

THE STATE OF CALIFORNIA.

CONTINUED.

CONFIGURATION OF THE STATE — BAY OF SAN FRANCISCO AND CITY — RIVERS OF CALIFORNIA — CHARACTER OF SOIL, ETC. — RELATIVE STERILITY AND PRODUCTIVENESS — CLIMATE — DRY AND WET SEASONS — CAUSES OF CHANGE — CLIMATE IN SAN FRANCISCO, COAST RANGE VALLEYS AND INTERIOR VALLEY — AREA OF ARABLE AND GRAZING LAND — PRODUCTIONS — DISCOVERY OF GOLD — ITS POSITION — THE PLACERES — WASHING — DIGGING — THE MINES — CALCULATIONS AS TO THE YIELD OF THE MINES — GOLD YIELDED BY CALIFORNIA — ITS QUALITY — QUICKSILVER MINES — COMMERCE — POPULATION — GROWTH OF CITIES — OLD PRESIDIOS — TOWNS — LAND TITLES — MISSION LANDS — CONCLUSION.

The State of California, as at present formed by its constitution, lies chiefly between the Sierra Nevada and the sea. North and south, it embraces about ten degrees of latitude, from 32° , where it touches the peninsula of Lower California, to 42° , where it bounds on Oregon. East and west, from the Sierra Nevada to the sea, it will average, in the central parts, one hundred and fifty miles, and in the northern, two hundred. The whole State is thus, in truth, a single geographical formation or great valley, though commonly divided into the valleys of San Joaquin and Sacramento — the two great streams which flow from the north and south until they meet near the centre of the State and wend their way to the ocean through the bay of San Francisco.

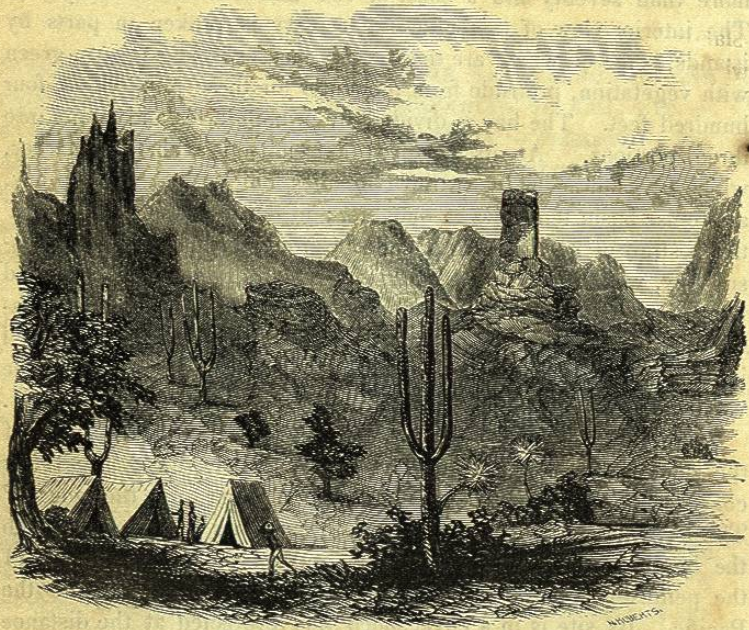
This beautiful arm of the ocean, which is pronounced by all geographers to be one of the most wonderful harbors in the world, was discovered about 1768 by a party of Franciscan friars, who bestowed upon it the name of their patron Saint. Completely landlocked, it is capable of sheltering the most extended commerce. Approached from the sea, a bold outline of coast scenery is presented to the observer. On the south, the bordering mountains descend in narrow ranges, lashed by the surf of the Pacific. On the north, a bluff promontory rises full three thousand feet above

the sea, while, betwixt these points, walled in by lofty cliffs on either side, a narrow strait, about a mile in width and five in length, with a depth in mid channel of forty and forty-five fathoms, forms the Chrysopolæ or Golden Gate. Beyond this, the wonderful bay of San Francisco opens like an inland sea to the right and left, extending in each direction about thirty-four miles, with a length of more than seventy and a coast of two hundred and seventy-five. The interior view of this lake-like estuary is broken in parts by islands, some of which are mere rocky masses, while others, green with vegetation, protrude from the water for three hundred or four hundred feet. The bay is divided by promontories and straits into three portions. At its northern extremity is Whaler's harbor, which communicates by a strait two miles long with San Pablo bay, a circular basin ten miles in diameter; at the northern extremity of this a strait of greater length, called Carquinez, connects with Suisun bay, which is nearly equal in size and shape to San Pablo, and into this bay the confluent waters of the Sacramento and San Joaquin are emptied. A *delta* of twenty-five miles in length, divided into islands by deep channels, connects the Suisun bay with the valley of these rivers, into whose mouths the tide flows regularly.

On the bay of San Francisco is situated the marvellous city of the same name, which sprang up, almost "in a night," and was constructed of materials quite as frail as those of "the gourd." The town lies about four miles from the narrows or straits by which the bay is entered, on its west side, and on the northern point of the peninsula between the southern portion of the estuary and the Pacific. Its site is in a cove, faced and protected at the distance of two miles by the large island of Yerba Buena. The land rises gradually for more than half a mile from the water's edge, towards the west and south-west, until it terminates in a range of hills five hundred feet above the sea. North of the town is a large bluff, plunging precipitously into the bay, in front of which is the best anchorage.

The most important rivers of California are, of course, the San Joaquin and Sacramento. The San Joaquin, running from south to north, is represented to be navigable in some seasons for a greater part of its length, during eight months of the year. Its chief affluents, lying altogether on its eastern side, and pouring down from the Sierra Nevada, are the Lake Fork, Acumnes, Tuolumne, Stanislaus, Calaveras, Mukelumne, Mariposa and Cosumnes. The Rio Colorado of the West forms part of the eastern State boundary, from the 35th degree of north latitude to the Mexican line, but it flows

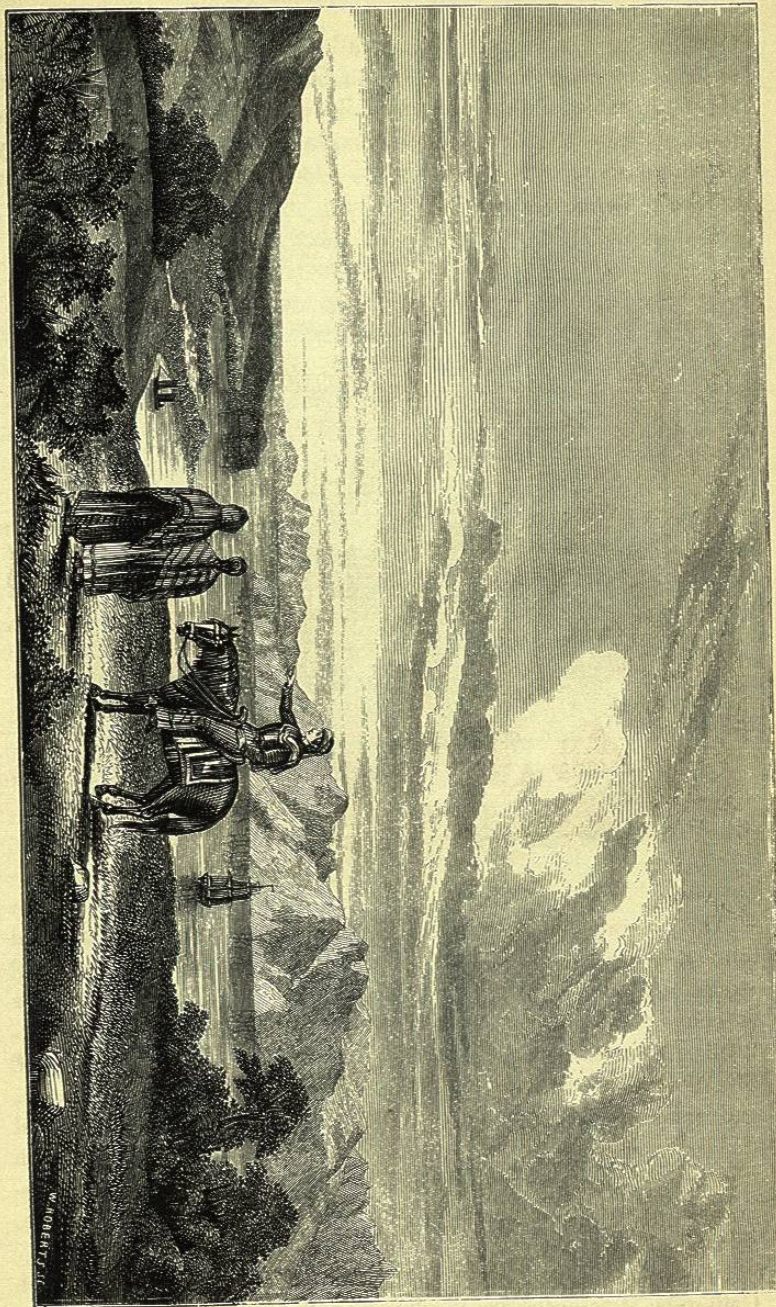
through a region at present very little known or valued, yet future explorations may show it to be valuable. Its deep colored waters, similar to those of the Missouri and Red rivers east of the mountains, indicate that it probably has not passed through an entirely ungenerous soil. The valley of the Gila, whose waters are clear, is known to be barren.



SCENERY ON THE GILA.

The Sacramento runs from north to south through an inclined alluvial prairie, and is described as a deep, broad and beautiful stream. It flows through a fine region, and is navigable for vessels of considerable draught as high as the settlements in the neighborhood of Sutter's original location. The principal tributaries of this river, also, originate in the melting snows of the Eastern Sierra, and are known as the Antelope, Deer, Mill and Chico creeks, and the Butte, Dorado, Plumas or Feather, Yuba, Bear and American rivers. Cottonwood creek and some other smaller streams are disgorged into it from the slopes of the Western or Coast Range. The Trinity and a few at the north, run into the Pacific.

In order to comprehend the agricultural and mineral value of California, it is necessary to glance at the structure of the region. Upon the forty-first parallel of latitude, in a fork of the Sierra Ne-



BAY OF SAN FRANCISCO.

vada, is a tract of high table land, about one hundred miles in length, surrounded on all sides by mountains, and called by Frémont the UPPER VALLEY of the Sacramento. Here the growth of timber is vigorous and immense, for the climate and productions are modified by altitude as well as latitude. The Sacramento river, rising in the mountains at its northern extremity, reaches the Lower Valley through a gorge or cañon on the line of Shastl Peak, falling two thousand feet in twenty miles.

The LOWER VALLEY is subdivided, as we have stated, into the valleys of the two great rivers, both of which are, at most, only a few hundred feet above the level of the sea, and gradually slope towards the bay. The *foot hills* of the Sierra Nevada limiting the valleys, make a woodland country diversified with undulating grounds and pretty vales or glens watered by numerous small streams. These afford many advantageous spots for farms, occasionally forming large bottoms of rich, moist land. Below 39° of latitude, and *west* of the *foot hills*, the forests are limited to scattering groves of *oak* in the valleys and on the borders of streams; or, of *red wood* on the ridges and in the gorges. With these exceptions, the whole region presents a surface without shrubbery or trees, though a few hills are shaded by dwarfed and stunted groves which may be used as fuel. California is covered, however, with various kinds of grasses and with wild oats, which grow luxuriantly in the valleys for many miles from the coast, but, ripening early in the season, they soon cease to protect the soil from the sun's scorching rays. As summer advances, the moisture in the atmosphere, and to a considerable depth in the earth, is completely exhausted, and the radiation of heat from the parched plains and naked hill sides becomes insufferable. North of the Bay of San Francisco, between the Sacramento and Joaquin valley and the coast, the country is cut up by mountain ridges and rolling hills, with many fertile, watered valleys. Immediately along the coast, lie open prairies, belted or broken by occasional forests, and interspersed with extensive fields of wild grain. Around the southern arm of the bay, a low, alluvial bottom land, sometimes overgrown by oaks, borders the western foot of the Coast Range, terminating, on a breadth of thirty miles, in the valley of San José. In this neighborhood, too, is the lovely valley of San Juan, which is probably the garden of the new State. These two valleys form a continuous plain of fifty-five miles in length, and from one to twenty miles in breadth, opening with smaller valleys among the hills. The balmy region, enclosed between the coast range and the lower

hills upon the ocean, is blessed with a soil of singular fertility, a fine, dry atmosphere, and a soft, delicious climate. It is wooded with majestic trees, covered with rich grasses, brilliant with an endless variety of flowers, and produces profusely the fruits of the temperate and tropical zones.

South of Point Concepcion the climate and general appearance of the country are changed. From that point the coast bends almost directly east; the face of the country obtains a more southern exposure, and is sheltered by ranges of low mountains or hills from the bleak violence of north-west storms. The climate accordingly is more genial, and fosters a richer variety of productions than is found on the northern coasts.

The valleys parallel with the coast range, as well as those which extend eastwardly in all directions among the hills towards the great plain of the Sacramento, are of unsurpassed fertility. Their soil is a deep, black alluvian, and so porous that it remains perfectly unbroken by gullies, notwithstanding the great quantity of water which falls into it during the wet season. The productiveness of "California," says Frémont in his Memoir on that region, published in 1848, "is greatly modified by the structure of the country, and under this aspect may be considered in three divisions—the *southern*, below Point Concepcion and the Santa Barbara mountain, about latitude 35°; the *northern*, from Cape Mendocino, latitude 41°, to the Oregon boundary; and the *middle*, including the bay and basin of San Francisco and the coast between Point Concepcion and Cape Mendocino. Of these three divisions the rainy season is longest and heaviest in the north, and lightest in the south. Vegetation is governed accordingly—coming with the rains—decaying where they fail. Summer and winter, in our sense of the terms, are not applicable to this part of the country. It is not heat and cold, but wet and dry, which mark the seasons, and the winter months, instead of killing vegetation, revive it. The dry season makes a period of consecutive drought, the only winter in the vegetation of this country, which can hardly be said at any time to cease. In forests, where the soil is sheltered, in low lands of streams and hilly country, where the ground remains moist, grass continues constantly green and flowers bloom in all months of the year.

"In the southern half of the country the long summer drought has rendered irrigation necessary, and the experience of the missions, in their prosperous day, has shown that, in California, as elsewhere, the driest plains are made productive, and the heaviest

crops yielded by that mode of cultivation. With irrigation a succession of crops may be produced throughout the year."

The peculiarities of the climate of California are so well explained in a letter from the Honorable T. Butler King, that we extract his observations thereon as the most valuable portion of the report made by him to the United States Government in March, 1850.¹

"The north-east winds, in their progress across the continent, towards the Pacific ocean, pass over the snow-capped ridges of the Rocky Mountains and the Sierra Nevada, and are of course deprived of all the moisture which can be extracted from them by the low temperature of that region of eternal snow; consequently no moisture can be precipitated from them, in the form of dew or rain, in a higher temperature than that to which they have been subjected. They pass therefore over the hills and plains of California, where the temperature is very high in summer, in a very dry state; and so far from being charged with moisture, they absorb, like a sponge, all that the atmosphere and surface of the earth can yield, until both become, apparently, perfectly dry.

"This process commences when the line of the sun's greatest attraction comes north in summer, bringing with it vast atmospheric movements. Their approach produces the dry season in California, which, governed by these laws, continues until some time after the sun repasses the equator in September, when, about the middle of November, the climate being relieved from these north-east currents of air, the south-west winds set in from the ocean, charged with moisture—the rains commence, and continue to fall, not constantly, as some persons have represented, but with sufficient frequency to designate the period of their continuance, as the *wet season*, from about the middle of November until the middle of May, in the latitude of San Francisco.

"It follows, as a matter of course, that the *dry season* commences first, and continues longest in the southern portions of the Territory, and that the climate of the northern part is influenced in a much less degree by the causes which I have mentioned than any other section of the country. Consequently, we find that as low down as latitude 39° rains are sufficiently frequent in summer to render irrigation quite unnecessary to the perfect maturity of any crop which is suited to the soil and climate.

¹ See T. B. King's Report on California, Ex. Doc. No. 59, 31 Cong. 1st sess

“There is an extensive ocean current of cold water, which coming from the northern regions of the Pacific, or, perhaps, from the Arctic, flows along the coast of California. It arrives charged with, and in its progress, emits air, which appears in the form of fog when it comes in contact with a higher temperature of the American coast, as the Gulf-stream of the Atlantic exhales vapor when it meets, in any part of its progress, a lower temperature. This current has not been surveyed, and, therefore, its source, temperature, velocity, width, and course, have not been accurately ascertained.

“It is believed by Lieut. Maury, on what he considers sufficient evidence—and no higher authority can be cited—that this current comes from the coasts of China and Japan, flows northwardly to the peninsula of Kamptschatka, and, making a circuit to the eastward, strikes the American coast in about latitude 41° or 42° . It passes thence, southwardly, and finally loses itself in the tropics. * *

“As the summer advances in California, the moisture in the atmosphere and the earth, to a considerable depth, soon becomes exhausted; and the radiation of heat, from the extensive naked plains and hill-sides, is very great.

“The cold, dry currents of air from the north-east, after passing the Rocky Mountains and the Sierra Nevada, descend to the Pacific and absorb the moisture of the atmosphere to a great distance from the land. The cold air from the mountains, and that which accompanies the great ocean current from the north-west, thus become united, and vast banks of fog are generated, which, when driven by the wind, has a penetrating or *cutting* effect on the human skin, much more uncomfortable than would be felt in the humid atmosphere of the Atlantic at a much lower temperature.

“As the sun rises from day to day, week after week, and month after month, in unclouded brightness during the dry season, and pours down his unbroken rays on the dry, unprotected surface of the country, the heat becomes so much greater inland than it is on the ocean, that an under-current of cold air, bringing the fog with it, rushes over the coast-range of hills, and through their numerous passes, towards the interior.

“Every day as the heat, inland, attains a sufficient temperature, the cold, dry wind from the ocean commences to blow. This is usually from eleven to one o'clock; and as the day advances the wind increases and continues to blow till late at night. When the vacuum is filled, or the equilibrium of the atmosphere restored, the wind ceases: a perfect calm prevails until about the same hour the following day, when the process re-commences and progresses as before,

and these phenomena are of daily occurrence, with few exceptions, throughout the dry season.

“The cold winds and fogs render the climate at San Francisco, and all along the coast of California, except the extreme southern portion of it, probably more uncomfortable, to those not accustomed to it, in summer than in winter.

“A few miles inland, where the heat of the sun modifies and softens the wind from the ocean, the climate is moderate and delightful. The heat in the middle of the day is not so great as to retard labor, or to render exercise in the open air uncomfortable. The nights are cool and pleasant. This description of climate prevails in all the valleys along the coast-range, and extends throughout the country, north and south, as far eastward as the valley of the Sacramento and San Joaquin. In this vast plain the sea breeze loses its influence, and the degree of heat in the middle of the day, during the summer months, is much greater than is known on the Atlantic coast in the same latitudes. It is dry, however, and probably not more oppressive. On the foot-hills of the Sierra Nevada, and especially in the deep ravines of the streams, the thermometer frequently ranges from 110° to 115° in the shade, during three or four hours of the day, from eleven until three o'clock. In the evening, as the sun declines, the radiation of heat ceases. The cool, dry atmosphere from the mountains spreads over the whole country, and renders the nights fresh and invigorating. * * * * *

“These variations in the climate of California account for the different conflicting opinions and statements respecting it. A stranger arriving at San Francisco in summer, is annoyed by the cold winds and fogs, and pronounces the climate intolerable. A few months will modify if not banish his dislike, and he will not fail to appreciate the beneficial effects of a cool, bracing atmosphere. Those who approach California overland, through the passes of the mountains, find the heat of summer, in the middle of the day, greater than they have been accustomed to, and therefore many complain of it.

“Those who take up their residence in the valleys which are situated between the great plain of the Sacramento and San Joaquin and the coast range of hills, find the climate, especially in the dry season, as healthful and pleasant as it is possible for any climate to be which possesses sufficient heat to mature the cereal grains and edible roots of the temperate zone.”¹

¹ See appendix at end of vol. for Meteorological Observations in California.