernard Fontana, and W. Michael Mathes all insisted that historical accounts be used in interpreting archaeological evidence of our peninsula’s extinct cultures. This notwithstanding, the vast number and diverse kinds of historical sites to be found within the region are just beginning to be appreciated. Similarly, the published and unpublished documents that can complement archaeological inquiry remain unfamiliar to many.

Below, this paper divides into three sections that precede a short conclusion. The first of the three offers a definition of historical archaeology, notes its interdisciplinary nature, and how this field of study is applied in the United States, South America, and Mexico. The second section evaluates and modifies the historical site classification system proposed by Fontana (1965), specific to Baja California Sur. The third and final section reviews important documentary sources for Baja California Sur history. I hope to show that the cultural historical resources of Baja California Sur are rich, varied, and worthy of study and preservation for future generations.

**Historical Archaeology: Definition, Characterization, and Practice**

New World historical archaeology studies sites, features, and artifacts from initial European contact with Native American peoples in the late fifteenth century until the mid-nineteenth century. The discipline combines the analysis of material remains (e.g., artifacts, features, and ecofacts) with historical documents. Historical archaeologists typically employ the same field techniques as those of prehistoric archaeologists; however, their research must also include analysis of documentary evidence, such as diaries, letters, maps, etc. Comparative documentary evidence facilitates interpretation of historical era settlement patterns, domestic life, economic relationships, social structure, and even worldview; it can also broaden knowledge of socioeconomic systems such as colonialism, capitalism, or slavery (Little 2007).

Archaeological evidence consists of artifacts, ecofacts, features, and sites. Historical artifacts include ceramics, toys, machinery, and toothbrushes. Ecofacts, the biological remains at sites, include pollen, phytoliths, seeds, and animal bones. Features include foundations, privies, wells, trash scatters, glory holes, mine tailings, hearths, etc., while archaeological sites are simply places where artifacts and features can be discovered (Little 2007). Historical records are either primary or secondary. Primary sources include eyewitness accounts (by explorers, missionaries, and travelers), letters, official government documents, maps, journals, ship logs, diaries, newspaper articles, postcards, and photographs. Such material is accessed mostly in archives, libraries, and government repositories. Secondary sources are those books, articles, and reports written about past events, but because most are interpretive, they can be less reliable than primary documents.

Despite their different methods, archaeology, emphasizing scientific excavation, and history, focusing upon archival research, are compatible and have been applied in combination with great success worldwide. As required by law, historical sites in the United States are evaluated prior to development projects. This legal requirement has greatly contributed to the preservation of the nation’s historical past (Pykles 2008). Historical archaeology in South America has instead focused on broad theoretical issues, such as ethnic identity, social conflict, the use of space, culture change, power and marginalization, and economic institutions (Funari and Zarankin 2004; Funari and Brittez 2006). Thus, many South American historical archaeologists are less
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Historical Site Types of Baja California Sur

Introduction

Bernard Fontana (1965:61–63) proposed a historical site classification system of five divisions: (1) Protohistoric sites prior to 1492; (2) Contact sites, or Native settlements visited by non-Indians; (3) Post-contact sites, or Native places settled after the arrival of non-Indians; (4) Frontier sites, or non-Native locations established and administered by non-Indians (military posts, missions, trading posts, colonial settlements, etc.); (5) Nonaboriginal sites, which involved Indians peripherally or not at all, with artifact assemblages wholly or almost wholly non-Indian (ranches, mining towns, villages, cities, manufacturing centers, and permanent military facilities). My classification of historical sites modifies Fontana’s, excluding his Protohistoric category while adding two slightly modified nonaboriginal site types.

Contact Sites

Early settlements

The settlement and colonization of Baja California was a long and arduous process owing to the remoteness of the region, rugged terrain, and the limited availability of potable water. Initial European contact on the peninsula dates to May 3, 1535, when Hernán Cortés sailed into the bay of La Paz, made landfall, and established a small colony named Santa Cruz (Figure 2). Sebastián Vizcaino visited the same region in 1596 and discovered artifacts discarded by the Cortesian expedition:

I was in this place for two days, during which, while looking for a place to fortify and explore all of the cove which goes over eight leagues inland, I found on the shore...
Figure 1. Historical sites mentioned in the text. Map by James Ketchum and Karina Busto-Ibarra.
of the sea a high area which appeared to be made by hand of some one hundred paces and very flat, and around it a pit like a well. Therein we set up tents and set stakes, and we found some horseshoes, cables, arrow points, keys, and other iron things that were so old and consumed from the weather that we took them to be an indication that this was the place where the Marqués del Valle was lost when he came on this voyage … [Vizcaíno 1992:138].

This account of September 12, 1596, may represent the first example of historical archaeology in Mexico, if not the entire New World. Vizcaíno’s descriptions of discarded artifacts, their states of preservation, and the approximate geographical locations provide clues to the whereabouts of vanished Santa Cruz.
Frontier Sites

Missions

The colonization of peninsular California was linked to the establishment of 30 Jesuit, Franciscan, and Dominican missions between 1697 and 1834. These religious outposts stretched from San José del Cabo to Guadalupe and eventually reached into Alta California, enabling clerics and non-Native settlers to colonize isolated and distant territories. Many studies of these missions have been undertaken, focusing on demography and culture change, especially the effects of European settlement on Native societies (Mathes 1977, 1982, 2001; del Río 1984, 2003; Avilés and Hoover; Molto et al. 2012). Detailed studies of mission architecture and church artifacts have also been published by Hinojosa Oliva (1985), Díaz (1986), Meyer de Stinglhamber (2001), and Vernon (2002).

On October 5, 1683, a mission site was selected at Arroyo San Bruno during the Isidro de Atondo y Antillón campaign. Intense heat and lack of food and potable water forced Eusebio Francisco Kino and others to abandon the site in May 1685 (Mathes 1982). Over a decade later, José María Salvatierra, credited with establishing the first Jesuit mission on the peninsula, came to San Bruno in October 1697. From there, Salvatierra went to Loreto where the permanent mission was established (Mathes 1982; del Río 1997). Early mission sites and European explorer camps along the coast are among the most significant potential survey and excavation sites for historical archaeologists. Any attempt to locate them must, of course, employ primary historical documents (Mathes 1968, 1979, 1982; León-Portilla 1989b, 1995).

Despite being the first religious outposts that were built in the Californias, mission sites in Baja California Sur have never been systematically surveyed, mapped, formally recorded, or test excavated, although some research has been undertaken. In the early 1970s, Eric Ritter inventoried a collection of surface ceramics at Misión Santa Rosalía de Mulegé (Ritter, personal communication 2009). Modern travel accounts and photographic essays of Baja missions are staples of popular literature (Arraj 2002; Vernon 2002). Minor archaeological work was undertaken at Mission San Bruno near Loreto on the Gulf of California. Otherwise, most if not all Baja California Sur’s missions, including Misión de Nuestra Señora de Loreto Conchó (Loreto), Misión de Nuestra Señora del Pilar de La Paz Airapi (La Paz), Misión Estero de las Palmas de San José del Cabo Añuití (San José del Cabo), Misión Santa Rosa de las Palmas Todos Santos (Todos Santos), Misión Santa Rosalía de Mulegé (Mulegé), Misión San Ignacio Kadakaamán (San Ignacio), Misión San José de Comondu (north of Loreto), and Misión Santiago de Los Coras (Santiago) were not surveyed, mapped, or test excavated before being reconstructed or restored. Relatively few pristine mission sites remain. W. Michael Mathes (personal communication 2005) suggested that Misión San Luis Gonzaga Chiriyaquí, northwest of La Paz, and Misión Nuestra Señora de los Dolores del Sur Chillá, located between Loreto and La Paz, represent prime locations for systematic archaeological inquiry (Figure 3). Minor testing could include ecofactual analysis, providing data about changes in Native diet over time, as well as information about introduced plants and animals (Fermín Reygadas, personal communication 2007).

Archaeological work at surviving missions in Baja California has been productive. Peverill Meigs (1935) was among the first scholars to survey the Mission San Vicente Ferrer in the late 1920s. Roughly 50 years later, Ronald May (1973) analyzed the ceramics from Mission Santo Tomás de Aquino near Ensenada using documentary sources. Recently, César González (2001) provided a useful overview of archaeological work at the Mission San Vicente Ferrer. In Alta California, historical archaeology inquiry has been undertaken at Mission Santa Clara de Assis (Skowronek
and Wizorek 1997) and Mission Santa Inés (Hoover 1992). Similar research projects could be developed for mission sites in Baja California Sur.

**El Camino Real**

The road system of Baja California, often referred to as El Camino Real, comprised cleared trails connecting a newly chosen mission site with the nearest older establishment. According to Crosby (1994:196), “Missions were located at water sources so Indian footpaths usually indicated the best routes between them. Often the Camino Real was created simply by widening and smoothing an old [Indian foot] trail.” Portions of the Camino Real and lesser paths built to outlying pueblos and visitas (outposts) near each mission have endured for centuries. Written records sometimes make it possible to determine their original locations (Crosby 1974, 1977). Nineteenth and twentieth century accounts offer precise data about travel itineraries and towns along Baja California Sur’s road network (North 1910; Jordán 1951, 1995; Gerhard and Gulick 1956; Castillo Negrete 2002). In the United States, Edward Staski (2004) applied historical archaeological methods while surveying the old road from Las Cruces, New Mexico, to El Paso, Texas, especially those portions impacted by farming and urban development. He concluded that original remnants still exist. In Baja California the Camino Real could be similarly studied.

**Nonaboriginal Sites**

**Farms and Ranches**

Baja California ranches began during the Mission period. Clerics used the best available land to plant crops and to raise cattle, pigs, sheep, and goats. In rare instances, privately owned cattle ranches or agricultural farms were established between 1697 and 1768 under Jesuit authority. After the 1768 Jesuit expulsion, many new ranches were established, particularly close to the mission complexes at Todos Santos, San José del Cabo, and San Antonio, marking the beginning of secular colonization in Baja California. One hundred thirty-three cattle ranches were founded between 1769 and 1821, when the region experienced a steady growth in population (Trejo 1999).

Early nineteenth century ranches can be inventoried through reliable archival sources (Lassépas 1995; Trejo 1999; Castillo Negrete 2002). Gerhard and Gulick
(1956) and Jordán (1951, 1995) list those ranches still extant in the 1950s. Harry Crosby (1981) and Reygadas Dahl and Lando-Romo (2013) have studied modern ranches in the peninsula. Historical documentation should therefore be a part of any archaeological study of Baja California Sur’s ranching tradition (see Reygadas Dahl and Rabanal-Mora 2013).

**Pearl Fishing Sites**

The fabled wealth of pearls inspired the earliest voyages to California, including the 1535 expedition led by Hernán Cortés (Gerhard 1956; Mathes 1966:10, 1968; del Río 1990). Prior to the Pax Jesuítica, the Spanish Crown granted few licenses to individuals, giving recipients rights to fish for pearls in the Gulf of California and to market pearls (Mathes 1966:11). Mosk wrote:

> A new colonization policy for Lower California adopted at the end of the seventeenth century further restricted pearl fishing. In 1697 control of the province was awarded to the Jesuits, who retained it until the expulsion order of 1767. Pearl fishing interfered with their missionary efforts, and they took pains to discourage it. Only small-scale operations, usually clandestine, were carried on during the Jesuit period [Mosk 1941:461].

Pearling was prohibited until 1742 when Manuel de Ocio, a former soldier of the Loreto Presidio, attempted its revival. During the 1820s and 1830s, pearling was expanded as mother-of-pearl shell also became marketable (Mosk 1941:463–464). An 1838 regulation required all free divers to work from armadas de buceo (Figure 4). Each such “fleet” incorporated a mother ship, often a brig, serving the smaller boats or canoes of the individual divers. The “admiral” of each fleet controlled the daily harvest for the owners, usually La Paz merchants, who in turn exported their pearls and mother-of-pearl to mainland Mexico and beyond (Esteva 1863; Cariño 1996:115). In 1857 José María Esteva (1863) again regulated pearling, slowing depletion of this valuable resource. Esteva limited pearling times and locations and prohibited taking juvenile oysters (Mosk 1941). The pearling season now ran from July to September, greatly diminishing the quantity collected. However, an 1870s technological advance reversed this conservation trend. The new “hard-hat diving suit” encouraged yearlong harvesting and, together with Mexican government pearling concessions to private individuals, diminished the quantity and quality of the resource. After decades of intensive exploitation, pearl oysters became scarce, and their natural regeneration could not keep pace with increasing demand. At the turn of the twentieth century, Gastón

![Figure 4. Early twentieth century pearl diving fleet in Baja California waters. Mother ship at right, smaller service boats sailing off to left. From Cariño (1998:107).](image)
J. Vives, a Frenchman residing in La Paz, responded to this scarcity by creating the first artificial oyster pearl farm producing good quality pearls (Cariño 1998). The new pearling station was established at San Gabriel, a cove on the southwest margin of Espíritu Santo Island (Cariño 2003). It was visited by zoologist Charles Haskins Townsend:

… during the years 1910 and 1911 the total amount of shell exported from La Paz and derived from the waters adjacent to the Peninsula of Lower California was 331 tons… San Gabriel Cove, Espíritu Santo Island, in the Gulf of California, fifteen miles from La Paz is the only establishment of the kind in the world [Charles Haskins Townsend 1916:434].

Remnants of Vives’ successful offshore venture survive today, including pearl nurseries and an artificial dike one-third of a mile long which transformed San Gabriel Cove into a lagoon (Cariño 2003). Pearl fisheries were found on Carmen, San José, and Cerralvo Islands, south of La Paz at La Ventana and Cabo Pulmo, on the interior coast near Loreto and Mulegé, and at Magdalena Bay on the Pacific coast (Esteva 1863; Diguet 1912). Extant artifacts and features from these sites could be studied in company with documentary sources, for an exciting kind of historical archaeology (Jordán 1951, 1995).

Mines

In 1748 Manuel de Ocio began the region’s first mine at Santa Ana. Soon thereafter, the El Triunfo (1751) and San Antonio mines (1756) were established. Owing to the success of their mines, Santa Ana and San Antonio attracted settlers, becoming peninsular California’s first secular communities (Diguet 1912; Amao 1982, 1997; Southworth 1989). Mining dominated the regional economy during the eighteenth and nineteenth centuries. In 1862 Triunfo Mining and Commercial Company changed its name to the Hormiguera Mining Company and then, in 1878, to the Progreso Mining Company (Diguet 1912; Rivas Hernández 2000). The mining industry kept pace with modern machinery and improved extraction methods, and the output of copper, silver, and gold increased (Southworth 1989). Vestiges of the original Santa Ana and San Antonio mining towns are visible today,
including aqueducts and slag heaps. These archaeological features present a superb research opportunity for historical archaeologists concerned with this important period of Baja California Sur history.

The Santa Rosalía port city was founded in 1885 with no colonial roots. In 1885 the French Compagnie du Boleo received a generous concession from Porfirio Díaz’ government to exploit the rich local copper deposits (Romero Gil 1991; González Cruz 2000). The company installed modern processing equipment, a 33 km railroad linking the mine with the port, and an electrical plant and telephone service (Gonzales 1994:655). This company exported copper to Europe and in exchange imported exotic commodities and new technology to the mine and to the port. A vibrant maritime trade network now linked Baja California and Mexico directly to international markets (Busto 1999a). By 1910 the copper mining town of Santa Rosalía was the largest urban center on the peninsula (Deasy and Gerhard 1944:584). Curiously, the industrial facilities, located in the heart of Santa Rosalía, were never dismantled. The entire town of Santa Rosalía is historically significant, and many of its late nineteenth and early twentieth century buildings remain intact. Private homes, retail stores, schools, locomotives, hotels, machinery, streets, a cemetery, church, hospital, wharf, and the foundry buildings all stand sentinel over the old mining town. Santa Rosalía (Figure 5) retains its Gustav Eiffel designed metal church, its 35 m smokestack, and sundry other structures. Santa Rosalía holds great promise for industrial history and archaeology.

**Saltworks**

Salt extraction was crucial to the economic growth of Baja California Sur. The abundance and superior quality of Isla del Carmen salt was recognized by seventeenth century clerics. Miguel del Barco called the salinas of Isla Carmen “inexhaustible”:

… if a great fleet of … ships … arrived there, they could be promptly loaded up with nothing but salt. And, if after eight or ten days another similar fleet came … [it] would find the salt pan as full and whole as the first one had found it … this salt pan … is one of the best on earth [Barco 1980:285–286].

In 1717 Padre Juan María Salvatierra petitioned the King of Spain for permission to work the salt deposit, stating, “There is enough salt to supply the whole world” (Kirkland et al. 1966:937).

Edward H. Cook (1908:546), a consulting mining engineer from Tucson, Arizona, visited the deposits at Salinas Bay, Isla Carmen, reporting, “For years the Mexican Government maintained a penal colony on the island and operated the deposits with convict labor, but during the French intervention the island was sold to private persons.” To my knowledge, this is the only mention of a penal colony on Isla Carmen. Confirmation could come through field archaeology coupled with archival search of newspapers and government documents and oral history interviews of Loreto informants.

Salt was exported during most of the nineteenth century (Lassépas 1995; Trejo 1999), yet it was not until the 1870s that it was industrially exploited. Santiago Viosca, the United States consul stationed at La Paz, established saltworks on the southeast side of Carmen Island, employing 140 persons year-round. The salt mine incorporated a small railroad and two stone buildings; one served as the office, the other for machinery storage (Southworth 1989). Salt had industrial applications in silver mining (Diguet 1912:36) and served as ballast for sailing vessels (Busto 1999a). On April 2, 1911, Charles H. Townsend voyaged to Isla Carmen and reported:

The salt deposit of Carmen Island is a … lake of snow-white salt nearly two miles long and
a mile wide. The surface salt is dissolved during the annual rainy season and after re-crystallizing forms new supplies … [it] appears to be inexhaustible and only about one-tenth of the lake surface has ever been worked … about sixty tons of salt [is] piled up … [and] As much as 35,000 tons have been shipped in one year, but much more could be supplied if demanded. Its purity is such that it requires no refinement. This salt deposit has been worked commercially for about fifty years … The salt lake has no connection with the sea. The deposit of salt is known to be at least 15 feet in depth [Townsend 1916:424–425].

Salt was also extracted on the Baja California Sur Pacific coast. As whaling declined at Ojo de Liebre (“Rabbit’s Eye,” on Scammon’s Lagoon), the salt industry correspondingly grew (Figure 6). Schooners and other sailing vessels hauled increasingly larger quantities of salt to San Francisco between 1869 and 1873, and small-scale salt extraction enterprises continued throughout the late nineteenth and early twentieth centuries (Henderson 1972:240). By 1870 the industry was supported by a small colony of American and Chinese salt workers. Remnants of this community still exist—hand trucks, wagons, a pier, and the windmill whose enclosed base served as a barracks for the workers—more grist for the historical archaeology mill.

Figure 6. Map of early salt works on the southeastern inner reaches of Scammon’s Lagoon. The map of the Salinas de Ojo de Liebre was drawn in 1884, but the American operators had abandoned their enterprise in 1873. The map and drawings show an orchilla stand in lower left; pier and dock; windmill (molino) for pumping water into evaporation pans (pilas); rail lines over the salt flats; barracks for Chinese workers (barraca China); hand truck operated on the rails over the salt flats; and an abandoned, beached salt lighter with a bird’s nest (nido) on one mast. From Joaquin M. Ramos (1866) and reproduced in Henderson (1972:240).
**Tanneries**

Tanning was a key industry during the second half of the nineteenth century, and the manufacturing and exporting of leather hides was economically important to most towns along Mexico’s Pacific coast. Oxen, deer, and cattle hides were shipped to the United States and beyond. In La Paz, Baja California Sur, U.S. Consul Santiago Viosca owned and operated a thriving tannery in the early twentieth century (Busto 1999a) (Figure 7). Viosca’s leather products served the needs of local merchants, such as Chinese immigrant Quon Ley Yuen, who owned a shoe factory (Preciado 2005:311). Viosca’s tannery and leather company remained active until 1947; its remnants still exist on a vacant lot in La Paz, awaiting archaeological survey and excavation.

**Sugar Mills**

A sugar industry developed in the Cape Region of Baja California Sur, particularly south of La Paz; there, a combination of fertile lands and ample water resulted in the cultivation of sugar cane and the production of *panocha* (brown sugar) using the trapiche process, which involves pressing trunks through a machine to extract the juices of the plant. This later gave way to steam power extraction. Sugar was provided to Baja California as well as to mainland Mexico. In 1893 there were 11 sugar factories in Todos Santos (Figure 8), 16 in Santiago, and 18 in San José del Cabo, all operated by different owners (Busto 1999a: 48).

**Fishing, Whaling, and Turtling Camps**

Fishing is an old tradition along the coast of peninsular California. Many marine resources were harvested over the past five centuries, including shark, tuna, and edible oyster. Gray whale was heavily hunted during the nineteenth century at Magdalena Bay, San Ignacio, and Scammon’s Lagoon (Henderson 1972). Whalers had direct contact with local businesses and individuals at coastal towns. Systematic field surveys around Magdalena Bay, San Ignacio Lagoon, and Ojo de Liebre Lagoon would undoubtedly produce evidence of long-vanished whaling activity. In the 1930s a tuna fishing and packing company (Compañía de Productos Marinos de Cabo San Lucas) was established at Cabo San Lucas and continued operating into the 1970s (Green Olachea 1993; Cariño 1996). One company structure still exists. There is abundant documentation of shark fishing camps at Puerto Escondido, shark and turtle camps at El Pardito Island, and turtle camps at Ojo de Liebre and San Ignacio lagoons. Information about these potential archaeological sites exists in

Figure 7. Tannery Viosca de la Paz, B.C., ca. 1935. Fototeca INAH, México, D.F.
diaries, ship logs, scientific expedition journals, and accounts of travel voyages to the region (Bancroft 1932; Steinbeck 1951).

**Nonaboriginal Communications and Service Sites**

**Railroads**

Extensive rail networks were never built in Baja California Sur. Nonetheless, small industrial railways were operated by various concerns, including mines and saltworks, at the end of the nineteenth century (Kirchner 1988). In 1885 the French Compagnie du Boleo took control of Santa Rosalía’s open-pit copper mine and system of underground tunnels (Southworth 1989; Romero Gil 1991:63) and built a railroad connecting the smelter and port in Santa Rosalia with numerous mines to the west and southwest (Figure 9), principally the Providencia, Purgatorio, Soledad, and Boleo (Kirchner 1988:189). By the late 1890s the Progreso Mining Company laid down rails that could support heavy steam locomotives. According to Kirchner, this line extended:

… from the smelter site in El Triunfo, passing upgrade to the northeast by way of

![Figure 8. Trapiche Todos Santos in 1957. Note the old iron boiler to the left of the brick structure at center. University of California, San Diego, Mandeville Special Collections, Howard Gulick Photograph Collection.](image1)

![Figure 9. The Santa Rosalía waterfront in 1900. Railroad lines and shunt engines in foreground, square-rigged cargo ships in background. Note steam tug, dredge, and work boats. San Francisco Maritime National Historical Park, Harold D. Huycke Photographic Collection.](image2)
the Soledad, Codicia, and Tiro 96 mines, with a terminal at the Mina Humboldt, just north of the summit on the modern road between El Triunfo and San Antonio … At its peak, the line may have comprised 15 k of track … A walk along the still visible railroad route turns up an occasional rusty spike, and from time to time, a piece of rail [Kirchner 1988:210–212].

Other industries, such as the saltworks at Isla del Carmen, Ojo de Liebre Lagoon, and Pichilingue, employed light, narrow-gauge railways to service their evaporation ponds (Kirchner 1988:223). A 3 ft gauge railway with 9 km of track serviced the gypsum mine on San Marcos Island and was active until the 1920s (Kirchner 1988:244–245). Finally, the port at La Paz used a short rail line to transfer merchandise from its dock to the customs house nearby. Historical photographs show the location of this vanished structure.

**Lighthouses**

Maritime navigation in the Gulf of California has been active since colonial times. Coastal towns and port cities were sources of food, water, and other necessities for sailors. For centuries mariners used recognizable landforms as aids to navigation. The chalky cliffs of Cabo Falso, visible from great distances, were one such landmark (Imray 1868:117). The earliest lighthouse construction dates to the Porfirito (1876–1911), when many improvements were made to Mexico’s ports; all were part of Porfirio Díaz’s objective of increasing international maritime trade (Busto 1999b). Modern lighthouses at the ports of La Paz, Cabo San Lucas (Cabo Falso), San José del Cabo, and Magdalena Bay in the southern portion of the peninsula were in operation by 1907. Remnants of these lighthouses are visible today (Figure 10) and should be stabilized before they are obliterated by wave action.

**Wharves**

Specific wharves merit immediate attention from historical archaeologists, especially those built, such as the one at Santa Rosalía, where no natural bay existed prior to the arrival of the Compagnie du Boleo. Santa Rosalía’s man-made harbor represented a Herculean building effort, equal measures of engineering savvy and mechanical innovation. The Santa Rosalía wharf and its associated 327 m dike were built between 1897 and 1910 (Romero Gil 1991:61). Wharves at other ports, like La Paz, have been remodeled in recent years, yet they still represent important historical features that should be studied.

**Shipwrecks**

Underwater archaeology in Mexico has been focused mostly on seventeenth century shipwrecks along the Caribbean coast (Luna Erreguerena 1998; Trejo Rivera 2003). This notwithstanding, the maritime cultural heritage of Baja California holds great promise. INAH’s Subdirección de Arqueología Subacuática now mandates the investigation of shipwreck sites off coastal Baja California.¹ The Proyecto Arqueológico Galeón de Manila, within the municipality of Ensenada, has recovered a wide range of artifacts from the vessel *San Felipe*, including lead hull sheathing, iron nails and bolts, bronze figurines, Spanish coins, and Chinese porcelain fragments. A second underwater project at Bahía Tortugas, north of San José, recovered ordnance and fragments of coal. Such artifacts are derived from the Imperial Japanese Navy cruiser *Asama* that ran aground off the coast of Baja California on February 6, 1915. Other shipwrecks off the coast of Baja California Sur are known or suspected (Gerhard 1956; Mathes 1968, 1981). I have noted that several vessels sank in Magdalena Bay and in the Bay of La Paz during the nineteenth and early twentieth centuries, making these areas prime locations for underwater archaeological research (Busto 1999a).
Military Posts, Garrisons, and Battlefields

Military posts were established in Baja California Sur as early as the sixteenth century. The first presidio was associated with Misión de Nuestra Señora de Loreto Conchó, or Mission Loreto, founded by the Society of Jesus in 1697. Colonial documents provide additional information about the functions and artifact types associated with the presidio at Loreto. Two centuries later hostilities between Mexico and the United States climaxed with American forces invading Baja California Sur, engaging Mexican forces in combat. Documents on the Mexican-American War in Baja California (1846–1848) report skirmish sites, military garrisons, and cuarteles (military barracks) in Mulegé, La Paz, Loreto, and San José del Cabo (Halleck 1977; Nunis 1977:31, 35, 38, 45; Amero 1984).

A few years later, in 1870:

… the United States Government acquired a coaling station at the fine old pirate cove of Pichilingue Bay near La Paz, and in the years 1873 and 1875 her ships, the Hassler and the Narragansett, made a complete survey of the peninsular coast. In 1858 Lieutenant J. C. Ives of the United States Topographical Engineers had explored the Colorado up-ward from its mouth. Now, therefore, mapmakers could over-look the charts made by Padre Consag one hundred and thirty years earlier and turn to newer and more accurate ones …

It is reasonable to suppose that Mexico watched with somewhat dubious eyes the American nation calmly acquiring a coaling station at Pichilingue, American vessels surveying the peninsular coast and American papers prophesying the early acquisition of Lower California [North 1908:83, 86].

A U.S. government document (United States Hydrographic Office 1887:24) indicates that in 1886 a warehouse and guardhouse were situated near a coal shed, somewhat grandiose terms for what in reality were in some cases simply thatch-roofed, open-air ramadas (Figure 11). The U.S. naval base at Pichilingue remained in operation until the end of World War I, when it was turned over to the Mexican government. In 1951 remnants of the coal storage buildings were still visible (Jordan 1995). Today, the port of Pichilingue serves La Paz and its surrounding region.
The other strategic military post in Baja California Sur was Magdalena Bay, where the U.S. Navy had maintained a coaling station since 1883. By the turn of the nineteenth century, it incorporated both a naval gunnery range and U.S. Marine Corps small arms range. Just prior to World War I, Magdalena Bay came under intense international scrutiny. The Mexican government was considering granting permission to the Imperial Japanese Navy to establish its own coaling station there, a potential threat to U.S. Pacific security (Chamberlin 1955). By the 1920s the population of Magdalena Bay was minimal, comprising government officials, such as the lighthouse keeper, the customs house collector, and other administrators. The site holds great potential for students of U.S. and international military history.

**Miscellaneous Historical Sites**

Sites that fit no established category can also be studied from a historical archaeology perspective. These include city buildings, public offices, plazas, hotels, commercial house structures, theaters, streets, hospitals, schools, and cemeteries. In Baja California Sur, cemeteries are invariably associated with missions and mining districts. Cemeteries are located at the Misión San Francisco Javier de Viggé-Biaundó (San Javier), the Misión Santa Rosalía de Mulegé (Mulegé), and at the Misión San Luis Gonzaga Chiriyaquí (San Luis Gonzaga), and an abandoned nineteenth century cemetery exists at El Triunfo; all hold great research potential.

**Review of Historical Sources and Archives**

A broad range of primary and secondary documents are readily accessible in Spain, Mexico, and the United States. The most relevant collections include the Archivo General de Indias (AGI), in Seville, Spain, and the Archivo General de la Nación (AGN) in Mexico City. Both contain Colonial period material. The AGN holds three unique collections: Californias, Fondo Piadoso de las Californias, and Provincias Internas. Documents from the AGN include eyewitness accounts by explorers and missionaries, many of which are transcribed, translated into many languages, and published (e.g., Tamaral 1946; Baegert 1952; Piccolo 1962; Mathes 1965, 1979; Venegas 1966; Barco 1973; Clavijero
Historical Archaeology of Baja California Sur


The State Archive of Baja California Sur Archivo Histórico Pablo L. Martínez [AHPLM] incorporates a world-class collection of rare books, manuscripts, photographs, maps, and ephemera on the history of Baja California Sur. The AHPLM holds many nineteenth and twentieth century documents, fewer Colonial period materials. Other documents on the history of Baja California Sur are stored in two additional regional facilities, the Archivo General del Estado de Sonora in Hermosillo, and the Instituto de Investigaciones Históricas-Universidad Autónoma de Baja California in Tijuana (IIH, UABC, Tijuana). This latter facility has acquired materials from the AGN, the AHPLM, and the Bancroft Library at the University of California, Berkeley. In 1995 W. Michael Mathes donated his extensive personal library to the Colegio de Jalisco. Since then, the Biblioteca Dr. W. Miguel Mathes at El Colegio de Jalisco, A.C., has been dedicated to the preservation of thousands of highly specialized books, journals, 35 mm slides, and mission and colonial documents on microfilm, all reflecting Dr. Mathes’ eclectic interests in Mexican history.

Several private and public libraries in California contain holdings relevant to Baja California Sur. The Bancroft Library and the Mandeville Special Collections Library, University of California, San Diego, maintain a wide range of such rare books, manuscripts, periodicals, maps, and photographs. Researchers can also benefit from consulting collections at other academic research libraries, including the University of California, Riverside, the University of California, Los Angeles, and the Seaver Center for Western History at the University of Southern California. Additionally, books and manuscripts at the Los Angeles Public Library; the Sutro Library, San Francisco; the Henry E. Huntington Library, San Marino; and the Sherman Foundation Library, Corona del Mar are relevant to Baja California Sur. The very useful Online Archive of California (OAC) provides access to primary collections maintained by more than 200 institutions including libraries, special collections, archives, historical societies, and museums throughout California. These include collections maintained by all 10 University of California campuses. One of its most beneficial holdings are complete runs of historic newspapers, in some cases dating back to the 1840s. In this age of digital research, it should also be noted that certain kinds of historical sources, including manuscripts, traveler’s accounts, navigation logs, maps, pamphlets, brochures, postcards (Figures 12 and 13), newspapers and diaries, primary and secondary sources alike, are not only available online at specific websites, but some materials can be purchased through electronic trading forums like eBay (DeLyser 2004). Lastly, regional museums in Baja California Sur, including Loreto, Todos Santos, La Paz, and Santa Rosalía, exhibit a broad spectrum of tools, mining equipment, and sundry artifacts associated with many of the abovementioned archaeological sites.

Conclusion

For the past century Mexican archaeology has been recognized as a powerful tool serving the needs of researchers, educators, and local community members. It is a focus of national pride. While Baja California Sur has hosted many survey and salvage projects over the past 40 years, archaeologists have only recently considered historical sites worthy of attention, and even though scholars have employed eighteenth century Jesuit writings to illuminate prehistory (cf. Mathes 1981:44), more recent documents continue to be ignored. My hope is that the present paper motivates archaeologists and historians to begin research and preservation projects in Baja California Sur. Historical archaeology is on the rise throughout Mexico, and this trend must inevitably reach across the Sea of Cortés. With eighteenth, nineteenth, and early twentieth century documents and hundreds of very diverse and not yet studied historical sites, Baja California Sur
remains Mexico’s last, and best, frontier for historical archaeology research.

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Endnotes

2. Mathes (1981, 1991) and León-Portilla (1972) reviewed historical sources available for Baja California. León-Portilla (1972:8) stated, “Documentary sources for the history of Baja California are abundant beyond expectation, and historians who have been concerned with them will readily agree with this statement,” to which Mathes, quoting León-Portilla, quipped, “Probably there are more historical documents relating to Baja California than there are Baja Californians” (Mathes 1981:44). For brevity’s sake, I will note just a few resources, including Barrett’s (1957) comprehensive bibliography of Baja Californiana II 1535–1964; the Baja California Travels Series published by Dawson’s Book Shop, Los Angeles, which consists of 49 volumes that cover a broad range of topics. Volume 50 of the Baja California Travels Series (Hager and Hager 1991) is the superior general index of the series. The Pacific Coast Archaeological Society has demonstrated a keen interest in Baja California since 1965 (see PCAS Quarterly Committee 2007:103–111). Lastly, Bajacalifology, the website of the San Diego Archaeological Center, offers a comprehensive bibliography of references relating to the prehistory, early history (to 1821), and ethnography of Baja California; this online reference tool includes published books and articles, theses and dissertations, oral conference papers, and unpublished archaeological reports (http://www.sandiegoarchaeology.org/Laylander/Baja/index1.htm). The Bajacalifology website also provides links to libraries, governmental agencies, university programs, museums, organizations, and meetings.

3: The Online Archive of California web page can be accessed at www.oac.cdlib.org.

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