

ships. The mean rise and fall of tides is 3.7 feet; of spring tides 5 feet, and of neap tides 2.3 feet. Here storms are of rare occurrence, and the climate is of the most equable and salubrious known. The towns of New and Old San Diego are at the eastern extremity of the bay. The steamers of the Pacific Mail S. S. Co. call at this port, as well as do others, and it is the expected western terminus of the Texas Pacific Railway. These arms of commerce connecting it with the interior and with the great cities of the world, give merited consequence to this, one of the most beautiful and safest harbors of the world.

The anchorage of San Luis Rey, in latitude 33° 17', and longitude 117° 29', is unprotected and little used. The same may be said of the anchorage of San Juan Capistrano, situated twenty-five miles northwest of the former.

Anaheim Landing is equally unprotected, but in fair weather is considerably used, the receiving and discharging of passengers and cargo being effected by lighters while the sea-going vessels are anchored a mile or more from shore. Here the shore runs nearly east and west and the landing is distant from San Pedro between ten and eleven miles. Other and similar landings are made along the coast but cannot be designated as harbors.

San Pedro Bay, though it cannot be classed with the bay of San Diego as a harbor, is the most important port of the lower coast. From it the productive country of the interior is easily accessible, roads leading easterly to Arizona, and northerly to the rich mining regions of Inyo, and these with the prosperous neighboring country give it a large and increasing commerce. Los Angeles, twenty-two miles north from the anchorage, is the distributing point, but Wilmington, three miles inside the bar, is the receiving point. The construction, here, of a breakwater, or dyke, by the United States Government, running from a point of land called Rattlesnake Island to Deadmans Island, has greatly improved the harbor, affording protection from the southern winds, and at the same time so confining and directing the tidal currents as to wash and deepen the channel crossing the bar. This improvement is still in progress, and farther dredging will give the harbor the safety and capacity that the importance of the position demands. Previously this was but an open roadstead with about five fathoms of water a mile from land, but it is believed a fine harbor will be created where piers will be built, and landings made direct. At present lighters are used transferring freight through a tortuous channel to an inner bay at Wilmington. The tides rise and fall from three to five feet, with extremes of six and a half feet.

Santa Monica is about twenty-two miles north northwest of San Pedro and fifteen miles a little south of west from Los Angeles, and fronts a large open bay, or bight of the coast, lying between Point Vincent on the south, and Point Duma on the west, twenty-six miles apart. Here landings have been effected for a number of years, by means of lighters and surf boats directly upon the broad and smooth beach, but recently a wharf 2,700 feet in length has been constructed at which deep water vessels moor with safety. This adds greatly to the convenience of the commerce of Los Angeles. A railroad connects the two places, and is extending as the Los Angeles and Independence Railroad to Inyo county. The Beach at Santa Monica is a favorite place for bathers, and the new town promises to become important as a summer resort as well as for its convenient harbor.

Point Hueneque, or Conversion, is the next landing in much use as we go up the coast. A lighthouse has been proposed on this point which the Coast Survey locates in latitude 34° 08' north, and longitude 119° 09' west. Westerly extends the Santa Barbara Channel, about one hundred miles in length and twenty-five in width, lying between the main land and the chain of islands, the principal of which are the Santa Cruz, Santa Rosa, and San Miguel. At the western extremity of the channel, on the land side, is Point Conception, one of the most prominent headlands of the coast, and protecting the southern section from the cold northwest winds which sweep, in summer, so fiercely along the exposed parts of Northern California and Oregon.

The chains of islands along the Southern Coast, as San Clemente, Santa Catalina, San Nicholas, Anacapa, Santa Barbara, Santa Cruz, Santa Rosa and San Miguel are quite barren, and generally destitute of water, therefore offer slight inducements for culture, and with grazing capacities extremely limited. The most important is Santa Catalina, off the coast of San Pedro, which has a good harbor, but about all good fishing is found.

Within the Santa Barbara Channel landings are made at numerous places, the principal being at San Buenaventura, Santa Barbara and El Coto. These are generally open roadsteads, the swells of the sea being broken by a heavy growth of kelp, affording a partial protection to shipping and to wharves within. At Santa Barbara a substantial pier has been constructed which steamers and vessels approach and fasten to.

From Point Conception the coast bears northwest, high, bold and dangerous. The first landing reached is that of San Luis Obispo, or Avila, as it is recently named, the principal town being ten miles interior. This is not a pleasant landing, though much used in obedience to the demands of business in the interior.

The Bay of San Simeon, in latitude 35° 39' and longitude 121° 15', is an exposed roadstead, but affords a good anchorage during northwest winds. From this the shore stretches direct and unbroken to latitude 36° 35', where the small but beautiful Carmello Bay breaks the rigid line. The Sierra Santa Lucia rises abruptly from the sea, and from San Luis Obispo to Point Carmello, a distance of one hundred and ten miles, offers no depression for convenient passage, and is unexplored and unknown. A few miles north of Carmello Bay is Point Pinos, around which enters the grand and historic Bay of Monterey. This is the oldest of the occupied portions of California, having been entered and taken possession of by the Spanish, under Viscayno, in December, 1602. The bay is of large area, with an opening twenty-five miles broad, while it extends into the land only half that distance. The portion embraced in Point Pinos, being a capacious bay fronting the town of Monterey, is well landlocked, and constitutes a perfectly safe harbor. The Salinas and the Pajaro rivers enter the bay on the eastern side, their mouths forming good harbors for light-draft vessels. On the northern shore, near the ocean main, is the harbor of Santa Cruz—not always safe, but easily reached and much frequented. Thence northerly to the Golden Gate intervenes a rocky and dangerous coast. Several points project into the sea, and slight indentations are made, where light-draft vessels at times may land, but which larger ships always shun. Half Moon Bay, eighteen miles south of the Golden Gate, affords a good summer anchorage.

Under the latitude 37° 48' longitude 122° 30', the coast abruptly opens to the great Bay of San Francisco, one of the very best harbors of the Pacific and of the world. The entrance is by the Golden Gate, a strait one mile in width by six miles in length, expanding in the broad bay of eight miles in width, reaching southward forty miles and north twenty-five, and with Suisun adding thirty more to its extent, giving a shore line of over three hundred miles. This is a noble inland sea, containing a number of fine harbors, and possessing a commerce within itself. Upon rocky points defensive forts are erected; and Fort, Lime and Black Points, and Angel, and Alcatrazes Islands stand in the passage-way, formidably armed and ready to dispute the entrance of a hostile fleet. The bar off the mouth of the Bay has a depth of five fathoms, rapidly deepening inside with an easy and safe passage. This bay, it is by some believed, was first entered by Sir Francis Drake in 1579, although general authority locates his bay and landing some thirty miles northwest. The entrance is otherwise reported as first seen by Ferrelo, in 1543, the successor of the great Spanish Navigator, Cabrillo, but the only authentic account of the discovery of the bay was by a land party from San Diego in 1769, under Gaspar de Portola, who were seeking the Bay of Monterey, but who, traveling eastward of the Coast Range, had missed the object of their search. In 1776 the Golden