

Las Cruces, elevation 3,872 feet, population 3,500. This little town is situated on the Old Mexican division of the Santa Fé Railroad, forty-three miles north of El Paso. It lies in the Mesilla valley, which is a portion of the Rio Grande valley. At this point the valley is wide and fruitful under irrigation, there being large fields of alfalfa. The water is pure, but somewhat alkaline. There are moderately good accommodations in the town, but more suitable ones for the invalids are found in the ranches around, particularly at the Alameda, which is a mile distant.

The Organ Mountains are twelve miles east, rising to a height of 8,949 feet. The winter climate is delightful and continues pleasant until April, when the heat becomes too great for the comfort of Eastern visitors. The mean maximum temperature is, as computed for the three years, 1896 to 1899: autumn, 78°; winter, 58°; spring 76°; summer, 92° F. The mean minimum temperature is: autumn, 41°; winter, 23°; spring, 41°; summer, 60° F. The average annual rainfall for the last twenty years was only eight inches. The number of cloudy days for the year is twenty-five. In the winter the average is four cloudy days a month. The average wind movement is believed to be about five and one-half miles an hour.

The Alameda can accommodate forty guests. The rooms are of good size, and there are plenty of porches. The rates are from \$10 to \$15 per week. Fifteen miles east of Las Cruces Van Patten's resort stands in a valley of the Organ Mountains at an altitude of 6,000 feet. Here there is a substantial stone house which can accommodate twenty-five persons, and it is surrounded by tents, and is a cool and pleasant place in which to pass the summer.

Pecos Valley.—Separated from the Rio Grande valley by high mountains is the Pecos valley region lying to the east; it comprises a wide belt of land running southward for a distance of one hundred and seventy miles from Roswell to Pecos City. Here irrigation is extensively carried on, and it is a good place for those who have sufficiently recovered their health to carry on farming or stock-raising. The accommodations in the hotels and boarding-houses are, however, not very good, and the valley is rather too hot in summer and too windy, particularly in the spring, to make it desirable for most invalids. Roswell, at the northern end of the valley, is rather better sheltered than the town of Carlsbad. The elevation of the valley varies from 4,000 to 3,000 feet. At Carlsbad the mean temperature for autumn is 63°, winter 44°, spring 63°, summer 79° F.

S. Edwin Solly.

NEW ORLEANS, LOUISIANA.—This great Southern city and port is situated upon a double curve of the Mississippi River, one hundred and seven miles from its mouth, although a much less distance from the coast in a straight line. The city lies chiefly upon the left bank of the river, and actually covers about forty square miles, although the city limits embrace an area of something like one hundred and eighty square miles. One of the peculiarities of this city, and one that is doubtless conducive to its healthfulness, is the great area which it covers, thus permitting liberal air spaces and grounds about the buildings in the residential districts. The city is built upon low land, lower than the surface of the river at high-water mark, and huge embankments of earth called "levees" are required to prevent an overflow, and even these are occasionally broken through. The soil is of an alluvial nature, and by digging from three to four feet one usually reaches water; hence the houses have no cellars, and the dead have to be buried in tombs elevated above the ground.

There are a large number of bodies of water—lakes, bayous, swamps, and the like—about the city, and to the north of the city is Lake Pontchartrain, forty miles long and twenty-four miles wide. This lake is connected with the Gulf of Mexico, and forms with the Mississippi River an isthmus upon which the city is built. The population at the census of 1900 was 287,104, composed of

Creoles, Americans, and negroes. It is obvious, from the low, level situation of the city, that the problem of drainage is a difficult one; this is partially accomplished by gutters which run into open canals, and these in turn empty with a sluggish current into Lake Pontchartrain. A comprehensive system of sewerage, which will effectually dispose of the house waste and other sewerage and cause it to be discharged into the river below the city, is said to be now under construction. The drinking-water is generally obtained from the rain, stored in tanks or cisterns, each house being provided with such a receptacle, which is a peculiar feature of the architecture. For other purposes the water of the Mississippi River is used, this being taken directly from the river without filtration.

The city itself and its surroundings are very attractive, especially to a Northerner. The vegetation is of a semi-tropical nature and very luxuriant. The variety of races and the common use of the French language, the streets, markets, cemeteries, parks, and various points of historic interest, and the extensive wharves with the vast amount of inland and foreign shipping, all afford interest and diversion. The French market is the great "sight" of New Orleans, and is best visited in the early morning.

The accommodations are good, the principal hotel being the comparatively new St. Charles, occupying an entire square in the heart of the city. A favorite winter excursion is to New Orleans at the time of the famous "Mardi Gras," which is said to be more brilliant than the carnival at Nice or Rome.

The mortality of the city is about 27.58 per 1,000. The following meteorological table gives the principal characteristics of the climate of New Orleans:

CLIMATE OF NEW ORLEANS, LA. LATITUDE, 29° 58'; LONGITUDE, 90° 4'. PERIOD OF OBSERVATION, THIRTEEN YEARS.

	Jan.	Mar.	June.	Aug.	Nov.	Year.
Temperature—						
Average mean temperature or normal (degrees Fabr.)	54.7°	63.1°	81.0°	81.7°	61.0°	69.8°
Average range	13.9	15.0	12.4	12.1	13.1	
Mean of warmest	61.2	71.7	87.2	88.1	67.8	
Mean of coldest	47.3	56.7	74.8	76	54.7	
Highest or maximum	73	84	97	96.5	82	
Lowest or minimum	20	36.5	65	69	31.5	
Humidity—						
Average mean relative	72.2%	70%	72.3%	73%	71.6%	71.4%
Precipitation—						
Average in inches	5.52	5.75	6.04	5.99	5.58	64.63
Wind—						
Prevailing direction	N.	S. E.	S. E.	S. E.	N.	S. E.
Average hourly velocity in miles	7.8	8.6	6	5.5	8	7.4
Weather—						
Average number of clear days	7.6	10.1	8	7.8	9.5	110.5
Average number of fair days	12.2	10.6	16	18.4	10.2	156.1
Average number of fair and clear days	19.8	20.7	24	26.2	19.7	266.9

It will be seen that the climate is tropical or semitropical in nature, warm and moderately moist. The mean temperature of the year is 69.8° F. The highest average summer temperature is 94° F., and the lowest average winter temperature is 27° F. On February 13th, 1899, an extraordinary and unheard-of event occurred, in the formation of ice at the mouth of the Mississippi River, the thermometer indicating a temperature of 10° F. On the 17th of the same month ice flowed past New Orleans into the Gulf of Mexico.*

Snow is a rare phenomenon, but cold waves occasionally occur, accompanied by frost, which nips the sugar cane and cotton plant.

The annual rainfall varies from 31 to 64 inches, the spring and summer being the rainiest seasons. The average mean relative humidity is 71.4 per cent., about the same as that of New York City.

* "The Cold Wave of February, 1899," Guy Hinsdale, Transactions of the American Climatological Association, 1899.

According to Hinsdale ("Climatology, Health Resorts," vol. iv., part ii., of "Physiological Therapeutics") there is about sixty-two per cent. of possible sunshine. Such a climate is more or less enervating, but in itself not unhealthy. A strict quarantine is exercised against the importation of yellow fever, of which several epidemics have in former years occurred. The amount of water about the city would appear to be favorable for the propagation of the mosquito, and hence malaria must be frequent.

There are several resorts on the gulf coast at not a great distance from New Orleans, which are frequented both in summer and in winter. Indeed, the entire route from New Orleans to Mobile along the Gulf is very attractive. Pass Christian on this line has a mild winter climate, favorable for persons suffering from bronchial disease, from malaria, or from Bright's disease, for convalescents from some acute disease, and for those of feeble vitality. It possesses a good hotel, cottages, and boarding-houses. The sanitary conditions are good; there is pure artesian well water; the soil is dry and porous; and extensive pine forests lie immediately in the rear of the town. The average mean winter temperature is given by Solly as 70° F. There are opportunities for driving, boating, fishing, and hunting.

Covington, thirty miles to the north of New Orleans, reached by a picturesque journey across Lake Pontchartrain and up the Tchefuncta River, situated in the midst of pine woods, is said to have a very salubrious winter climate, with a "soft air," and is sheltered from all "Northerners." It is considered by some local physicians to be favorable for pulmonary diseases.

Bay St. Louis is another resort frequented by the New Orleans Creoles, and said to be rapidly growing in favor with winter visitors. Biloxi, Beauvoir, Ocean Springs, and Long Beach are other resorts on the Gulf coast.

For those seeking rest and diversion the trip down the Mississippi River can be recommended, and from personal experience the writer can testify to its charm and variety. The portion from Baton Rouge to New Orleans along the sugar plantations is of especial delight and interest to the Northern traveller. Below New Orleans, through the "delta country" to the jetties and the Gulf, the voyage is also one of great interest.

New Orleans can be reached from the north by various lines of railroads, and steamers with good accommodations run directly there from New York, occupying about five days on the voyage.

New Orleans is a convenient port of departure for Central America and the West Indies.

Edward O. Otis.

NEWPORT NEWS. See *Old Point Comfort.*

NEWPORT, R. I.—Newport, until very recently one of the capitals of Rhode Island, and in some respects probably the most celebrated of American health resorts, occupies the isthmus and much of the remainder of a peninsula which forms the southwestern termination of the island of Aquidneck or Rhode Island. This island, lying in the middle of the lower portion of Narragansett Bay, is entirely exposed at its southern end to the full sweep of the Atlantic billows, so that Newport, although partly sheltered by the land, partakes in a measure of the climate of the neighboring oceanic islands of Block Island, Martha's Vineyard, and Nantucket. Newport is the seat of the Naval War College, of the United States Torpedo Station, and of the large military post of Fort Adams, at the entrance to the harbor. It has a resident population of 23,000, increased in summer by nine or ten thousand, contains public buildings, many churches, banks, schools, shops of all kinds, an opera house, excellent libraries, the Newport Casino, and an admirably equipped institution, the Newport Hospital; it is also the home of numerous societies, clubs, and associations. It is lighted by gas and electricity and has an electric street railway, running north and south with a branch line to the beach.

The old town, settled in 1639, and built chiefly on the western slopes of a broad and elevated ridge rising directly from the harbor, still retains much of the aspect of colonial days, and in its narrow streets and ancient buildings, of which, in spite of the increasing encroachments of modern civilization, many replete with historic associations are still standing, presents the features of an old New England seaport town and contrasts vividly with the newer suburbs by which it is surrounded. The summer homes are constantly extending until they have already taken up a considerable part of the peninsula. Bellevue Avenue, a modern extension of one of the main city thoroughfares, Touro Street, has been continued due south as far as the ocean, and forms a wide and splendid highway two and a half miles in length, on each side of which are placed the stately houses and beautifully kept grounds of the wealthier summer residents.

The natural features of Newport and vicinity are very attractive. Bishop Berkeley justly described the island to his friends as "pleasantly laid out in hills and vales and rising grounds, and hath plenty of excellent springs, and fine rivulets and many delightful landscapes of rocks, and promontories and adjacent lands." On the one side, the waters of the land-locked harbor and Narragansett Bay studded with islands offer numerous inducements to the lovers of sailing, boating, and fishing. On the other, the ocean is quickly reached at the First or Easton's Beach, at a point where the coast line of the island turns sharply to the east. This beach, seven-eighths of a mile in length, lies in a sheltered bay and in the season is crowded with bathers. Hot salt baths are provided there in summer. Further to the east, beyond Easton's Point, lies the longer, Second or Sachuset Beach, and still farther, facing the east passage of Narragansett Bay, is the Third Beach. Besides these, the principal beaches, the shore near Newport presents a very varied and irregular outline. One of the most striking parts is "The Cliffs" which may be said to extend from the west end of the bathing beach to the end of Bellevue Avenue, for nearly three miles. The public walk along these cliffs through the grounds of some of the finest places constitutes one of Newport's greatest attractions. Of the various drives, the "Ocean drive" from the southern end of Bellevue Avenue, westward along the shore, is justly celebrated. The interior of the island, traversed by two main thoroughfares, the East and West roads, and numerous cross roads, presents a pleasing diversity of hill and dale with charming views of the bay and ocean, and there are many peaceful woodland lanes bordered with dense shrubbery, which remain quite secluded even in summer.

The geological formation underlying Newport and its vicinity is somewhat complex, and consists mainly of various rocks of the carboniferous period. Newport Neck, as the extreme southwestern corner of the island is called, consists of pre-carboniferous rocks, supposed to be partly of igneous origin. In the middle portion of the Neck a conspicuous reddish granite (protogine) is to be observed. On this part of the island the rocks are largely exposed, and are grouped in picturesque masses. The Paradise Rocks back of the second beach offer interesting features to geologists by whom they have been frequently studied. Many of the rocks about Newport have undergone metamorphic processes, and have also been greatly disturbed, and in many cases bent and folded, besides having been eroded by glacial action. There are several large ponds in the vicinity of the city.

The soil under the city proper is a tenacious clay, beneath which frequently occurs a stratum of water-bearing gravel. Most of the wells in the compact quarter of the city receive their supply from this gravel and are for the most part dangerous from liability to contamination from deep cesspools dug through the clay.

The climate of Newport is less trying and more equable than that of most other places on the New England coast. Although snow and ice are far from infrequent, yet the winters are milder and the daily thermometric range is less than in New York, Providence, and Boston. Owing to the influence of the ocean, the spring is rather more

CLIMATE OF NEWPORT, R. I. LATITUDE, 41° 29'; LONGITUDE, 71° 19'. CONDENSED FROM A CLIMATIC CHART OF SEVEN YEARS AND EIGHT MONTHS FROM OBSERVATIONS OF THE UNITED STATES SIGNAL SERVICE, IN THE PREVIOUS EDITION OF THIS HANDBOOK.

Data.	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Average for year.
Temperature—													
Average or normal.....	30.3°	31.7°	36.2°	44.5°	54.4°	64.4°	70.4°	72.0°	66.7°	58.0°	46.1°	40.6°	49.6
Average daily range.....	15.4	15.0	14.1	9.4	14.0	14.5	8.7	12.6	12.2	13.6	12.8	14.1	13.0
Mean of warmest.....	37.7	39.0	43.7	50.2	62.3	71.3	74.7	76.3	70.9	62.6	49.3	42.2	
Mean of coldest.....	22.3	24.0	29.6	40.8	48.3	56.8	60.0	63.7	58.7	49.0	36.5	28.1	
Highest or maximum.....	61.5	56.0	63.0	69.5	85.2	89.0	92.0	87.0	88.3	81.5	71.2	60.0	
Lowest or minimum.....	-7.8	-2.0	8.9	22.0	33.0	44.8	53.5	53.0	41.0	30.0	4.0	-3.0	
Humidity—													
Average relative.....	74.8%	74.0%	72.7%	70.6%	74.3%	76.2%	77.8%	79.6%	79.1%	75.7%	76.0%	75.2%	75.5%
Precipitation—													
Average in inches.....	4.38	4.58	6.50	4.81	2.75	3.28	3.67	3.65	3.10	3.83	3.50	3.86	47.91
Wind—													
Prevailing direction.....	W.	N. W.	N. W.	S. W.	S. W.	S. W.	S. W.	S. W.	S. W.	W.	W.	S. W.	
Average hourly velocity in miles.....	11.1	11.1	11.1	9.9	8.1	7.1	6.8	6.4	7.7	9.5	11.1	11.5	9.3
Weather—													
Average number clear days.....	9.2	7.5	8.3	7.8	8.2	9.5	8.6	9.0	8.4	11.0	8.2	8.0	103.7
Average number fair days.....	12.2	12.5	11.9	11.1	12.9	13.6	13.8	12.4	12.4	10.7	10.0	13.0	146.5
Average number clear and fair days.....	21.4	20.0	20.2	18.9	21.1	23.1	22.4	21.4	20.8	21.7	18.2	21.0	250.2

backward, the summer cooler, and the autumn warmer than in the interior. Cultivated flowers have been observed in bloom at Newport late in November. The humidity in summer is often excessive, and in consequence of this there are many days extremely close and relaxing although the temperature is not remarkably high, seldom rising above 85° F. The prevailing winds at Newport are from the southwest. The rainfall is about the average for the New England coast. Fogs are frequent during the warmer part of the year, especially in early summer. Thunder storms are infrequent in Newport itself. The Newport season may be said to last from June 1st to October or even November. The city is, however, much frequented by visitors before and after these dates, and in fact to some extent throughout the year. June, except for those who dislike the occasional heavy fogs, is a very pleasant month, when the foliage is at the height of its beauty. The temperature of the water at Newport in summer is remarkably warm, making bathing very agreeable, and a large proportion of the fishes and marine flora are southern forms. Whether this warmth, as supposed by Lorin Blodget, Storer,* and others, is due to currents from the Gulf Stream, which is more than one hundred miles distant, may be doubted, but there is no question of the fact, and to the temperature of the waters which surround its shores the mild climate of Newport is in large measure undoubtedly due. There are decided climatic as well as other differences between the various parts of Newport. The situations in and about the city, which is two miles from the south end of the island, and some distance from the Atlantic Ocean, are the warmest and most relaxing in summer, though on the other hand generally preferable and more convenient in winter. The cottage sites on the cliffs are cooler and always in great demand both on account of the sea breezes, convenience, and beauty of scenery. The southwest point of the island, Brenton's point, as the prevailing winds are from the southwest, is the most exposed and coolest. Lying along the harbor at the north end of the city is a district known as "The Point," which offers conveniences for boating and is sheltered from easterly winds in winter. Another attractive but limited section is the high ground just south of the harbor.

The accompanying meteorological table is taken from the former edition of this HANDBOOK. The government station at Newport was discontinued in March, 1883, so that no recent records from this source are obtainable. Additional partial observations until 1895 will be found in the Bulletins and Investigations of the New England Meteorological Society and in the Bulletins and Reports of the United States Weather Bureau.

The death rate of Newport is low and the temperate and equable climate seems to be especially favorable to

* "The Mild Winter Climate of Newport, R. I., as the Effect of the Gulf Stream," by H. R. Storer, M.D., Medical Record, December 22d, 1883.

longevity, which is further aided by the abundance of air space and the absence of injurious trades and occupations. Newport is admirably adapted for children, who thrive there greatly, with the exception that in early autumn a tendency is noticed to the prevalence of diarrheal diseases. For those suffering from tuberculosis and from bronchial, renal, and rheumatic affections, Newport shares too much in the general characters of the New England climate to be recommended, but for convalescents and delicate persons who reside in more inclement places and who for any reason are not able to seek an ideal climate at a distance, it will often be found in winter to be very advantageous. Though well known to the residents, the mildness of the winter climate is as yet hardly appreciated.

The very sedative and soothing effect of the Newport climate renders it useful in many cases of overtaxed brain and nervous system, and neurasthenia—particularly those which require a sedative rather than a tonic treatment. On the other hand, in a limited number of cases, especially in women, the summer climate exercises such a weakening and relaxing influence (felt by every one in a slight degree) that its effect is actually harmful. For gastro-intestinal disorders it is, generally speaking, contraindicated, chiefly during summer. Asthmatics are sometimes benefited, but sometimes the reverse is the case.

The sanitary conditions at Newport, though susceptible of much improvement in the older part of the city, are on the whole good. Newport has a satisfactory sewerage system, the main outlet pipe of which is carried for some distance beneath the waters of the harbor and discharges at the outer side of Goat Island. The city water taken from Easton's Pond and supplementary sources, though not as yet devoid of organic matter which supports a growth of vegetable organisms and infusoria, is of fair quality and has never been recognized as the cause of any epidemic. Everything for comfort and health is attainable to a degree not met with elsewhere outside of the larger cities, though Newport is deficient in hotel accommodations. There are, however, many excellent boarding-houses open at all seasons.

Newport is reached from New York by the large and comfortable night boats on Long Island Sound in ten hours, or by railway to Wickford in five hours, thence by steamboat across Narragansett Bay in another hour. From Boston and Providence there is direct communication by rail. The latter city may also be reached by boat. The neighboring pleasant resorts of Jamestown and Narragansett Pier are readily accessible, and there is also direct communication in summer with Block Island.

William C. Rives.

NEWSOM'S ARROYO-GRANDE SPRINGS.—San Luis, Obispo County, Cal.
POST-OFFICE.—Arroyo Grande. Hotel and cottages.

ACCESS.—By rail to Arroyo Grande, thence by stage two miles to springs.

The ocean beach road affords one of the finest drives in that section of the country. The springs are pleasantly situated at an altitude of about four hundred feet. They lie about fourteen miles south of San Luis Obispo. The climate here is one of almost perpetual sunshine, with occasional spring and autumn rains. On the place are three principal springs whose waters range in temperature from 40° to 100° F., and flow 49,000 gallons hourly. The following analysis was made by Winslow Anderson:

ONE UNITED STATES GALLON CONTAINS:

Solids.	Grains.
Sodium chloride.....	4.10
Sodium carbonate.....	1.75
Sodium sulphate.....	3.92
Potassium carbonate.....	15
Potassium sulphate.....	2.90
Magnesium carbonate.....	6.41
Magnesium sulphate.....	2.47
Calcium carbonate.....	8.25
Calcium sulphate.....	76
Ferrous carbonate.....	3.98
Alumina.....	.33
Silica.....	2.03
Organic matter.....	.27
Total solids.....	37.32
Gases.	Cu. in.
Free carbonic-acid gas.....	14.90
Free sulphureted hydrogen.....	3.56
Temperature of water analyzed, 100.5° F.	

These waters have gained considerable reputation in the treatment of old cases of chronic rheumatism and gout, catarrhal affections of the bladder and bowels, skin diseases, etc. For uterine disorders the hot sulphurous douche has been highly recommended.

James K. Crook.

NEW YORK is situated in 41° north latitude, 74° longitude west from Greenwich. Its temperature range is wide (from -6° F. to 99° F. with a mean of 52.6° F. in 1899), subject to extremes, especially to extreme heat in summer, and often to sudden changes. Owing to its insular and seaboard position, the extreme summer heat is usually a few degrees less in New York than the average of sister cities. Its climate is moist, the relative humidity in 1899 averaging 76 per cent. at 8 A.M. and 73 per cent. at 8 P.M. In the same year the rainfall was 42 inches, but in other years it has often exceeded 52 inches. The average hourly movement of wind varied from 8.6 miles in July to 18.9 miles in March. The prevailing direction of wind is northwest. In 1899 there were 29 thunder-storms, 128 clear days, 127 partly cloudy days, 110 cloudy days. Both in summer and in winter the temperature in New York is milder than that of Chicago,

CLIMATE OF NEW YORK, N. Y. LATITUDE, 40° 43'; LONGITUDE, 74° 0'. PERIOD OF OBSERVATION, THIRTEEN YEARS.

	January.	March.	May.	July.	September.	November.	Spring.	Summer.	Autumn.	Winter.	Year.
Temperature (Degrees Fahrenheit)—											
Average or normal.....	30.1°	36.8°	59.0°	73.7°	65.3°	42.1°	47.5°	71.5°	54.3°	31.4°	51.2°
Average range.....	13.6	14.6	16.7	17.4	14.9	13.6					
Mean of warmest.....	36.7	45.9	68.5	83.7	74.4	50.9					
Mean of coldest.....	23.1	31.3	51.8	66.3	59.5	37.3					
Highest or maximum.....	64	72	94	99	100.2	74					
Lowest or minimum.....	-6	3	34	57	36	7					
Humidity—											
Average relative.....	72.4%	67.6%	65.0%	70.4%	72.8%	69.6%	65.8%	70.1%	70.7%	72.3%	69.7%
Precipitation.											
Average in inches.....	3.50	4.07	2.74	4.46	3.90	3.34	10.06	12.40	10.36	9.70	42.52
Wind—											
Prevailing direction.....	W.	N. W.	S. W.	S. W.	S. W.	N. W.	N. W.	S. W.	N. W.	W.	N. W.
Average hourly velocity in miles.....	9.7	11.3	8.5	7.5	8.8	10	9.8	7.6	9.3	10.2	9.2
Weather—											
Average number of clear days.....	7.6	7.5	9.7	7.5	8.8	8.4	24.8	24.6	27.4	21.8	68.6
Average number of fair days.....	11.6	13.5	13	15.5	12.1	11.5	38.9	43.2	36.4	34.9	153.4
Average number of clear and fair days.....	19.2	21	22.7	23	20.9	19.9	63.7	67.8	63.8	56.7	222

The lessened mortality of 1902 is attributable in part, no doubt, to the remarkable and widespread absence of excessive heat during the summer months. In New York City there was only one day in this year in which the maximum temperature rose to 91° F. During the so-called "dog days" the temperature did not go above 88° F., and the nights have been breezy and cool. The State of New York lies in the main track of the cool waves which emerge from the northern Rocky Mountain region and drift thence eastward over the Great Lakes where the conditions have been unusually moderate during the past season, dominated by a series of cool anti-cyclones from the northwest.

The summer rainfall has been excessive, amounting throughout half of the State of New York to more than twelve inches during June and July. This is attributed to an "exceptional strength and persistency in the southerly winds bearing the vapor of the tropical ocean to feed the rain clouds producing the excessive precipitation in our northern States."

The great concentration of population in New York, now embracing over three and a half millions of people, complicates all problems of health and municipal hygiene. There are over forty thousand hotels, apartment and tenement houses in the city. The extremes of society are more widely separated than in any other American city. Philanthropic measures on a very large and generous scale have been carried out for years in New York and have done much to improve the condition of the poor and sick and outcast. It is impossible to enumerate them, but they are rapidly extending their work and are more and more generously supported.

New York is now well provided with small parks in which the poor have an opportunity for recreation and temporarily escape from their crowded quarters. Music is provided on summer evenings, and public-school properties which formerly were tightly closed all summer, are now thrown open as playgrounds for the children. Recreation piers along the river front serve a similar purpose and are specially grateful to tired mothers with sick infants. The floating hospitals of St. John's Guild, the country week associations, kindergartens, and free ice funds contribute largely to diminish misery and promote health. Van Cortlandt, Bronx, and Riverside parks are largely uncultivated, but very popular. Van Cortlandt has fine golf links and skating facilities; in the Bronx there are opportunities for picnicking, rowing, and flower-gathering. Prospect Park, Brooklyn, and Central Park, Manhattan, are the largest cultivated parks in the city. Facilities for tennis, baseball, football, croquet, and amusements for small children are provided. Taken in connection with its superb water front, the bay, the rivers, and the sound, New York, aside from its commercial supremacy, is one of the most desirable places of residence in the world.

Guy Hinsdale.

NICE.—This city is the most popular resort on the Riviera, as it is the largest, containing 93,760 inhabitants. It is one hundred and forty miles northeast from Marseilles, nineteen and one-quarter miles northeast from Cannes, and nine and one-half miles west from Monaco. It is situated on the Baie des Anges, opening toward the south, at the mouth of the little river Paillon. To the east is the hill of Villefranche, affording protection from the east winds, and to the west the promontory Cap d'Antibes, which affords partial protection from the mistral or northwest wind. To the north are the foothills of the Maritime Alps, the highest of which is Mount Chauve, with an elevation of 2,824 feet, and standing seven miles back from the coast. These foothills, as Dr. Sparks has observed, are too far distant and too much intersected by valleys to afford very good protection against winds coming from that direction.

The city of Nice consists of three distinct portions: the old town, on the left bank of the Paillon; the Port, with a seafaring population; and the Strangers' Quarter, on the right bank of the river, which is the portion occupied by the winter visitors. This last section is the fashion-

able part of the city, and contains attractive avenues and gardens, broad streets with fine buildings, and innumerable hotels and pensions.

Along the coast runs the Promenade des Anglais, a beautiful, broad-terraced walk, two miles in length. It is shaded by palms and other trees, with a pier and casino near the beginning, and is bordered with hotels and villas.

In the season from November to May, Nice is visited by one hundred thousand people, and it then resembles a northern capital with all its gaiety. During the year about one million people are said to visit it. Between the foothills proper and the shore, a distance of four or five miles, is a sloping area of country consisting of low ridges and shallow valleys. Immediately adjacent to the coast is a level tract of ground.

In seeking a health resort along the Riviera it must not be forgotten that Nice is a large, extensive city, and consequently possesses the disadvantages and perturbing influences of a city, viewed from a health-resort point of view.

The sanitary condition of Nice is said to be the best on the Riviera, and the water supply "excellent in quality and quantity" (Linn).

Nice, by reason of its situation and size, possesses innumerable resources for diversion and pleasure. Here congregate visitors from almost every civilized country, and life in this gay winter city is made most attractive for them. At the height of the season the carnival is celebrated with great display. Nice is considered a healthy city, its death rate comparing favorably with that of most French towns. In 1890 there were 21.63 deaths per 1,000.

The following table from Teyssere's figures give some of the meteorological data for the season, October to April inclusive, extending over a series of years:

	Octo-ber.	Novem-ber.	Decem-ber.	Janu-ary.	Feb-ruary.	March.	April.
Temperature (degrees Fahr.)—							
Mean	61.61°	52.80°	48.2°	46.72°	48.48°	51.22°	57.54°
Absolute maximum..	88.16	74.7	65.3	66.6	66	70.5	82
Absolute minimum..	36.7	31.1	36.9	36.5	38.3	33.1	37.2
Humidity—							
Mean relative.....	62.6%	62.4%	63%	65.8%	59.9%	55.7%	60.4%

"The mean annual temperature," according to Burney Yeo, "is 60.3° F. The mean winter temperature 49.1° F., and the mean spring temperature 58.1° F. The minimum temperature at night is 26.6° F. The coldest months are January and February. The relative humidity is small, as is seen by the table. The mean annual rainfall is 32.43 inches, and 19.45 inches for the six winter months November to April. The mean proportion of sunny, cloudy, and rainy days for twenty years is: sunny 219.2, cloudy 77.3, rainy 67.4, and for the winter season, from October 1st to May 31st, sunny 135.8, cloudy 55.3, rainy 52.8." March, April, and May are the windiest months. Of the stormy winds the east wind is the most common, says Burney Yeo, and blows forty-five days in the year.

"Like Cannes," says Huntington Richards, "Nice is one of the windiest of the Riviera resorts. The mistral blows about nine times in the year, chiefly in February and March, and is accompanied by clouds of dust. The average number of days of complete calm during the nine autumn, winter, and spring months, as quoted by Sparks from Teyssere, is 18.6, while the average number of days of gentle wind is 203.8, and that of strong wind days is 69.4, out of which 29.4 occur during the three spring months."

"It must be admitted," says Sir Hermann Weber, "that the changes of temperature are very great, even in sunny places, when passing from a sheltered position to a spot exposed to winds, and likewise on passing from the sun into the shade. A great part of the town is also exposed to the northeast wind, owing to a gap left in the sur-

rounding heights by the Paillon torrent, and the mistral is often very annoying, the protection by some rather low hills to the northwest being inefficient. But the character of the climate is remarkably sunny and invigorating, and the bright days considerably exceed in number the dull and rainy ones." Frost rarely occurs, and then at night. Fogs are unknown. The temperature of the sea water in winter is between 53° and 61° F., and in summer between 64° and 75° F.

"Nice enjoys," says Dr. Wendt, in the previous edition of this HANDBOOK, "nothing more nor less than a fair average of Riviera climate. This means that it is not devoid of drawbacks, and that ideal winters are not found there. Nice is more sheltered than some places, but is nevertheless exposed to the mistral, which blows at Nice just as it blows at most other Riviera spots. It should be borne in mind by invalids and tourists that Nice and the Riviera in general really possess two distinct and different climates, viz., seashore or marine climate and an inland or mountain climate. It is quite well known that immediate proximity to the sea may induce sleeplessness and other symptoms, denoting too exciting an action on the nervous system. The dry, sunny inland air is tonic and sedative; the air in immediate proximity to the shores of the sea is bracing and exciting. The air of the city and its suburbs is often a mixture of the two. It is thus apparent that a number of local climates are found at Nice, concerning which the resident physicians will inform invalids."

As a genuine health resort it will be seen from the preceding climatic considerations that Nice possesses grave defects, and is perhaps the least desirable of the Riviera stations, particularly toward the close of winter and the beginning of spring. As has been well said, it is "rather a pleasure resort than a refuge for invalids." It does, however, offer much to a certain class of patients or semi-invalids. Those seeking sunshine, a certain degree of warmth, dry air, and comfortable living, even luxury, will find it here, under most attractive surroundings.

Anemia, chlorosis, scrofula, gout, rheumatism, dyspepsia, diabetes, Bright's disease, chronic bronchitis, asthma, and catarrhal conditions of the upper air passages are said to be more or less favorably influenced by the climate of Nice. It is not to be recommended for pulmonary tuberculosis, although it was formerly much resorted to by this class of cases. For the feeble, from old age or other cause, it is of value.

The suburb of Cimiez, two miles from the sea, appears to possess especial climatic advantages. It is said to be better sheltered and has a more equable climate, and its influence is more sedative. The late Queen of England visited this quarter of Nice several times.

Three and a half miles to the east of Nice is Beaulieu, said to be one of the best protected spots on the coast. The high mountains rise directly in the rear, cutting off the north winds. The situation of this little place is most attractive, and the groves of olive trees, orchards of orange and lemon, and the luxuriant vegetation enhance the beauty of the scenery.

The excursions in the vicinity of Nice are many and most attractive, affording marvellously beautiful views of this picturesque region. La Turbie, 1,600 feet above the level of the sea, on the Corniche road between Nice and Monaco, is perhaps one of the most strikingly beautiful spots in all this region of magnificent scenery.

For the true invalid the Riviera may possess many disadvantages, but for one weary with the routine of life, to roam along this coast from Genoa to Cannes in the late spring or early summer when the vegetation is at its best, is a source of unending delight, as the writer can testify from personal experience. Edward O. Otis.

NIGHTMARE. See *Consciousness, Disorders of.*

NIRVANIN—diethyl-glycocoll-p-amido-ortho-oxybenzoic acid methyl hydrochloride, HC(C₂H₅)₂NCH₂CO.HN.C₂H₄.OH.COOC₂H₅—occurs in white neutral pris-

matic crystals, very soluble in water. Elsberg at Mount Sinai Hospital in New York City, found the toxic dose in rabbits to be 0.22 gm. per kilogram of body weight, while that of cocaine is 0.02 gm. per kilogram. Boiling causes very slow deterioration of anæsthetic power and is practically harmless to the drug for short periods. Solutions purposely infected soon became sterile, and one- to two-per-cent. solutions were still sterile at the end of six months. Joannin found 0.5-0.7 gm. per kilogram toxic for guinea-pigs, while betaucaine is twice, and cocaine nine times, as toxic. But M. Didrickson affirms that the toxicity is greater than these authors report, very small doses having resulted in excitement, hallucinations, and convulsions.

Clinical evidence seems to favor this new compound as a stable, sterile, very soluble local anæsthetic. In 0.2-0.5-per-cent. solution it is suitable for infiltration anæsthesia, and in five-per-cent. strength for local application. It is somewhat irritating, and if used for the eye should be combined with cocaine. It has but little power of penetration, a five-per-cent. solution applied to a mucous membrane scarcely affecting the submucous tissues. It is said to be of value in pruritus and in dentistry. W. A. Bastedo.

NITRIC ACID.—*Aqua fortis.* Under the title *Acidum Nitricum*, Nitric Acid, the United States Pharmacopœia makes official a liquid composed of sixty-eight per cent., by weight, of absolute nitric acid [HNO₃]. Such grade of nitric acid is a heavy liquid of about 1.414 specific gravity, colorless when freshly made and perfectly pure, but, as met with in the shops, apt to be of a distinctly yellowish shade. The acid fumes upon exposure, is powerfully corrosive and stains animal tissues and woollen fabrics a bright yellow. It dissolves silver, mercury, copper, and other metals with evolution of red fumes. It mixes in all proportions with water and alcohol. It is a pretty potent oxidizer, yielding up a portion of its oxygen to oxidizable material, and it has a strong affinity for water, by reason of which affinity, in part, it is powerfully caustic to animal tissues. It should be kept in well-stoppered, dark amber-colored bottles.

The valuable properties of strong nitric acid are the power of the acid to oxidize on the one hand, and to cauterize on the other. By its oxidizing virtues nitric acid is a serviceable disinfectant in situations where its corrosive action will do no injury; and its cauterant powers are convenient for surgical application. The acid burns searchingly and thoroughly, yet not unmanageably. When using nitric acid as a caustic, it is well to bound the area intended for cauterization by a ring of oil or of adhesive plaster, to prevent the action from spreading unduly. The acid is then applied by a glass rod or bit of stick, care being taken to avoid excess. Swallowed in any considerable quantity nitric acid is a powerful corrosive poison, producing effects substantially similar to those caused by sulphuric acid (see *Sulphuric Acid*). The most striking difference between the poisoning by the two agents is, that in sulphuric-acid corrosion the sloughs tend to be brown or blackish, while in that from nitric acid they are yellow. Inhalation of the fumes of nitric acid also may kill.

In proper dilution nitric acid operates physiologically as do all the sour mineral acids (see *Sulphuric Acid*), and shares with hydrochloric acid a sort of selective efficacy in disorders of the digestive apparatus. Vomiting, from many causes, is often relieved effectually by nitric acid, and so is diarrhoea, and so is the functional disorder of digestion commonly ascribed to sluggish action or even congestion of the liver. Even a special curative action over constitutional syphilis has been proclaimed of nitric acid, but is at the present day quite properly discredited. For internal giving, the following preparation of the United States Pharmacopœia is to be used:

Acidum Nitricum Dilutum, Diluted Nitric Acid. This preparation is a simple dilution of the official strong acid with distilled water, in the proportion a little less than six parts of added water to each one of acid. It