

Chamberlain (W.M.)

SOUTHERN CALIFORNIA



*DR. W. M. CHAMBERLAIN,
RAYMOND HOTEL,
PASADENA, CALIFORNIA.
NOVEMBER TO MAY.*

NOTES ON THE SANITARY AND
CLIMATIC CONDITIONS
OF
SOUTHERN CALIFORNIA

BY

W. M. CHAMBERLAIN, M.D.

CONSULTING PHYSICIAN TO CHARITY HOSPITAL, N. Y., ETC., ETC.

READ BEFORE THE SECTION OF PRACTICE OF THE N. Y.
ACADEMY OF MEDICINE, OCTOBER 19, 1886

Reprinted from THE MEDICAL RECORD, October 30, 1886



NEW YORK
TROW'S PRINTING AND BOOKBINDING COMPANY
201-213 EAST TWELFTH STREET
1886

NOTES ON THE CLIMATIC AND SANITARY CONDITIONS OF SOUTHERN CALIFORNIA.¹

THE increase and the diffusion of wealth, the extension of railroads, and the greatly increased comfort of travel, have made us a travelling people.

For pleasure or for health, a great multitude are moving in all directions over our vast territory. Fine hotels and sanitarium are multiplying at an equal rate. Such are found, distant from each other by only a few hours' travel, all along the Atlantic coast from Mount Desert to St. Augustine; all along the pine forests and sandy plains from Lakewood to Thomasville; and all along the mountain ridges from the Adirondacks to Asheville and Marietta. The slopes and parks of the Rocky Mountains in Colorado and New Mexico are as well provided, and even the far-off waters of Puget Sound are set with hotels which compare very well with the finest of the Catskills.

Notably within the last few years this tide of travel has turned toward California, and during the last winter the southern part of that State was fairly inundated by it. For two months the Southern Pacific Railroad alone brought to Colton an average of more than a thousand west-bound tourists daily.

There are five completed transcontinental railways now in operation, and two more in progress of construction; and there is good reason to think that the Pacific slope will be colonized and occupied at a rate more rapid than heretofore.

¹ Read before the Section of Practice of Medicine, New York Academy of Medicine, October 19, 1886.

The city of Los Angeles, which in 1880 had a population of 14,000, claims now to have 42,000; and a similar, if less marked, increase is seen at several other points.

The writer spent five months of the last winter in California, travelled several hundred miles by wagon through some of its less frequented regions, and was greatly interested in the physical and social conditions there observed.

It was very evident that by far the largest portion of the travellers came from the prairie States of the West and Northwest. From Chicago, Milwaukee, St. Paul, Minneapolis, Omaha, Lincoln, Kansas City, and the country about these towns, there seemed to be a veritable exodus.

The motive was to escape from the long, harsh winter, from the snows and the fierce winds, and the mud, which there enforce a long imprisonment on all those of feeble vitality or impaired health.

And the general result seemed to be a delighted abandonment to the pleasures of an open-air life, amid novel and beautiful scenery, with unrestricted locomotion. The man from Winnipeg made haste to lay aside his furs on New-Year's Day, and to roll in the breakers on the beach at Santa Monica; and the girl from Duluth delighted to ride or drive through the groves of sycamores, the avenues of eucalyptus, and the orchards of oranges.

Among our fellow-travellers was one who had spent two winters on the Italian Riviera, one at Tangier, one at Cairo, two in Florida, one in Nassau, and was now, for the sixth time, returning to Santa Barbara. Almost everyone was ready to say that here was indeed the most attractive and the most salubrious of all winter resorts.

Allow me, then, to ask your attention to the physical facts in the case.

California is a very large State; Texas alone is larger. The area of California is about twenty-three times larger than that of Massachusetts.

The parallel of 42° north latitude forms its northern

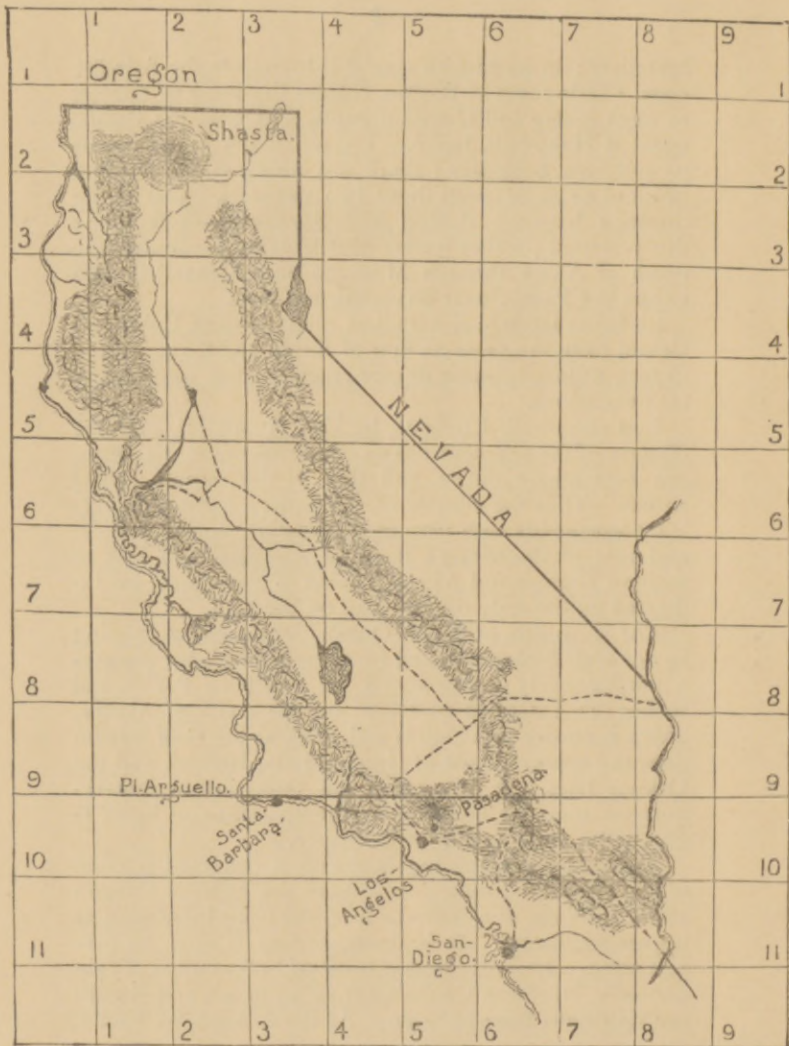
boundary ; in its eastern course it intersects the Atlantic coast a little south of Boston, crosses the south of Europe through Rome and Constantinople, and cuts the Pacific coast at Hakodadi, Japan. The parallel of $32^{\circ} 30'$ forms its southern boundary ; there are nearly eight hundred miles of coast between these two parallels, equal to the distance between Boston and Savannah—in fact, the thirty-second parallel passes near Savannah—crosses the north of Africa through Morocco and Alexandria, and enters the Pacific near Shanghai, in China.

So far as latitude determines climate, then, California should have the same as that of Spain and Syria, which, in fact, it does in some degree resemble, but with important variations.

It is remarked, I believe, by Von Humboldt, that the climate of the adjacent coasts of continents in the northern hemisphere differs, and that of the remote coasts agrees. Thus the climate of the eastern coast of America corresponds with that of the eastern coast of Asia, and that of the western coast of America with that of western Europe and Africa. Some of these may be indicated by the rude outline map on the wall.

The Kuro-siro, or Pacific Ocean current, corresponding to our Gulf Stream, issuing from the China seas, pursues a northwesterly course across the Northern Pacific and strikes the American continent on the coast of Alaska, which it covers with clouds and rains, as the Gulf Stream does the western coast of Great Britain, Ireland, and the Orkney Isles. It also raises the temperature remarkably, so that the mean winter temperature of Sitka is nearly the same as that of Baltimore.

The return current, together with a deflected portion of the original current, passes down the coast of Oregon and California, at a distance from the coast increasing as it goes southward. It is desiccated as it goes, by precipitation. It gives Oregon from 50 to 60 inches of rain annually, Northern California from 30 to 40, and Southern California from 10 to 20. At Point Arguello, having



now lost most of its force, it is shouldered off the coast, leaving the embayed shore of Southern California washed by the warmer waters of the subtropical sea, driven thither by almost uniform southwest winds, of little force in winter but strong in summer.

The winds are mostly from the west along the whole coast of California—west and northwest in the northern, west and southwest in the southern portion.

Thus, of 14,612 consecutive observations at San Diego, 878 were reported calm; 1,730 were reported north wind; 1,044 were reported south wind; 2,879 were reported easterly; 8,146 were reported westerly; and the mean average velocity 5.9 miles per hour, as compared with 7.7 miles per hour at New York, and 15.8 at Cape Hatteras.

As the winds move inland, they lose force and humidity, and at the base of the foothills comparative calm prevails. The ratio of decrease may be stated as about one per cent. for each five miles of distance from the sea; a ratio which may be much varied by mere topographical peculiarities.

The relative humidity of the air decreases in the same way. Thus, at the seaside stations it is from 70 to 72, about the same as on our coast; at one station fifteen miles inland, 66; at one station twenty-three miles inland, 59.

The mountain system of California divides the State into three sections, differing very much from each other. From Mount Shasta, in the north, 14,140 feet high, two chains at first diverge there, are nearly parallel, and then converge and unite. A system of parallel ranges runs from north to south along the coast, and is called the Coast Range.

From fifty to one hundred miles inland another system of ranges, parallel to each other and to the Coast Range, is known as the Sierra Nevada.

The two systems are united in the north by Mount Shasta, and in the south in San Antonio, San Bernardino, and San Jacinto.

The crest of the Coast Range may be about 3,500 feet high, with summits of 4,000 and 4,500 feet, and the crest of the Sierra Nevada about 8,000, with summits of 12,000 to 16,000 feet. The great valley lies between them, 450 miles long and about 50 broad, narrow at the upper end and broader at the lower. From the great mountain masses at the southern end of the valley a system of parallel ranges runs nearly due west, to be fused in the Coast Range, and south of this range is the triangular area of Southern California, separated on the north and east from the remainder of the State by lofty mountains, whose minor spurs cross it in a southerly course to the open Southern Sea. The general slope is about seventy feet to the mile, and it is traversed by many torrential streams, running in straight and shallow beds, full in the season of rains, and almost dry at other times—often fuller near the foothills than in their lower course, as the water sinks through a gravelly soil to reappear as springs on lower lands, or sometimes runs in underground currents into the sea. This is perhaps a kindly provision of nature, for if it ran entirely upon the surface it might be mostly evaporated in the long, bright summers; whereas, in fact, it runs underground, shielded from the sun's rays, but still within reach of human needs and devices.

The soil of this territory varies often and much; strips of clayey loam, ranging in color from a friable chocolate to a waxy black, indigitate with strips of gray, gravelly shingle and shale, and there are many grades of mixture between the two; but all are very rich in organic remains, phosphates, carbonates, and silicates, derived from the tertiary rocks.

It will be understood from the above that the drainage of the region is very perfect, there is little wet land, and no standing water. The surface, having different hygroscopic qualities, will be damp or dry, but the subsoil is always porous. This rapid and complete drainage accounts for the fact that there are no paludal miasmas.

The class of miasmatic diseases is almost unknown. This statement I heard from all.

The only military post of the United States in Southern California is at San Diego, which, in its general aspect, would not seem a pre-eminently choice location, for sanitary advantage, as compared with some others in the region. The report of the Surgeon-General of the Army for 1885 says of it: "The military post showing the highest rate of non-effectiveness from sickness was San Diego. This station is the sanitarium for the Division of the Pacific, and as such its exceptional rate is sufficiently accounted for. The general salubrity of the station caused its selection for the purposes indicated."

Surgeon Summers, of the post, writing of the period from 1866 to 1873, says: "In this vicinity a case of intermittent or remittent fever is seldom, if ever, seen, unless contracted elsewhere, and the tabulated report of diseases reads in part as follows:

Enteric fever	0
Typho-malarial fever	0
Malarial fever or resulting conditions.....	1
Diarrhœa and dysentery	12
Other miasmatic diseases	0
Rheumatism	5
Catarrhs and common colds	4
Bronchitis.....	0
Pneumonia.....	0
Pleuritis.....	0
Phthisis	3
Other respiratory diseases	0

This seems to me a remarkable showing. So far as I have been able to extend the comparison, it is without a parallel among the army posts as to these diseases, and it is certainly in strong contrast with the reports from the military posts in Florida, where the climate is in some respects similar.

There are but two seasons to the year in Southern California, the wet and the dry; the wet season, beginning in November, continues until May. During that period all the rainfall of the year occurs, amounting to

from ten to twenty or twenty-two inches. This usually falls in periods of three or four days at a time, and at intervals of from four to six weeks.

From January 27th to March 6th of the present year there was no rain at Pasadena and Los Angeles. Apparently there is less rainy weather in the California wet season than in our Eastern summer.

Less rain falls upon the seashore than in the foothills. The cool and water-laden air of the ocean, when it first strikes the land, seems to be rarefied by the increased radiation and reflection, and the power to carry moisture is increased until it reaches higher lands or meets the cooler air floating down from the hills. Thus the mean annual rainfall at San Diego is between nine and ten inches, and at Poway, twenty miles inland, is from seventeen to twenty inches. Occasionally, where from the local topography a cool current comes down upon the shore, the local precipitation is greater there. In dropping its water, as before said, the relative humidity of the air becomes less.

From the small amount of rainfall the question of the water-supply becomes important. Nowhere has the whole scheme of hydraulic questions been studied more generally, carefully, and to better results than in California. Mining, and, at various stages, most departments of agriculture are dependent upon an artificial supply of water.

The country is fairly endowed with springs, which break out, sometimes in large volume, along the foot of the terraces and in the ravines. About them are located the headquarters of the isolated farms and ranches.

Wherever there is an organized scheme of a fruit-growing colony, or other town, water for irrigation and domestic uses is provided by acequias, or aqueducts from the cañons of the mountains, often built with great labor and expense. Mountain water, thus obtained, is generally very soft, clear, and uncontaminated. Sometimes it is exceptionally pure; at others it carries more or less clay and other more positive mineralization.

The distribution of the ground-water is peculiar and interesting. You may enter a basin-like depression in the hills, containing perhaps several square miles of alluvial plain. It may not be traversed by any stream; there is no visible inlet or outlet for water, and you wonder what becomes of all that falls on the long slopes which surround it. It has, in fact, sunk into the surface where it fell, and descended, to underlie the plain at a depth often of not more than eight or ten feet. Such plains, except in the rainy season, look dry and parched; still they are set with great sycamores, evergreen live-oaks, and rapidly growing groves of eucalyptus, as well as orchards of fruit-trees. The young plants may require to be irrigated for a year or two, but soon their roots reach down to the un-failing streams below, and thenceforth they require no artificial water. After the third year the vineyards in such localities are full of lush leafage and succulent fruit—and the wells about the farm are full to within ten feet of the surface.

The facts which characterize the climate are best seen by comparison. For that purpose I have prepared the rude chart, on page 12, and have taken the details from the Report of the Chief Signal Officer of the United States for 1881, with the exception of those for Aiken, S. C., which is not a Signal Service station. The figures for this locality I have derived in part from the papers of Dr. Geddings, whose able and interesting papers have done much to extend the reputation of Aiken as a sanitarium; and in part from the report of the nearest Signal Service station, at Augusta, seventeen miles distant.

New York is chosen for one point, because it is our standard of comparison; Aiken, as a southern inland, and Jacksonville as a seaside, sanitarium; San Antonio, to represent the elevated Texan plateau; Los Angeles, Southern California; and St. Paul the interior Northwest. Other points—on the Florida coast, for example—might have been chosen, but not being Signal Service stations, the data are not at hand.

The first vertical column gives the elevation above sea-level. This is to be borne in mind for the comparison, as it modifies all other conditions.

The second vertical column gives the number of days in the year in which rain fell—the least appreciable quantity, namely, one-hundredth of an inch, constituting a “rainy day.”

	Elevation.	Rain-Days.	Cloudiness.	Humidity.	Rain-fall.	Temperature.						
						Jan. & Feb.	Mar. & Apr.	May & June.	July & Aug.	Sept. & Oct.	Nov. & Dec.	Mean.
<i>New York.</i>	—	122	41	73	43	27	41	62	72	55	34	48.
<i>Aiken.</i>	585	132	37	58	51	45	56	72	81	68	48	61
<i>Jacksonville.</i>	37	127	36	63	67	54	63	79	82	72	58	68.
<i>San Antonio.</i>	676	113	29	67	34	43	66	81	81	61	50	63.
<i>Los Angeles.</i>	350	51.	28.	67.	16.	54.	58.	64.	65.	62.	55.	59.
<i>St. Paul.</i>	811.	99.	41.	69.	29.	14.	37.	66.	71.	52.	18.	43.
<i>St. Paul</i>	—————					57	<i>Difference of the</i>					
<i>New York</i>	—————					45	<i>Means of the two</i>					
<i>Jacksonville</i>	—————					38	<i>coldest and the two</i>					
<i>San Antonio</i>	—————					38	<i>warmest Months.</i>					
<i>Aiken.</i>	—————					36	<i>Algiers 23</i>					
<i>Los Angeles.</i>	—————					11	<i>Mentone 33.</i>					

The third column gives the mean average per cent. of cloudiness, no day being called clear if at either of the three observations any clouds were observed.

Column fourth gives the mean relative humidity, saturation being 100.

Column fifth, the rainfall in inches.

The first column on the right gives the mean tempera-

ture of January and February, the two coldest months ; the fourth on the right, the mean temperature of the two warmest months, July and August.

The last column, the mean annual temperature, which is not of much importance, since a place where the thermometer has a great range may have the same mean as a place where the range is but a few degrees.

A much more instructive indication is obtained by noting the difference between the mean temperatures of the hot and cold months, which is indicated graphically by the black lines, and arithmetically by the figures attached. It thus appears that Los Angeles has fewer rainy days, less cloudy weather, less rainfall, a much more equable temperature, closely approximating the ideal mean of sixty degrees. In dryness of the air Aiken exceeds it, but it must be remembered that Los Angeles is ten times as far from the sea as Aiken, and considerably lower in level, and is, in fact, not an average point for Southern California.

I esteem the comparative cloudlessness, taken in connection with the mild and equal temperature, as most significant. Weber,¹ quoting from the "Proceedings of the British Royal Society for 1877 and 1878," says : "Light is inimical to the development of bacteria and the microscopic fungi associated with putrefaction and decay ; the preservative quality of light is most powerful in the direct solar ray, but can be demonstrated to exist in ordinary diffused sunlight ; and the actinic rays of the speculum have the greatest effect. . . . In the higher animal organisms, when deprived of light, oxidation does not take place so energetically, tissue change and nutrition are impaired. . . . In winter an invalid in southern lands enjoys the sun and daylight for several hours longer than in high northern latitudes."

The long, bright day of Southern California, with unclouded sky, mild and even warmth, and gentle winds

¹ Ziemssen's *Cyclopædia of Therapeutics*, vol. iv., p. 41, and *passim*.

invites the invalid to live in the open air and protects him while there.

From many sides we gather the inference that there is something in the air and soil of Southern California which nourishes, improves, and prolongs organic life to a remarkable degree.

The eucalyptus tree adds from eight to twelve feet annually to the length of its trunk. In a grove twelve years old there are many trees over one hundred feet in height. About Mr. Cooper's ranch, at Santa Barbara, are groups of live-oaks which are thought by good judges to be three or four thousand years old, and the Sequoias of Calaveras, the giants of the vegetable world, are of untold date. It is commonly said that the domestic animals live longer and are more prolific than at the East.

The California racing stables, particularly the Santa Anita stable near Los Angeles, have been brought East for the last two racing seasons, and have taken more prizes than any others of equal size. Since Frémont's great ride in 1847, the endurance of the Californian horse has been well known. I have never seen elsewhere more fresh-colored, strong-limbed, bright-eyed children.

The question of high and low altitudes for the treatment of thoracic disease has been widely debated. So far as it concerns diseases of the heart, all will recall the careful and comprehensive paper of our President. As to diseases of the respiratory organs, Dr. Denison, of Denver, has written papers¹ which show great research and ingenious argument. It is not my purpose, at present, to enter into this discussion, further than to say that the influence is so positive that the choice or refusal of it cannot be an indifferent matter. Having spent a portion of two seasons in Colorado, I have certainly seen a number of young and vigorous subjects, who have apparently been benefited by residence there; while I have also been more intimately conversant with a series of cases in which the results were clearly disastrous.

¹ N. Y. Med. Journal, June 12, 1886.

In Dr. A. N. Bell's work,¹ on the "Climatology of the United States," may be found a series of reports from the surgeons of the United States Army, stationed at many points in the mountain region of the West, which, with great uniformity, and sometimes in very strong language, assert that the particular form of climate which is there found, while it may promote immunity from consumption among the natives and in the well, is very unfit for those in whom the disease has been already recognized.

It is possible in Southern California to find more or less comfortable abodes up to the level of four thousand feet, where the other and greater advantages of the climate are not lost. Such are San Marcos Pass, Smith's Mountain, San Gorgonio, and Arrowhead Springs. In my judgment, however, the lower levels, from eight to fifteen hundred feet above sea-level, will be found adapted to a far larger number of cases.

The food-supply in Southern California is very good. Fish in variety and of good quality are abundant. The Eastern man, however, will miss our oysters. Game, fowl, and poultry are also abundant. In particular, excellent milk and butter abound, and good beef and mutton. In these particulars Southern California has great advantage over our own southern seaboard, Florida especially. Of fruits, grapes, oranges, pears, apricots, peaches, melons, guavas, etc., are of the best and cheapest. Apples are abundant, but inferior.

It remains to speak of the special points which are generally sought by invalids; and since so much of the comfort and well-being of the invalid depends upon how he is lodged and fed and amused, I shall be excused if I allude to the various hotels and other accommodations.

San Diego is the most southern—a town of 7,000 inhabitants, possessing the best harbor on the coast except that of San Francisco. The town is placed on the slope of a hill which rises to a height of three hundred feet in the distance of a mile from the shore of the bay. The

¹ Climatology, etc., of the United States, pp. 202 et seq.

ambition of the place is maritime commerce. The present town is only ten years old ; a great many unfinished projects are outlined upon its surface and in various stages of progress, giving to the place an unfinished look. There are some good hotels, some handsome public buildings, a few fine, and a great many small and temporary, dwellings. The lack of water-supply has hitherto been a cause of embarrassment and an unsanitary element. That, I believe, is soon to be remedied. The local climate, in the matter of temperature, is unsurpassed, for its winters are warm, and its summers, except for a few days when the north wind blows, are very cool and uniform. The climate is, however, damp. The rains are few but fogs are frequent. The social conditions are not yet far advanced.

Two hundred and fifty miles northwest, and at the other end of the coast of Southern California, is Santa Barbara, a town of 5,000 inhabitants. It may be called the Newport of the Pacific, widely known for its charms and attractions. Until, in the last decade, railroads were built, it was one of the few places which were accessible by sea. It has been long occupied, is much frequented by invalids, has a highly developed social life, good hotels, libraries, studios, clubs. The mountains and the sea come close together here, and the landscape has a very varied and enduring charm. It has now no railroad facilities, and communication with the rest of the world is, in the rainy season, apt to be irregular and sometimes infrequent. Like San Diego, it is very damp, as the moss-covered roofs and lichen-encrusted fences indicate. More than San Diego it is windy, for it lies in a trough between the hills, opening to the southeast and northwest ; up this valley the fogs roll in the early hours of the day, and whatever winds there may be are compressed and accelerated to an unusual force. The channel, twenty-five miles wide, is separated from the open sea by a chain of islands, large and small, low and lofty, and the beautiful bay affords fine sailing, fishing, and surf-bathing, while the cañons of the Santa-Ynez range

offer to the equestrian many picturesque winding trails, which he may follow as far as he will. The water-supply is abundant and excellent. The older parts of the town and some of the hotels are not in good sanitary condition, but there are enough satisfactory accommodations. The young are sure to be enthusiastic about Santa Barbara, and to all who have no occasion to fear a damp and somewhat windy spot, it is very attractive and eligible.

Midway between San Diego and Santa Barbara, but twenty miles back from the sea, is Los Angeles, which has been mentioned as a rapidly growing town. As the focus of all the railroads and the entrepôt of the best agricultural region, in the geographical centre of Southern California, with no serious commercial rival nearer than San Francisco, which is as far as Buffalo is from New York, it is destined to become a large and rich city. The business town is on a low plain environed on three sides by hills. The soil is a tenacious clay, giving abundance of mud in wet weather and dust in dry. The water-supply is not good, although it is in a way to be improved. The surrounding hills, which are already crowned by many fine residences, are beautiful and salubrious, but the more compact portions of the city are liable to typhoid and zymotic disease, and the general sanitary condition has the defects which are generally found in a rapidly growing town. It does not depend upon the company of invalids, for it has its hands full of industrial and speculative interests. Hitherto the hotels and boarding-houses have left much to be desired, but better accommodations are promised and in progress. In schools, churches, societies, theatres, hospitals, and medical men, it is well endowed.

Seven miles east of Los Angeles and from five to six hundred feet higher, on an elevated triangular plain, at the very base of the Sierra Madre, whose crest, though four thousand feet higher, is not five miles away, is Pasadena, "Crown of the Mountains." It is a suburban

town of 4,000 inhabitants ; originally a fruit-growing colony occupying about fifteen thousand acres of land, laid out like a park, and now covered with groves of oranges, lemons, apricots, walnuts, and figs, defined by lines of tall eucalyptus, avenues of pepper-trees, hedges of cypress, and set with villas embowered in the fragrance and bloom of all sub-tropical plants and flowers. A terrace six miles long and perhaps sixty feet high, divides it from the long and wide valley of San Gabriel. Along the terrace fresh streams burst forth and groves of stately oaks and sycamores are scattered. The valley below is covered with vineyards and grain fields. The Sierra Madre, carved by innumerable ravines, culminates in the southeast in the snow-capped domes of San Antonio, Cucamonga, San Bernardino, and San Jacinto, from nine to eleven thousand feet high. Beyond the plain is the blue and shining sea, and the whole landscape has a charm of grandeur and of beauty which prolonged contemplation still increases. The community, now mostly made up of exiles from ruder climes, is very cosmopolitan in its character ; culture, taste, and wealth are not wanting, and social pleasures are many and varied. There is a good public library, many boarding-houses, of many grades, sanitarium of various kinds, and among the adjoining foothills is the picturesque villa—Sierra Madre Hotel, which has long possessed an excellent reputation and custom. Within the last year parties who have large and long experience in the charge of invalids have built, on an elevation in the plain, the Raymond Hotel, with capacity for from three to four hundred guests. In location, construction, and appointments it is very superior, and for the management one of the best-known hotel-keepers of the East has been secured. The soil of Pasadena is light and dry, the roads are good, livery is good and cheap, and the excursions are many and delightful. The water-supply is of the best quality. There will be communication with the neighboring city by almost hourly trains.

In my judgment Pasadena is the point of election for, by far, the larger number of invalids. Especially do the conditions before enumerated fit it for all cases of renal disease, all cases of pulmonary trouble attended with free secretion, for enteric, rheumatic, and neuralgic affections.

It is not to be forgotten that for many invalids, home, with its comforts, its social and moral support, must still be the best place; that acute cases, and those far advanced in disease of the heart and lungs should not undertake a long journey, except under sufficient medical advice—which also should be allowed to control the conditions and extent of movement.

Did time allow I would speak of the mineral springs and baths. The sulphurated and chalybeate waters at various places compare in constitution with those of Central New York and Virginia. In accommodations and general resources they are, of course, not yet developed. I should mention beautiful Riverside, comparable with our Lenox, the theatre of most successful orange culture and of a highly advanced social order. Its altitude and dryness commend it to some invalids. It is, however, a windy place, with more than usual variations of temperature.

In these days of mind-cure, faith-cure, and subjective medication generally, one of the best things that can be said of Southern California is that it is an eminently cheerful region. Nostalgia and hypochondria cannot well continue there; there is too much enterprise, too much pleasure abroad. I have never seen so many contented people so far away from home.

It is common among the older residents to speak of it as "God's Country," which may sometimes be a way of complimenting the Elysian climate and the bountiful soil, but is oftener, I think, a more serious recognition of the Power and the Light which builds and adorns the Cosmos

"Which wields the world with never-varying love,
Sustains it from beneath and kindles it above."

