

Personal Observations
on some of the
Health Resorts
in
The Riviera
during the Winter of 1885-6

By
A. S. Cumming
M. B.

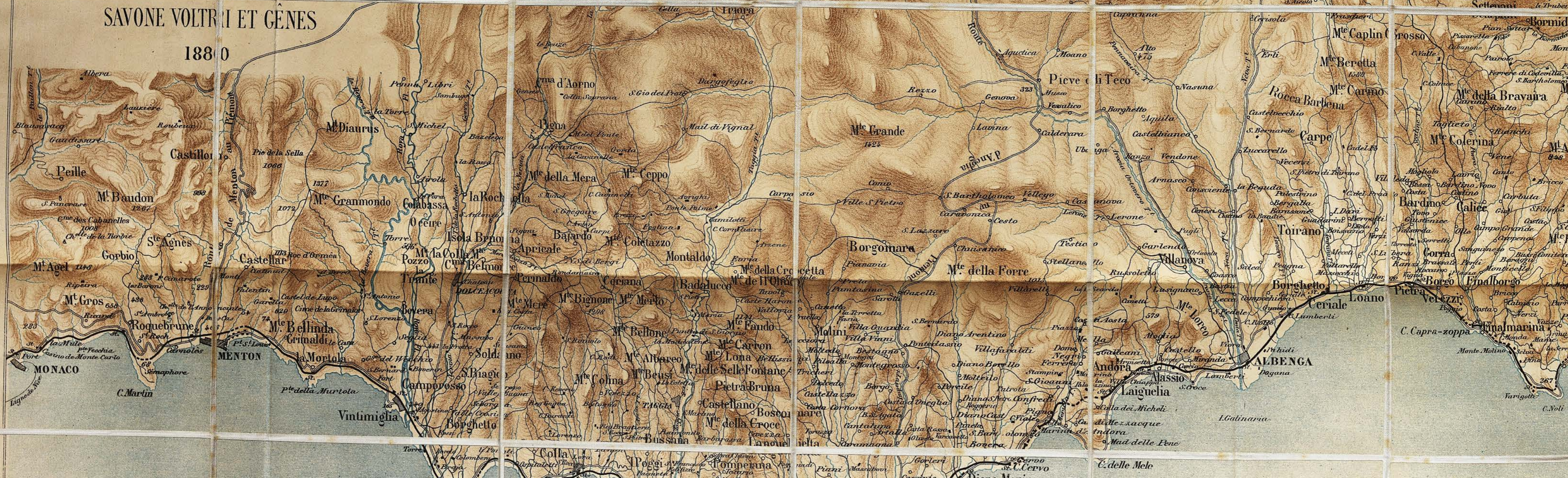




CARTE DE LA HAUTE ITALIE LITTORAL DE LA MÉDITERRANÉE AUX ENVIRONS DE MONACO, MENTON, S.^E RÉMO PORT MAURICE

SAVONE VOLTRI ET GÈNES

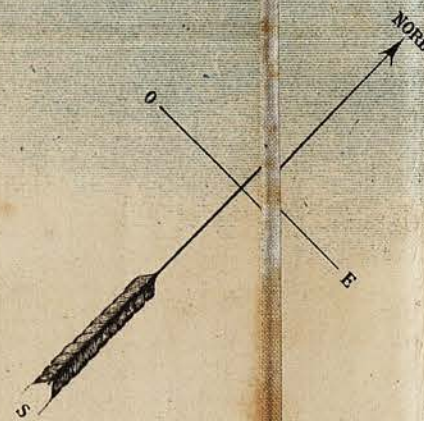
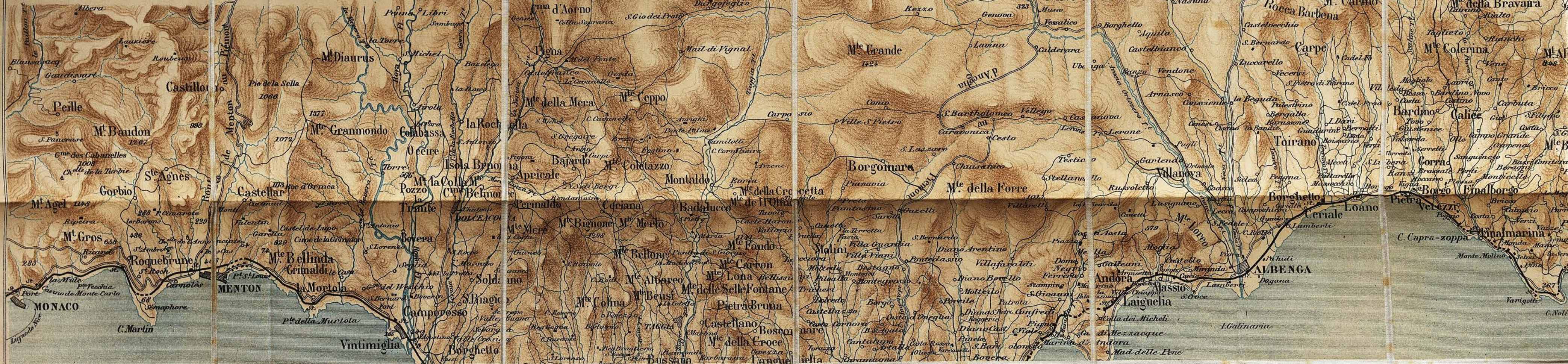
1880



MONACO, MENTON, S^{TE} REMO PORT MAURICE

SAVONE VOLTRI ET GENES

1880



20'

30'

40'

50'

Echelle en

Echelle en M

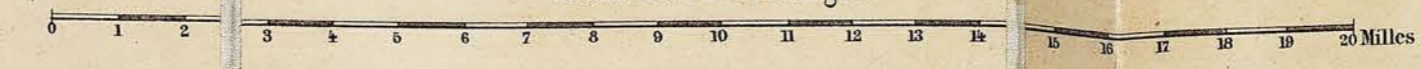


GOLFE DE GENÈS

Echelle en Kilomètres



Echelle en Milles Anglais



30'

40'

50'

60'



Face title

CARTE DES ALPES MARITIMES

LITTORAL DE LA MÉDITERRANÉE
AUX ENVIRONS DE
FRÉJUS CANNES GRASSE ANTIBES
NICE MONACO ET MENTON

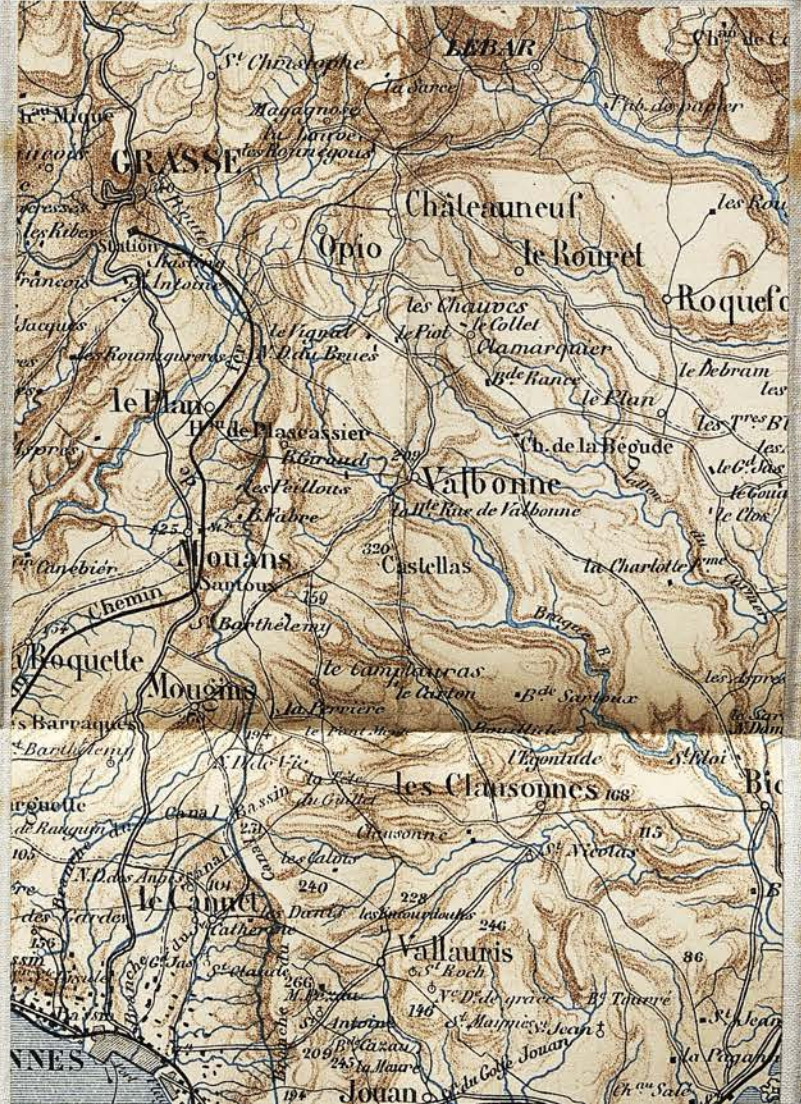
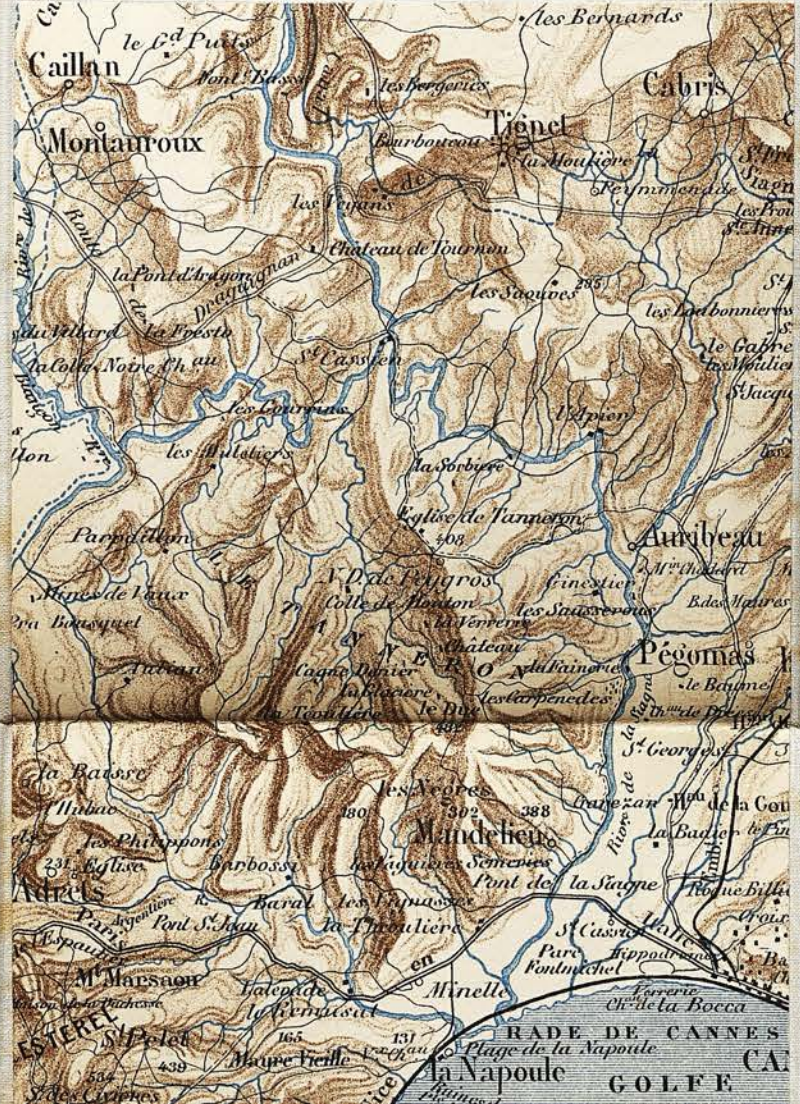
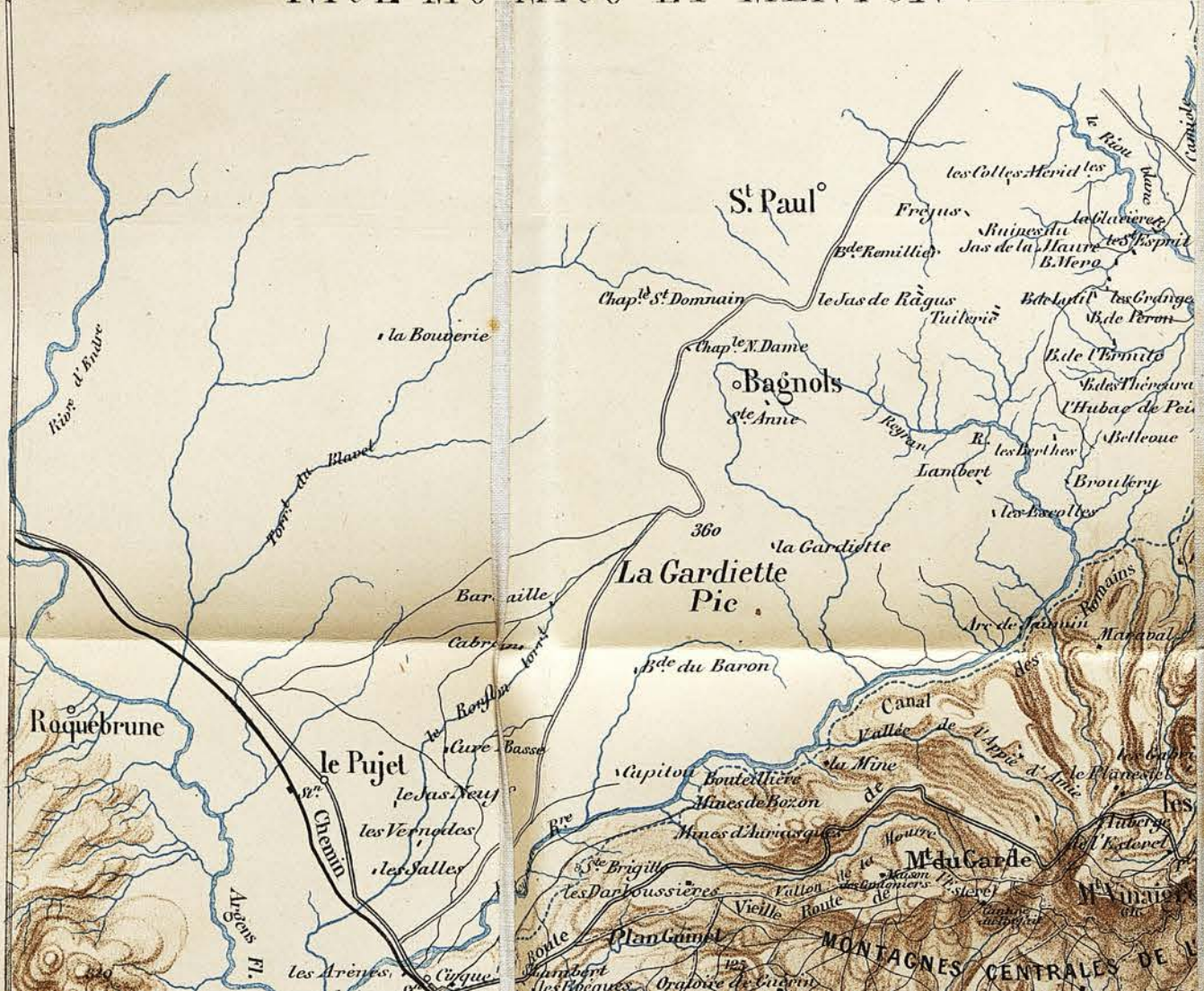
4° 10'

20'

30'

40'

10'



FRÉJUS CANNES GRASSE ANTIBES
NICE MONACO ET MENTON

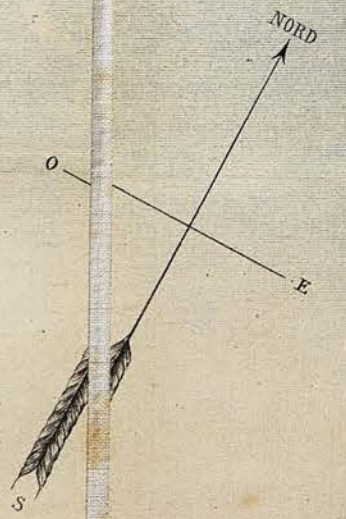


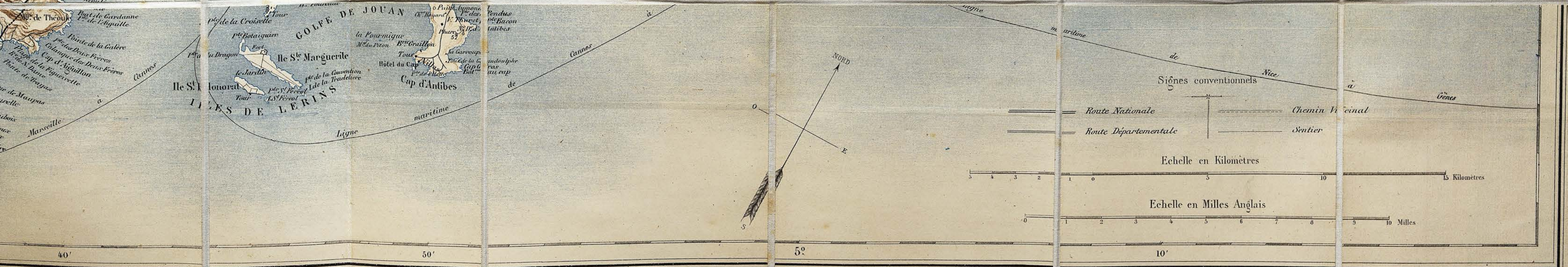
49° 30'

40'

50'

50'







All last Summer and during the previous Winter I had been losing flesh and strength, and was very unfit for work, and I was urgently recommended to spend the winter in the south of France. When there it occurred to me that I could not do better than make a special study of the climate both with a view to writing my Thesis & to gathering information which would be of use in practice. The information I have gained I have thrown into this form, & I have endeavoured as much as possible to confine myself to what I observed personally.

I have much pleasure in taking this opportunity to acknowledge the kindness & help I received from the Members of the profession on the Riviera & especially would I thank Dr. Frank, Bright & Edmonstone Charles in Cannes, Dr. Bernet & Siordet in Mentone; Dr. Griffiths & Piden in Ayères; & Dr. Wakefield at Nice - also I owe much to Mr. Russell the Sanitary Engineer at Cannes without whose help I could not

have inspected the drainage as thoroughly as I did.

I found as a rule that the medical men were most anxious that all inquiry should be made, & while naturally each had a preference for his own resort, they all were ready to acknowledge their shortcomings & frequently sent their patients from one to another, & even to send them quite away from the Coast.

I have of course had to consult the literature largely, & to take from it many facts such as I could not observe for myself, such as the meteorology, for necessarily a record of observations made by a passing Visitor during a short period & only extending over one season would be very fallacious. -

The Books I consulted were

The Riviera - Dr. Sparkes
Winter & Spring in the Mediterranean - Dr. Bennet
Nice & its Climate - Dr. Bovey
Swiss & Southern Health Resorts - Dr. March
Mentone - Dr. Cazenove de la Roche
San Remo Medically & Climatically considered -
Dr. Hassall

Riviera.

1.

Climate.

It is not my intention to enter into figures & Statistics of Meteorology. These points are fully dealt with in the Excellent works on the Riviera by Sparkes, March, Bennet &c. & at the best I could only boil down their facts - My object is chiefly to state the results of my ^{own} observation & the information I gained by conversing with those resident there.

It is easy to fill any number of pages with paragraphs from the various works on the subject but that would only tax the patience of the reader -

At the same time I cannot avoid giving shortly a few figures, to shew the chief points of difference between the Riviera & Home.

Very few people can come here & spend even a single winter without great inconvenience to themselves & their friends - To all it is a great Expense, & besides the journey is a very fatiguing one more especially to invalids.

This being so people naturally ask what the advantages are supposed to be

which should induce them to upset all their home arrangements.

And I would here remark that of course we only deal with the climate during the winter months, that is from November till April inclusive.

Well then, what is it that such people wish to escape from?

Cold, damp, fogs, Eastwind, rain - People in delicate health wish to avoid - November with its raw, cold wet days & its fogs & in early spring the cold East winds which are so trying to most people - They wish to find a Country where there is more sun & heat, less damp, no fogs, a climate warm, yet bracing & dry - a climate where they will never feel depressed, where with few exceptions each day will succeed the last, bright, gay & exhilarating.

It will be my endeavour to shew shortly that such a climate is to be found in the Riviera.

Temperature

Speaking generally there is a difference of between $9^{\circ} + 10^{\circ}$ F. between London & the Riviera - this is to be expected, considering that the latter is between $43^{\circ} + 45^{\circ}$ N. Lat.

To put it in another way in Mid-winter in the Riviera the mean temperature is not below April temperature at home. This however gives no adequate idea of the difference in the sensations of temperature, because the temperature of the air by no means follows that of the sun, & while in the sun you may be obliged to put up an umbrella & to wear a sun hat, in the shade you may have to wear an overcoat.

As Fessende shows the mean difference between the temperature in the sun & that in the shade of a northern wall is 75.2° F. an enormous difference.

This indicates that the heat enjoyed in reality is by no means represented by the thermometer. The reason for this is the dryness of the air. In England where the air is always moist, often

Saturated, the sky appears whitish in the sun from the moisture, & the sun's rays are intercepted in a large measure & consequently you do not get the same heat - & again this moisture prevents the heat stored up in the earth from radiating into space when the rays of the sun are withdrawn, & so the temperature is much more equable & less extreme. In the Riviera on the contrary during the prevalence of the dry N. W. Wind, when the atmosphere is very free from moisture, the sky is of an intense blue, the sun is very bright & its rays reach the earth without being modified, & you have great direct heat. Then at night fall or in the shade, the heat radiates rapidly & there is corresponding chill. I shall return to this point later on.

Rainfall

The actual Rainfall in the six winter months is about double that of England. In Dr. Spence's work elaborate tables will be found to shew this, but the number of rainy days in each month is very much less, less

than one half. This is very exhaustively treated of by Dr. Sparkes & it is enough to say here that the reason of this apparently anomalous fact is that when the rain comes, it often pours for days on end. There are two rainy seasons, autumn & Spring, during which times the rain often comes down in torrents, but after November & on to the end of February there is as a rule very little rain.

The beauty of the climate is that after the rain has gone you can calculate on a spell of good weather for some time.

Winds.

Practically during the winter months the chief winds prevalent are I. The North West wind or Mistral II. The East wind III. The South West wind.

I. The Mistral. I write with great diffidence about this wind, for my own observations have been so slight & authorities differ so much - Let me describe its nature. It comes from the Northwest & sweeping over Northern & Central France parts with most of its moisture & a great deal of its

heat. & having crossed the lofty ranges of mountains of Europe, arrives on the shores of the Mediterranean, a cold dry wind. It blows chiefly in Autumn & in Spring & more especially in March, but to some extent it blows throughout the winter. The effect of this wind depends on several factors Ist its strength - II. the Constitution of the individual III. the shelter of the particular district, but it may be said that to this wind & winds from kindred points of the Compass, are due the excessive dryness of the climate & therefore much of its health restoring properties.

Ist - Its strength - As a mild breeze nothing is pleasanter to most people than the N.W. wind - it is cool & dry & invigorating & you feel as if new life had been given you - and this is the character of the wind during winter.

When it increases to a gale, then it is harsh & cutting & very unpleasant - & moreover it raises by its dryness

clouds of dust. This is comparatively rare in most parts of the Riviera.

II. The constitution of the individual. I can only say that in this it resembles the East Wind in Edinburgh. Some people are affected very injuriously, being seized with neuralgic headache, & often the feeling as if a band were tied round the head - & they become irritable & out of sorts - & these people are chiefly neurotic, although it is seldom possible to tell how any individual will be affected. Others again never feel it, except that it is cold & dry - while others, & I am among this number, are positively exhilarated by it. As I have said elsewhere the effect of a fresh Mistral ^{on me} has been wonderfully exhilarating - I had the inclination to go & climb hills and take violent exercise.

III. The amount of shelter - this I deal with under the separate resorts - but I ought to say that East of the Esterels the Mistral is usually a modified or deflected wind. There are times no

doubt when the strength is very violent that they get the true Mistral in the various places, as Cannes &c. - but as a rule the mountain ridges catch it & turn it to the West & South west & it arrives in a comparatively pleasant form.

The East wind also chiefly prevails in Spring & autumn, but it on the other hand is a wet wind & to it are due the autumn & spring rains.

The West wind is often confounded with the Mistral & really I should say that this is the most frequent wind in winter. It is dry & pleasant, & wants the disagreeable characters of the Mistral, & this I believe to be one of the reasons why there are such differences of opinion about the Mistral.

Medically
Considered

It is still undecided what classes of cases are most suited for the various descriptions of Health Resorts. As is known to every medical man, there are the three varieties of climate; Sea Voyage - High Altitude, & such

climates as the Riviera; & physicians are by no means agreed upon the merits of each - Moreover practitioners and consultants frequently have a preference for one over the other for almost every case, so much so that when you send a case to such & such a consulting physician you can often say beforehand that he always sends his cases to Australia round the Cape, or to Davos Platz & so on.

This want of certainty is most undesirable & largely rises from want of carefully prepared Statistics extending over long periods, and as climatology is only in its infancy at present, this defect will be corrected in time, but one or two points may help to guide us in coming to a decision.

In the first place it should be clearly understood what we hope to gain by leaving home at all.

Phthisical Cases, tubercular or not, are essentially diseases of nutrition - That is, the patient has from some cause

or other begin to lose flesh & go down
 the hill - The lungs become affected,
 cough sets in, & the case goes on from
 consolidation to cavity & so on. Moreover
 the appetite fails, the stomach refuses
 to assimilate any but the simplest
 kinds of food - and this is the
 greatest difficulty; you think that if you
 could only get the stomach strengthened,
 or devise some kind of food so that your
 patient would begin to put on flesh,
 all would be well. In many cases
 you are able to do this with Cod liver
 oil, Maltine & other foods, combined
 with careful nursing at home - you
 have overcome the tendency to lose
 flesh & your patient recovers. This
 is not the place to enter into the subject
 of tubercle; I have only to deal with
 the subject of defective nutrition.
 Besides foods & nursing you have other
 factors, such as sunshine, & absence
 of cold & damp combined.

Your phthisical cases do fairly well
 at home in summer, but it is

towards the end of October when the days close in & there is much rain & fog that you are wishful to get them away. Later I shall dwell on these factors in determining locality, but meantime I wish to indicate another which I think is too much lost sight of, & that is the individual temperaments & tastes of the patient - How often does one find that a case is sent to a London physician for advice. The physician sounds him carefully all over & ascertains his exact morbid condition, & then gives some such advice as the following "Go to New Zealand or Australia by sailing vessel & return by America." or "Go to New Zealand by first class steamer, cruise round the islands & return by the same conveyance, but don't be back before the end of May" - & so on. The physician knows nothing about the patient's tastes. He may be a bad sailor & be ill half the voyage. - he may, as many do, hate the monotony of a voyage. In short if his spirits are not good & if he does

not get on with his fellow passengers, he may land worse than he started - Whereas with a calm passage & pleasant companions the result might have been very different. For the spirits Exercise a great influence on the powers of nutrition, & anything that tends to depress them is to be avoided.

It is the duty then of the Physicians in choosing a Health Resort for their patient, to study carefully his temperament & his tastes & as far as possible decide accordingly.

From the Climatologists point of view then it is best to postulate that all Disease, all departure from a state of health, is due to defective nutrition. For some reason the tissues do not take up & assimilate the due amount of nutriment from the blood; & there are various causes at work to produce this. The stomach may be at fault & may not be giving to the blood its proper supply of nutriment, the vitality of the system is lowered & becomes a nidus for many diseases.

The Nervous System may be at fault

and no proper assimilation & growth can take place unless this is in working order.

The Kidneys may be deranged, retarding or altogether preventing purification of the blood.

From such & many other causes the vitality of the system is impaired, & influences which might not affect a healthy organisation will give rise to various conditions eventually causing death.

Thus generally speaking we have to seek to improve the powers of nutrition, & so the vitality of the system, & so avert the downward tendency.

I ought here to say that we are dealing only with Chronic Diseases. Patients suffering from diseases in an acute form are kept at home till either they are cured, or it has assumed a chronic form & what climate has to do is not only to relieve the condition itself, but to raise the whole system & enable it to resist further attacks.

For six months in the year the climate of Great Britain is good enough; it is not all that could be desired,

but it is fairly good, & there are always localities where the greatest invalids can live - But from the end of October to the beginning of May this is not the case; the days shorten & there is a great deal of rain, damp & fog. The amount of actual sunlight is very small owing both to the shortness of the day & to the cloudiness, & of the atmosphere is more or less saturated with damp.

It is hardly necessary to emphasise the effect of direct sunlight apart from heat on the animal organism. In the vegetable ^{world} is seen at every turn how white sickly & waxy is any plant that grows in the dark; that every one knows.

In forests also where the trees form a dense canopy overhead & prevent the direct rays of the sun from penetrating, how scanty is the undergrowth, but clear a space & straightway the ground is covered with luxuriant plant life - and to quote from Dr. Thoms' work "The Experiments of H. Macayne show that suckers of the vine covered with

"black cloth receive a much greater degree of heat from the sun than do others exposed directly to its rays; & yet the former produce only scanty blossoms & no fruit while the others are loaded with grapes."

And if sunlight has such effects on vegetable life, it is no less efficacious in the animal world, & this need not be dwelt upon, as it is fully recognised in our sanitary laws & regulations. The enforcing for instance that all rooms shall have a window opening on the outside & the discouraging of narrow streets & dark rooms; all this quite apart from the subject of ventilation.

The hygrometric state of the atmosphere has also an important influence on the organism, for if it is in a state of saturation, as it is during a greater part of the winter, the skin does not act properly, & an undue amount of work is thrown on the kidneys, the lungs & the mucous membranes & if there is any weakness in these parts the additional strain serves to

light up mischief, not only that, but supposing the organs are in perfect health any cause which impairs the function of so important an organ as the skin must serve to derange the others, & so you have congestions of the Kidneys congestion of the lungs, catarrhs of the Bronchial & intestinal mucous membranes & all the train of complaints which these derangements give rise to.

Besides this action on the skin, a damp atmosphere impedes the free interchange of gases by the lungs, & the blood is not purified by that channel, nutrition is impaired & vitality lowered.

The conditions which render the climate of the Riviera desirable are,

- I. The temperature is about 10° F. warmer than in England.
- II. The climate is essentially a dry one and this is not only in the sense of there being far fewer rainy days, but also the atmosphere is much drier.
- III. The air is very pure.
- IV. The direct rays of the sun strike the

Earth unimpeded by clouds far more than at home.

These are the chief characteristics, & they serve to shew why the climate is so suitable for invalids.

Throughout the whole winter one can be out all day long, except towards sundown, at least five days out of seven, & can walk on the hills or sit & bask in the sun at will - and patients who would at home require to be constantly confined to the house, & limited to a couple of rooms perhaps, can be going about cheerfully enjoying the scenery & seeing friends. They are exposed to the direct rays of the sun with all their health giving power - & even if too ill to go out they can lie on a sofa in the window & bask in the sun's rays.

The medical men here lay great stress on this effect of the sun, & Dr. Bernes of Mentone tells me that a rule he lays down for his patients is "to keep their feet in the sun & their heads out of it" when they are sitting out.

It is really wonderful what a difference the sun makes in ones sensations. In dull weather when the sky is over-cast, the invalids become depressed, feel their symptoms return & imagine all manner of evils, but so soon as the clouds disappear & the warmth of the sun returns, all is bright again.

Then again the dryness of the air is such that evaporation is constantly going on from the skin, & the internal organs are thus relieved, the blood is purified & the pores are constantly kept open.

What then are the classes of cases which are benefitted by wintering there.

Respiratory System - Under this heading there are Phthisis, Bronchitis & Asthma. I do not include Pneumonia because it is an acute disease which either comes on here ^(the Riviera) owing to accident or indiscretion, or if it comes on at home it is treated there.

Phthisis - Cases of acute Phthisis should not come here, cases where there is high evening temperature, quick pulse, night sweats & all the symptoms of fever should not leave home at all. In the first place the journey is long and tedious & would be very detrimental, & besides the exciting air of the Riviera is not suited for such cases.

There has been much discussion & there is still great uncertainty on the subject of the origin of Phthisis, some authorities being of opinion that you can have no Phthisis without the Bacillus of Tubercle, that all Phthisis is Tubercular, therefore I presume hereditary; while others & I think now the majority hold that there is the catarrhal, or inflammatory Phthisis, not constitutional but acquired - and the Tubercular or hereditary.

There has been a disposition among many observers to regard not only all Phthisis as Tubercular, but all Tubercle as fatal & such have argued that it is

of no use trying climates in such cases, but even were all Phthisis Tubercular, that is too gloomy a view to take, must be apparent to all who have studied much in the Post mortem Theatre where it is very common to see in persons who have died of other causes altogether, caseous deposits no small portion of which are the product of former tubercular bronchopneumonic aggregations. (Sparkes)

The chief causes of Phthisis are,
 I A damp climate or soil, bad ventilation, over crowding, depressing & unhealthy employments. II. Also hereditary predisposition.

As regards the first class of causes which goes to produce inflammatory Phthisis, it will at once be seen from what I have said that the climate of the Riviera is all that could be desired. The climate is wonderfully dry & the soil is mainly composed of limestone & micaceous schist & the towns & suburbs are either built

on the solid rock or on the alluvial deposit washed down from these rocks & is dry and porous. Overcrowding I need hardly say does not exist - the hotels and Villas being all separate & surrounded by gardens & the ventilation is that of a semi tropical Country - and as for ones employment, one comes here to escape from it.

Dr. Siordelet & Dr. Bennet of Mentone tell me that the cases which do best are incipient cases of Catarrhal Phthisis, more especially when the patient is not very young, in short the most favorable type - tubercular cases, they say, if taken early do far better here, than at home, & often are rendered stationary & even cured. But the best clinical definition was given me by Dr. Edmonstone Charles of Cannes, who said "The cases that we like are those which have been taken early & where the patients are otherwise in fair health, & where there is a fair family history - but where you have a history of brothers or sisters

"or parents having succumbed to Phthisis,
 "the cases rarely recover - they do often rally
 "the disease is apparently checked,
 "but sooner or later the patient gets cold
 "by accident or some indiscretion & then
 "the disease returns & progresses".

Dr. Griffiths of Hyères said much
 the same adding that Hyères suits those
 with a rising temperature, if they have
 the strength to come there - that in a
 few days the temperature falls, the
 sweats abate & the patient soon picks
 up.

From all this I should be inclined
 to say that of Inflammatory Phthisis
 traceable to known causes, all cases
 which were not too far advanced to
 be able to travel without harm would
 be benefitted if not cured by a residence
 in the Riviera - They would be removed
 from the exciting cause & there being no
 bad family history there should be good
 hopes of recovery.

Of tubercular cases, if early I should
 send them, but where you have young

subjects with bad history & rapidly advancing disease it is rarely advisable to send them away from home comforts.

Phthisis with Haemoptysis does very well on the Riviera where the Haemoptysis is the result of Pulmonary congestion. I have the authority of Dr. Siorret, Dr. Frank & many others for this, & Dr. Siorret told me that he was in 1859 given up by Walshe suffering from Phthisis with Haemoptysis he then came to Mentone & now in 1886 he certainly looks well and strong. He has had one or two attacks since then & does not go up stairs much.

"We feel ourselves justified" says Dr. Thaon in the statement that the climate of Nice & the Riviera by no means predisposes to Haemoptysis. The following figures prove this beyond doubt.

We have exact details with reference to haemoptysis from 131 patients whom we questioned strictly on this point & 91 of the number had experienced

it in a marked degree before coming to Nice.

After one or several winters passed here only 27 of the whole 131 had spat blood.

These cases of Haemoptysis would do well to be away from the exciting influence of the sea, & Dr. Siordet considers that Cimiez, a suburb of Nice is well suited. He tells me that he sends frequently cases there from Mentone, with excellent results.

Cases with fever, high evening temperature & night sweats, also should be removed from the sea. There is some difference of opinion among authorities about this, but as they all agree that the parts removed from the sea are certainly beneficial, it is better to run no risks.

if sent here at all

Cases of Phthisis in patients of scrofulous diathesis should be down close to the sea.

How long should patients continue to come here?

This is a question the physician is sure to be asked. Will a winter suffice to fit me for the duties of life again?

The reply must of course vary with the case, but in even the most favorable cases it would be unwise to encourage any such hope. If the case is very slowly advancing, all you can hope to do is to check its progress the first season & render it stationary, & two or three more seasons are required to restore the patient to the level of good health.

Even if it is stationary when the case is sent off, and after a single season you allow him to return to the conditions which had originally lighted up the disease, you run a very grave risk of causing a return.

It is a question of course of money & other social conditions with which every medical man must deal, each on its own merits, but given that there are no impediments of that kind all cases should spend at least two seasons on the Riviera, & where the family

history is bad & the case has been taken in time the patient should pass winter after winter abroad until the tendency is outlived.

Bronchitis. Not second in importance to Phthisis comes Bronchitis.

According to the Registrar General's Reports the mortality from Bronchitis stands first among the diseases of the Lungs.

Nearly one half of these die under the age of 5 years, & with these we have nothing to do here, but of the remainder the greater part are over 55 years of age & it is to this class that I would draw attention - The main causes, says Dr. Sparkes, of a rise in the death rate from Bronchitis are a low mean temperature & a prevalence of Easterly winds, these two conditions occurring either separately or combined. A few days of very cold weather in any winter will, as every one knows, fill the obituary of the daily papers of persons from 65 or 70 upwards. The largest mean

mortality from disease of the respiratory organs occurs in November, December, January, February & March.

Mr Alexander Buchan, also in a lecture delivered at the Royal Institution 25th March 1881 gives corroborative information & figures.

He shews by means of curves the comparative mortality in London & that there is a large increase during the winter months. This increased mortality is to be assigned chiefly to diseases of the Respiratory organs, but not to Phthisis

Mr Buchan also shews that the greatest mortality from Pulmonary disease Excluding Phthisis occurs when the temperature is between 32° & 40° Fahr. Phthisis has its maximum in March. This author also shews the injurious influence of fog in addition to temperature.

In cases he says where the fog is dense & persistent the mortality from diseases of the Respiratory organs is appalling, as happened in London early

in 1880, when the mortality was nearly doubled. An Examination of the fogs of London shews they do not commence till the autumnal Equinox; and it is at this ^{season} ~~epoch~~ that asthma, by far the most sensitive of all diseases to fog, starts from its annual minimum; and in the end of November & beginning of December, when fogs become most frequent the curves for asthma and bronchitis shoot up with startling suddenness.

It is evident from these statements that if you can remove those subject to Bronchitis from these conditions of cold, East wind, damp & fog, you give them a new Lease of life.

Everyone knows many cases of old people who are perfectly well as a rule, & when the cold weather comes on are very careful to keep indoors & when they do go out to wrap up well, but one day they are caught, an attack of bronchitis comes on & they succumb.

Not only that, but if they do keep indoors & escape the effects of the weather, they are apt to fall victims to the effects

29.

of confinement, want of exercise & air and all the derangement these give rise to.

Even in my limited acquaintance I know of several cases of elderly people who many years ago came out suffering from severe Bronchitis & finding that they could live here & nowhere else came winter after winter, finally purchased a villa & settled.

These people go home in summer & return in November, & have their home circle & life interests here just as much as at home in England & they attribute the fact of their being alive to this course of life.

Is it not evident then that if elderly people who have the means would make a point of never spending winter at home but come to some such place as the Riviera they would not only prolong life but render it doubly enjoy-able. Those at home are apt to look on life here as a banishment. They don't know what they are talking about. A man for instance with the means & the taste, can make himself a power of good. The Italian poor are in a state of great destitution

† have no one to help them as at home.

But there are two kinds of Bronchitis, dry & moist & Dr. Siordet & Dr. Frank & Charles all agree in telling me that the kind which does well in this climate is the moist; where you have abundant expectoration - very soon the cough subsides & the expectoration diminishes & the patient gets relief. A hard dry bronchitic cough on the other hand does no good here & should go to a moister climate.

Asthma.

The remarks which apply to Bronchitis also apply very closely to asthma.

Asthma however is only a symptom not properly a disease & it is a symptom of so many different & often obscure conditions that it is often most difficult to treat.

Dr. Siordet whom I cannot thank enough for his kindness in giving me information, tells me that as a general rule asthmatic cases do well in one part or another of the Riviera. You may

have to shift them from one place to another, even from one house to another, but eventually you hit on a place to suit them. Asthma dependent on Bronchitis or the Stomach, certainly do well, for the Bronchitis subsides, & the dyspepsia improves with the climate & the cause is thus removed. Had the opportunity of observing one case for six weeks. The gentleman was about 35 years of age & had been subject to Asthma, bronchitic apparently, for many years, to so great an extent that he was much deformed & bent. He fortunately is wealthy & able to control his movements, & he comes to Cannes every winter. At first he lived on the Californie Hill, in the Grand Hotel, Californie but was still a victim to Asthma, when it occurred to Dr. Frank to move him to the Hotel Mont Fleury, only ten minutes walk distant, since when he has not had an attack. I watched him closely & although he more than once had an attack of cold, he never once had Asthma.

But Dr. Scordet says that the kind of Asthma which does not do well here is spasmodic asthma, & even these when they do come under his care have been greatly benefitted by being sent to Cinis.

Nervous System: Cases of Paralysis, from Sclerosis of the Spinal Cord are said to be benefitted, that is they get more enjoyment out of life, they can get out & bask in the sun.

Functional paralysis resulting from fever is certainly benefitted by a residence here owing to the tonic action of the atmosphere & the general improvement to the health.

Locomotor Ataxy is said by some to improve, by others not - it is doubtful. Nervous prostration from over brain work, or mental strain of any kind derives great benefit from this climate. The air is very tonic & bracing, & at the same time there is a disinclination to do any mental work, a tendency to sit in the sun & let the hours go by.

or to take walks & drives, & this must be good for overstrained nerves. Few things can be better for the over-worked professional man than to come here, for even six weeks.

But for people of a nervous disposition, for the excitable, irritable nervous temperament this is not the place.

This must be always borne in mind, that persons of this temperament no matter what they suffer from must not be sent here. With such the effect of the climate is very painful. They cannot sleep at nights, they become more irritable & excited, they lose their appetite & lose flesh & go down the hill.

When patients complain of these symptoms the medical men wisely send them right away to Biarritz or some such place.

I need hardly say that Hysterical women should not come here.

Heart Disease. Valvular Disease derives benefit from the climate. The weather is warmer & more equable than at home & the

patient can get into the open air constantly, also if he is liable to recurrent attacks of acute Rheumatism he is less liable to them here, if he is careful to follow his Doctor's instructions.

Fatty Degeneration of the heart is benefitted also by the Stimulating Effect of the air.

But where there is any nervous Element this region is contraindicated - And in Angina Pectoris - Lebert says these do well if they are sent far from the Sea, but the medical men here indicate that they should not be sent at all.

Anaemia. is eminently amenable to the effect of this climate. The long terms of Sun light, the warm yet bracing dry air have their effect, the blood is more freely oxygenated & the nutrition is improved. It is interesting to watch the effect of a residence on such cases. Young anaemic girls come here hardly able to walk & taking no pleasure in life, & in a very short time they seem

to expand + develop in every way. I should say that the climate of the Riviera is quite as important for this class of disease as for diseases of the Respiratory organs.

Cerebral. All cases of cerebral disease should avoid the Riviera. Medical authorities seem agreed on this, although it is difficult to get proof of it. At the same time it is reasonable that this exciting air should be injurious to those of plethoric habit + liable to apoplexy. All those liable to weakness of the vascular system as aneurism should rigidly avoid this country.

Albuminuria derives great benefit from a time spent here. It stands to reason that the great dryness of the climate acting powerfully on the skin + lungs + thus purifying the blood takes a great deal of work off the kidneys + gives them rest + time to recover.

It is to be remembered however that the chief way in which the climate

benefits albuminuric patients is by relieving the kidneys & thus giving them time to improve, but where there is organic disease all it can do is to mitigate symptoms & delay the downward tendency. I do not think more than this is to be looked for. In the only case I was able to observe I noticed that when the weather was dry & genial the patient felt in perfect health & was active & vigorous, but when rain came & the air was chilly & damp, all the old symptoms returned & he felt very miserable & feeble.

Dr. Hassall notes that statistics shewing the frequency of this disease among the native population are very defective, still it is observed that in Genoa the proportion of deaths due to Bright's Disease is only 1 in 4,303 cases & in London 1 in 82.

In San Remo 1 death only is registered from Bright's Disease & 25 from dropsy in five years.

Dr. Griffiths of Hyires says that

no cases of Bright's Disease have occurred in the Ayres Hospital within the memory of the present Medical Officers.

These facts together with the dryness of the climate & the amount of sun leave little doubt as to the benefit to be derived. Even where you have contracted Kidney & cannot hope for cure you have great alleviation of symptoms & prolongation of life.

Scrofulous Diathesis is greatly benefitted by a stay on the Mediterranean. All authorities are agreed on this point. Scrofula being, apart from the hereditary element, a disease of bad Hygiene & Mal nutrition, it follows that where you have a pure atmosphere & constant sun you may expect great improvement. The same may be said of Rickets & all diseases of Mal nutrition - Patients suffering from these complaints should live close to the sea to get the benefit of its stimulating & tonic action.

Chronic Rheumatism & Gout derive benefit also from a stay on the Riviera - as might be expected from the dryness of the climate. Acute Rheumatism on the other hand is not infrequent owing to the sudden changes of temperature.

Different Zones. It is convenient here to notice the several zones of climate on the Riviera. There are at least two - & no one who has not had personal experience of it can realise the difference it makes whether you live close to the sea or at a distance.

Dr. Barety I. There is the zone of the sea board which is tonic stimulating & exciting.

II. The zone of the Plain, simply tonic, this zone only exists in some places.

III. The zone of the Hills tonic & sedative.

This is Dr. Barety's division for Nice & it holds good all over - At any rate that the neighbourhood of the sea is exciting & irritating.

Why this should be so is not quite understood, but the fact remains & should not only never be forgotten, but should be taken advantage of, because

Certain cases will benefit only near the sea, others again only away from it.

Thus the neighbourhood of the sea is good for all strumous cases, all of a lymphatic torpid constitution, suffering from glandular enlargements & the other kindred affections, Tabes mesenterica & the strumous diseases of the joints. Again cases of anaemia, exhausted brain power & simple chronic affections of the spinal cord - Cases of chronic heart disease, chronic bronchial catarrh & such like.

While cases of acute cerebral congestion indeed cerebral cases altogether should avoid the sea - I should not send them to the Riviera at all.

Hysterical cases & all neurotic patients should keep as far from the sea as possible.

Prevailing Diseases of the Country

It is important of course to ascertain, as far as possible to what diseases the native population is chiefly liable, not only to confirm what is

alleged in favor of the climate for visitors, but in order that healthy visitors may be on their guard.

It is not easy to arrive at accuracy, or anything like it, for there are no Hospital statistics except at Nice & these are almost impossible to get at.

Then again the Statistics of the Hospital at Marseilles are of little value as bearing on the Riviera & even those of Genoa are hardly representative. Still there are a few facts of importance which should be noted.

Diarrhoea is common with new comers & often among those in perfect health & is as much due to the feeding as anything else.

Ordinary colds are very common & you have to take the greatest care not to catch cold. The sudden & severe changes in temperature are the chief cause of this. Most people know for instance the danger of being out at sunset. Owing to the extreme dryness of the climate & consequent rapid radiation, whenever

The sun disappears there is a rapid fall of temperature of several degrees & in place of feeling light & warm & cheerful, you are conscious of a sudden chill creeping over you. All invalids & all who know the climate make a point of never being out between 4 O'clock or even 3.30 & 6. After that the chill disappears & you may get out with safety. New comers are very apt to neglect this; they do not see the danger of it, & they may escape for a time, but too certainly their time comes unless they are careful & they catch a cold which, if they have delicate chests, will counteract all the good they have got.

The Doctors say that the worse the season is in weather the better on the average do their patients thrive for they then take moderate care.

Then again the study of the Statistics of Mortality at Genoa, shows that speaking broadly, while the mortality from acute diseases is greater than in London, that from chronic & degenerative

disease is far less, & the more chronic the disease the more marked the difference.

There anasarca from whatever cause, chronic affections of the Respiratory organs, Excluding Phthisis however, Chronic Heart disease, & chronic diseases of the Kidneys are far more rare in Genoa.

But acute affections of the Respiratory organs, of the intestinal canal, including enteritis, gastritis, diarrhoea & dysentery are far more frequent in Genoa; also acute affections of the nerve centres, apoplexy & cerebral congestion & acute inflammation of the heart.

The figures of course are not quite to be relied on, for they deal with the native population under very bad hygienic circumstances, also they include, I fancy, the Summer months. Still they go to shew that acute cases of any kind should not be sent here, nor any cerebral cases; while chronic cases do better here than at home.

Acute Rheumatism is common owing to the variations in Temperature

Chronic Rheumatism is rare, but on this point there is doubt, for while I know of cases which do well & lose their rheumatic pains there, I know of at least one case who is very rheumatic, & cannot live at Cannes in consequence although all her family are there, as her symptoms are aggravated there.

Epidemic diseases are not common - Scarlet fever, Measles & Hooping Cough are not only rare, but are generally very mild in type - Typhoid is rare - This was always insisted on to me when I criticised the drainage. - They said that Scarlet fever & Typhoid were very rare indeed - and I believe this to be true, but I can only say that it is in spite of the drainage & we must remember that we have to deal with winter months alone, when the climate, though mild is still essentially winter.

Croup & diphtheria are not uncommon in the large towns.

Chest Affections are common, but as the statistics include Marseilles they are valueless

Cerebral affections are common all along the Riviera, & Diseases of the heart are also not uncommon as we would expect from the prevalence of acute Rheumatism. Albuminuria is very rare.

It is to be remembered that the Riviera with which we as Climatologists have to deal occupies a very contracted area - because we have only to deal with the chief Health Resorts. The distance from Cannes, the most Westerly of them, to San Remo, the most Easterly, is only 52 miles, or if we include Hyères which is inland, & 20 miles west of Cannes, 72 miles in all, and in this limited area we have

Hyères		
Cannes	20 miles to Hyères	
Nice	40	" 20 to Cannes
Monaco	50	" 10 to Nice
Mentone	55	" 15 to Nice
Bordighera	65	" 15 to Mentone
San Remo	72	" 22 to Mentone

So that in choosing one place over another as a residence it is not the

difference of latitude & longitude which is to be considered, for they are all within a few miles of each other. I have dealt with each place separately elsewhere, but I shall endeavour to say shortly here how they struck me as compared one with another.

In the first place I should say that if the patient had friends at any one of the places, or had a fancy for any particular resort, I should choose that, unless there were any strong contra-indications, such as a neurotic temperament which would have to go inland & if the Riviera at all, to Ayires.

Ayires is said to be specially suited for cases of Phthisis when there is active inflammation going on or Haemoptysis. Being removed from the sea its stimulating influence is more sedative than the other resorts. It is also adapted for neurotic cases, for instance a case of Chronic Bronchitis when the patient is also troubled with Neuralgia or Insomnia. Such a case would not be likely to do well

at any other place on the Riviera.

The disadvantage of it is that it is fully exposed to the North West winds which is often very violent. It is also dull & you have not the endless variety of the sea, but were there no other place than Ajaccio no one would think of complaining. The truth is there are so many places that invalids become difficult to please.

Cannes. Is the most open & bracing of any - although well sheltered from the northerly winds, the hills are not so close to it nor so high as to exclude the breeze, & there is a slight depression to the N.W. which let the air in. It is lively bracing & pleasant, has endless drives & walks, excellent shops of all kinds & a large selection of splendid Hotels. You find the air more bracing & exhilarating there than at any other point.

Most people will like Cannes except those who are far advanced in Phthisis, or Neurotic.

Nice is cold & draughty, Exposed to the North East by the gorge of the Paillon & the air on the sea shore is most irritating.

Living on the Promenade des Anglais many are driven nearly frantic by something in the air, I don't know what it is; also by the ceaseless dash of the surf, & the glare of the sun. Nice certainly suits some people, notably those who want excitement & have no taste for a quiet country life. And many elderly people who suffer from weak hearts, disordered digestions or Bronchitis, & cannot go about much, enjoy sitting in the sun & watching the crowds of people & all that is going on. But I don't recommend it for phthisical people. There is too much temptation to be careless of ones health.

But these remarks do not apply to Cimiez, which is away from the sea, & high up. It is well sheltered & is removed from the bustle & excitement of Nice itself. Dr. Siordet told me that

he often sent patients there from Mentone, who found the latter too exciting, & that the change had always been successful - & he considered that Cimiez was not sufficiently known.

Mentone seemed to me to be too shut in - It is certainly closer & less dry & bracing than Cannes, but it is very quiet & suits those who are more advanced in Phthisis. Those who are accustomed to Mentone do not like Cannes, & vice versa, the moral of which is that there is not a great deal of difference.

Bordighera is more exposed to the sea breeze than any of the other places, & should be avoided by those who find the sea exciting, but sought by those who require stimulation, strumous, anaemic, & perhaps dyspeptic subjects. It is very quiet & many like this.

San Remo is not unlike Cannes - Cases that do in the one will do in the other. It is less exposed to the Mistral & more to the East wind. It is less dry & consequently less irritating.

But my idea is that as a rule cases which do in one part of the Riviera will do in the others, except for the proximity of the sea, & that the dislike to one place or another is often caused by bad Hotels, uncongenial Company, bad weather or a depressed state of health.

At the same time I know of several cases this winter which were not doing well at Cannes & which Dr. Bright & Frank sent to San Remo as being less stimulating.

But as a rule if patients find they do not agree with any one resort, it is safer to send them right away to Biarritz or Pau at once.

It occurred to me on going to the Riviera that as there were many books on the Meteorology & Climate, the main objects of my inquiries should be the Water Supply & Drainage, & I have done this as well as I could.

I found it most difficult to make personal Examination except in Cannes where Dr. Frank & Charles assisted me

to Examine the drainage of most of the Hotels & of the Town. This fact speaks for itself. The Doctors in Cannes are & have been for some years, alive to the necessity of better drainage & the result is that within the last three years almost every Hotel & most of the Villas have been put in first rate order. The English Doctors in Cannes are a strong body & they are all in earnest on this point, & while Cannes is already a well drained town, if the new system is carried out it will equal any town in England.

The importance of this cannot be over-rated, for once Cannes has been thus improved, the other towns will be bound to follow suit.

In the other places the authorities are too strong for the Doctors, & moreover I find that after a physician has been resident in those parts for a time he is apt to become insensibly imbued with the sanitary notions of the French. For instance one Doctor in Nice said that although the drainage did not

seem good, still the place was perfectly healthy & that he believed that the Cesspool system was the best for them. More than one Doctor in Mentone said the same.

Now, even ^{although} statistics show that Typhoid & Scarf fevers are not common, that merely shows that the climate is so good that it is healthy in spite of defective drainage & besides there is always the risk of an Epidemic.

That drainage can be improved by well directed energy is proved by what has been done in Cannes, & in a much smaller degree all along the Riviera, but I believe that united efforts should be made by the Faculty at home first to have a thorough investigation made officially & then to improve.

The Local Authorities are quite alive to their own interests, and if they found that the physicians at home were only sending patients to the best drained Resorts, they would very soon put matters on a better footing.

Cannes is I should say the best

drained town on the Riviera, & I fancy
Nice is the worst, from its size among
other causes.

San Remo is very good, for visitors at
least, for the Hotels are far away from
the Town, & one of the best drained Hotels
on the Riviera is the West End Hotel,
San Remo.

The water supply is on the ^{*}whole
good & pure. Formerly the inhabitants
depended on wells for their drinking
water, which were often contaminated
& were never safe, so much so that to
this day many people are afraid to touch
water on the Continent.

But in the Riviera all this has
been long altered & the towns get their
supply either from rivers led for a con-
siderable distance, as Cannes & Nice,
or from pure mountain springs, as Hyeres,
Menton, San Remo &c. The only
fault of the water is its exceeding hardness
more especially where it comes from mountain
springs, as the ranges from which they
arise are chiefly limestone.

There is no reason why those who drink water only at home should not adhere to the same practice on the Riviera.

I was not able to visit the High Altitude Resorts, as Davos Platz, & am therefore unable to give my own experience, but I asked many of the medical men on the Riviera what classes of cases they thought should be sent to Davos & what to the Riviera & it was pointed out to me by men like Dr Frank, Dr Sordet & Dr Charles that in the High Altitudes where the Barometric pressure is low the lungs get greater play & the act of respiration is accompanied by greater exertion than at lower levels & that therefore they are of opinion that cases of Phthisis where active inflammation is going on should not be sent to Davos, & indeed this seems reasonable, as we know that in all inflammations the great principle in treatment is Rest. A climate therefore which throws more work on the part affected cannot be suitable. For the same reason cases in which you have Heart Complications, Valvular disease or Fatty Degeneration you do not desire a climate which will tend to give the organ more work.

But much more information is yet required & there is great need of a careful case taking extending over a large period of time to give reliable data on which to form an opinion of the relative values of the two climates.

In the High Altitudes you have intense cold, great dryness a powerful sun, stillness of atmosphere & absence of wind & equality of climate.

In the Riviera on the other hand while you have the dry atmosphere, the climate is warm, there is a great deal of wind & consequent change in temperature, & the sudden changes are often very trying to invalids.

Journey

The first thing to do is to take a Cook's ticket to your destination. This is the same price as an ordinary ticket & saves a great deal of trouble. By it you can break the journey at several stations & can take a month to the journey if so disposed.

The next thing to decide is

whether to go right through from London without stopping or where & how often to break the journey. This of course depends on the strength of the invalid.

If you elect to go straight through - there is a train which leaves Victoria at 11 A.M. passes round Paris by the Grande Ceinture & reaches Marseilles about 12.17 A.M. the following day & comes at 4.13 P.M. thus between London & Cannes taking about 30 hours.

This is a very long journey, but the carriages are very comfortable & you can get a sleeping carriage all the way through on payment of half the first class fare - for instance the fare from London to Marseilles first class is £ 7.6.9

Sleeping Car	3. 17. -
Total	<u>£ 11. 3. 9</u>

This is very expensive & many prefer to do without the sleeping berth more especially as they are very uncomfortable & the authorities do not scruple to put gentlemen & ladies together - Where ladies are travelling alone especially if they don't speak French, it is

the best plan to travel without a break.

The next plan is to stop at Paris a day & either start from Paris at 9.25 p.m. landing at Cannes at 4.10 next afternoon or leave Paris at 8.55 A.M. & break the journey again at Marseilles - or even at Lyons or Avignon. I do not recommend invalids to stop at Lyons - It is cold, low & damp & depressing, & the Hotels are far from the station - if a break must be made it is best to go to Avignon; from where you can run right on to your destination.

Extra luggage is a great addition to the expense & yet if an invalid is going away from home for 6 months he must have both plenty clothes & other comforts. It is therefore a great saving to send on the bulk of the luggage by *Petite Vitesse* some three weeks before.

Clothing

This is a great difficulty at first to know what to take. I shall deal with a gentleman's wardrobe as more familiar to me than a lady's. He should take his winter & his summer clothes, two

or three suits of tweed clothes, a black coat & waist-coat for dinner & for Sunday & his dress clothes; flannels both heavy & light, say a dozen shirts, & woollen socks as well as lighter ones -

The point is that you are in two climates & have to dress for both. When the weather is wet you are glad to have on your thickest clothes, & the very next day you may have to put on summer clothing, but one should never wear anything but heavy winter flannels here. Take also great coats heavy & light - especially have a light coat that you may carry on your arm & put on when chills come on.

Hotels

In choosing rooms in a Hotel there is one rule which holds good throughout the Riviera, you must choose a room with a South exposure & if possible high up. You will have to pay more for this, but no one who has not been in the Riviera can have the remotest idea of the difference in temperature between a south room & one looking to one of

the other points of the compass. The north rooms are chilly & depressing while the south rooms & warm & genial.

If writing, you are safe to ask for a room with Southern aspect & on the 4th floor - most of the Hotels have a lift now a days.

Companions. As a rule an invalid should not be sent away alone. In the first place you have all the difficulties of the journey in a foreign country & all the trouble of managing the arrangements of every day life which are so irksome to an invalid.

Besides this it is to be remembered that a great part of the treatment is to keep the mind cheerful & invalids should never be allowed to feel lonely & dull.

I am sure that often people fail to derive benefit from a place because they have not happened to land among congenial people - besides people have all their own affairs to think of, & there are many hours every day during which you must be left to yourself. Happy is the invalid who has a sister or other member of the

family to accompany him - but if this is not attainable & no personal friend can be found to go, then an invalid should seek out a companion more or less trained to nursing as the case requires, but before all things a congenial spirit.

Occupations. This is a point of the first importance. Everyone unless he is too ill, should have an object in life, something to interest him & to occupy his mind. He should either study French, many take lessons here & it seems quite an amusement German or Italian. Or there is the Botany of the Country, & it is most interesting. Then the Geology of the Country is most imperfectly worked out & I believe that a man with a scientific turn of mind & the use of his legs would certainly add to his knowledge & might make good discoveries. At Mentone it is well known that Caves have been found filled with the bones of primitive man & such animals as the cave bears & so on. In the hills round Cannes I found

quite accidentally a beautifully marked specimen of the scales of a ganoid fish in limestone & judging from the Museum there, hardly anything has been done. The hills are chiefly limestone & in any old wall you see any quantity of fossil shells.

For myself I took up the study of the Country from a health point of view & I cannot tell what an interest it gave me in my life. The days seemed too short. I had always something to see. I walked up the hills with an aneroid & took the altitude, observed how the winds blew & so on.

Practical Hints. I shall jot down one or two things which may seem trifling but which make all the difference in ones comfort.

Take your own tea with you - it is bad and very expensive in the Riviera - You may have to pay duty, but it will repay you. Also take an etna, a teapot & cups & saucers & spoons. A basket fitted up with the necessaries for tea is a most useful thing & easily carried. You can

thus make a cup of good tea in your own room & it is very refreshing.

Take a hot water bottle - the india rubber ones are the most easily carried. It is often very cold at night & they don't supply them in Hotels.

Take a good supply of English soap - it is bad and dear on the Continent.

Take some volumes of solid reading with you. You can get no end of novels every where but good reading is more scarce.

Cannes.

Geographical Features. Cannes is situated in the Western or French Riviera on the North shore of the Mediterranean lat. $32\frac{1}{2}^{\circ}$ long 40° . It lies in the Gulf of Napoule, a shallow bay, which faces almost due south & which is flanked on the west by the Esterel mountains, & on the East by a low point, La Croisette. This bay is slightly divided into two by a pitting hill the Mont Chevalier & it is to the East of this that the town chiefly lies.

The Town is stretched along the shore, close to the water's edge & consists of a number of streets of houses & shops besides many good Hotels & the line of Railway runs through it. Inland from this, more & more straggling as they recede from the town are the villas of the more wealthy residents & many of the best Hotels.

Cannes is surrounded at a radius of between 1 & 3 miles by a range of hills averaging in height from 600 to 800 feet & the ground from the sea gradually slopes up to the foot of these hills & on this slope are situated the villas, & as the town increases these villas creep higher & higher up the hill side & looking from the Railway you see the hills encircling the town like a large amphitheatre, covered with the dark green foliage of the Pines up to the top, & thickly studded with white clean looking villas, of varied & often tasteful architecture; here & there large barrack-like buildings which are the Hotels.

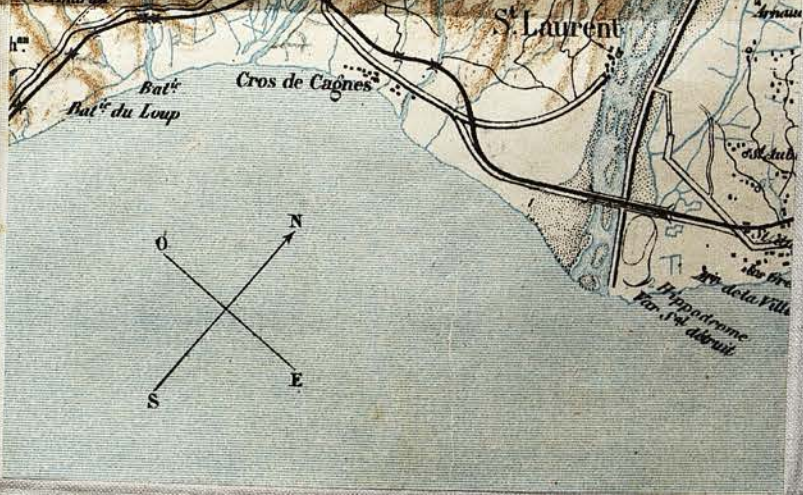
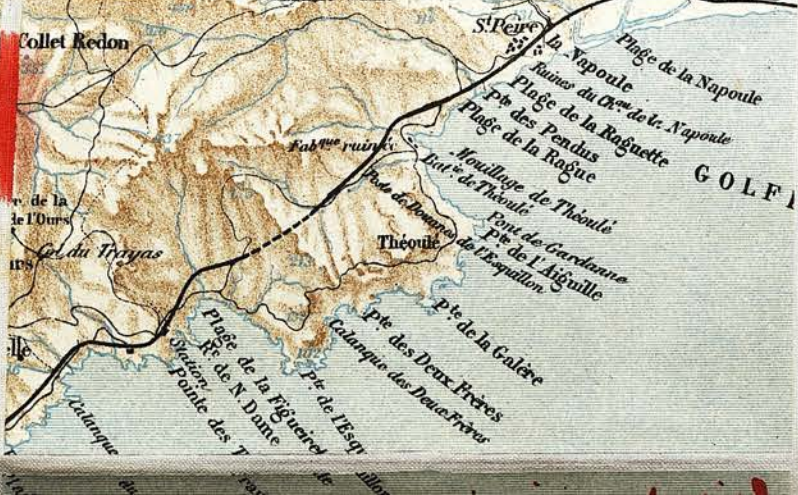
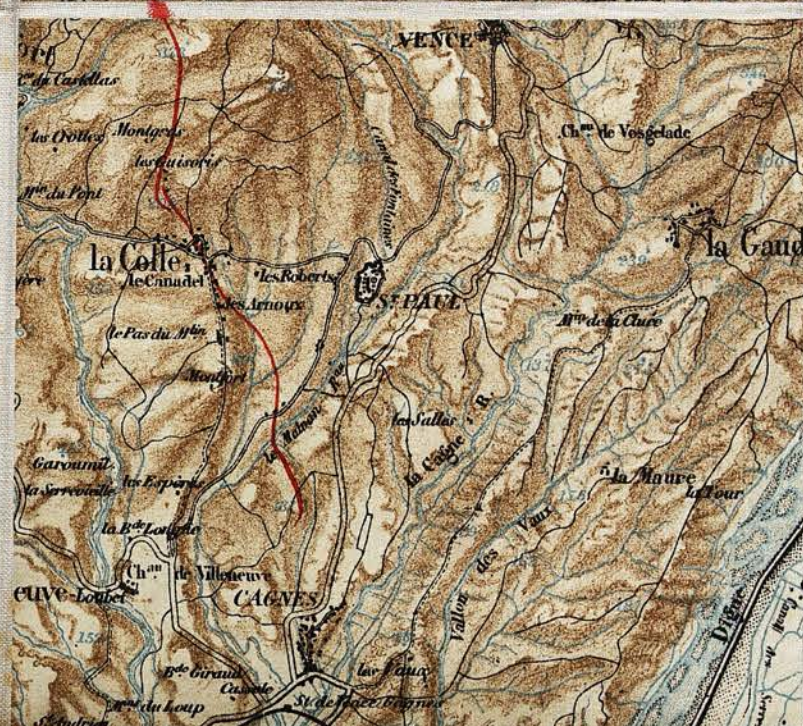
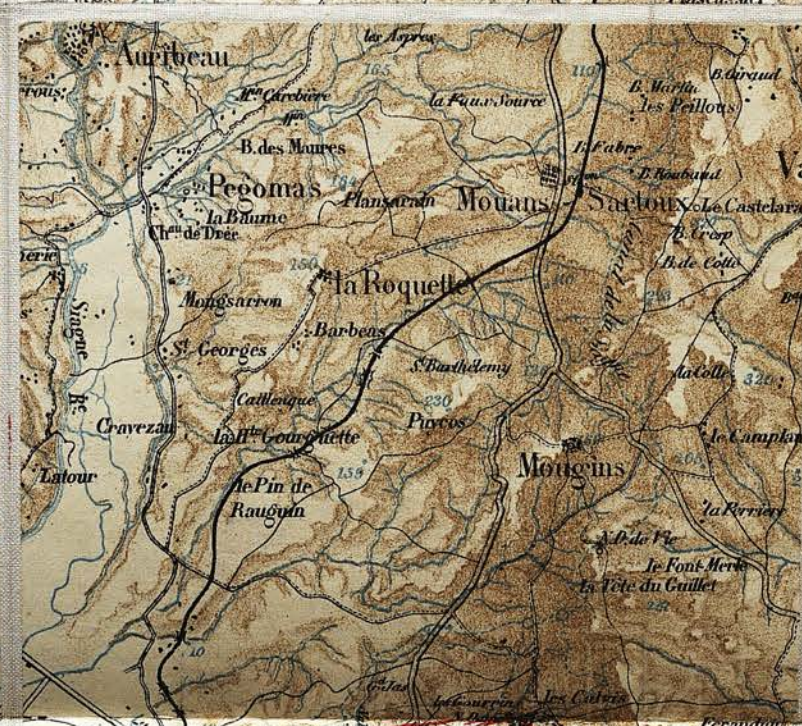
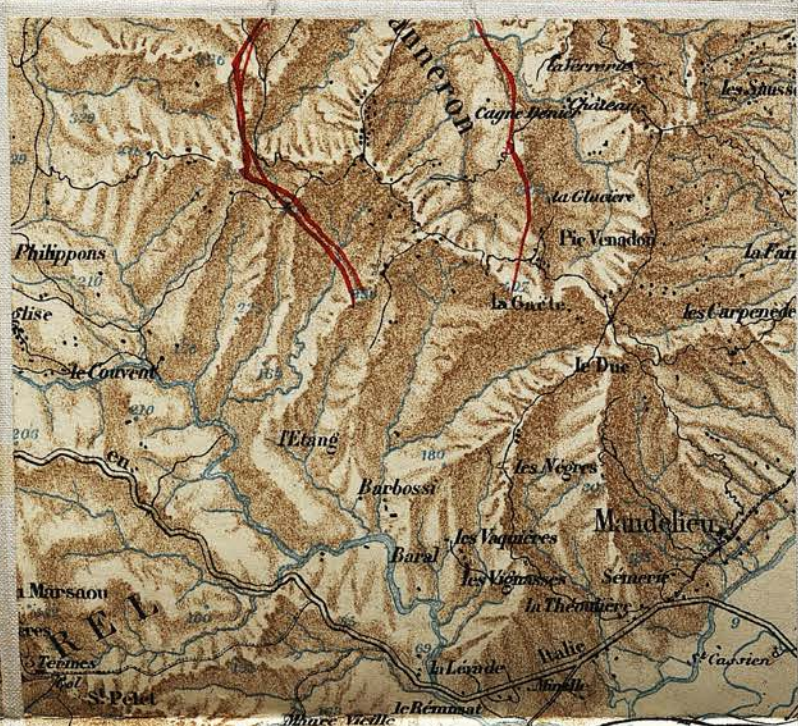
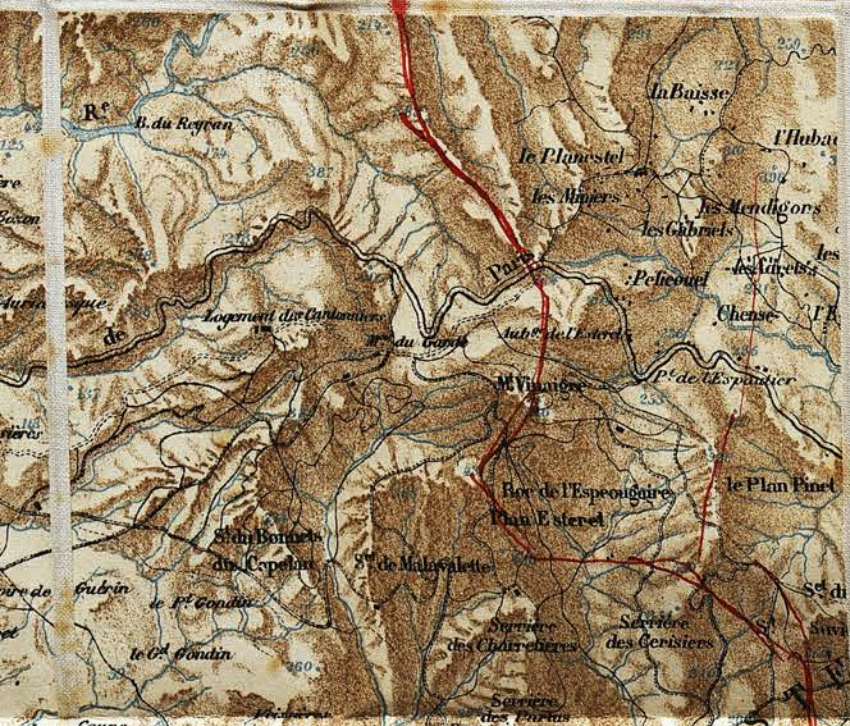
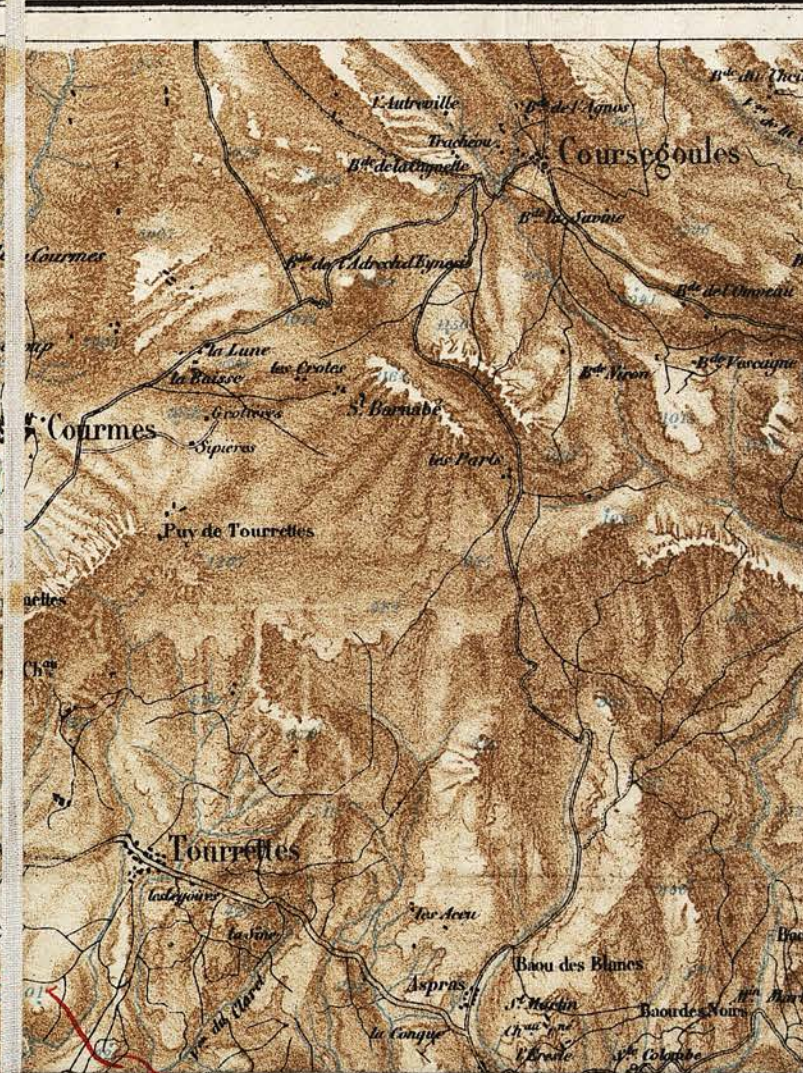
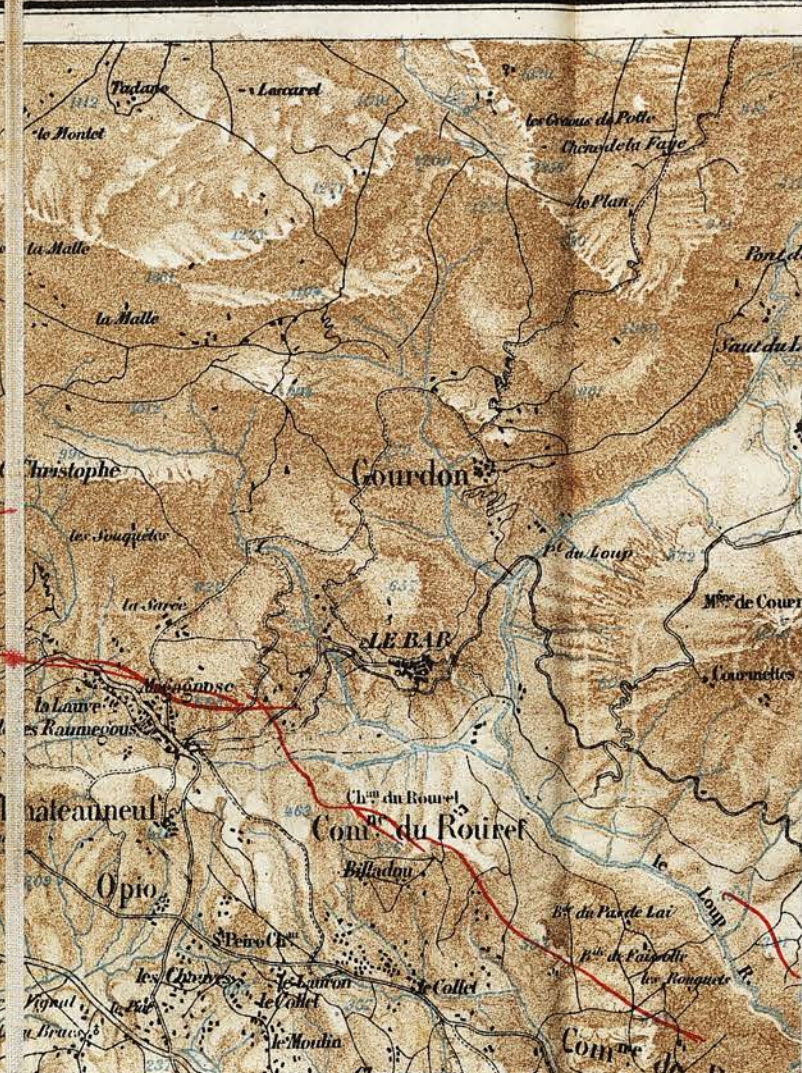
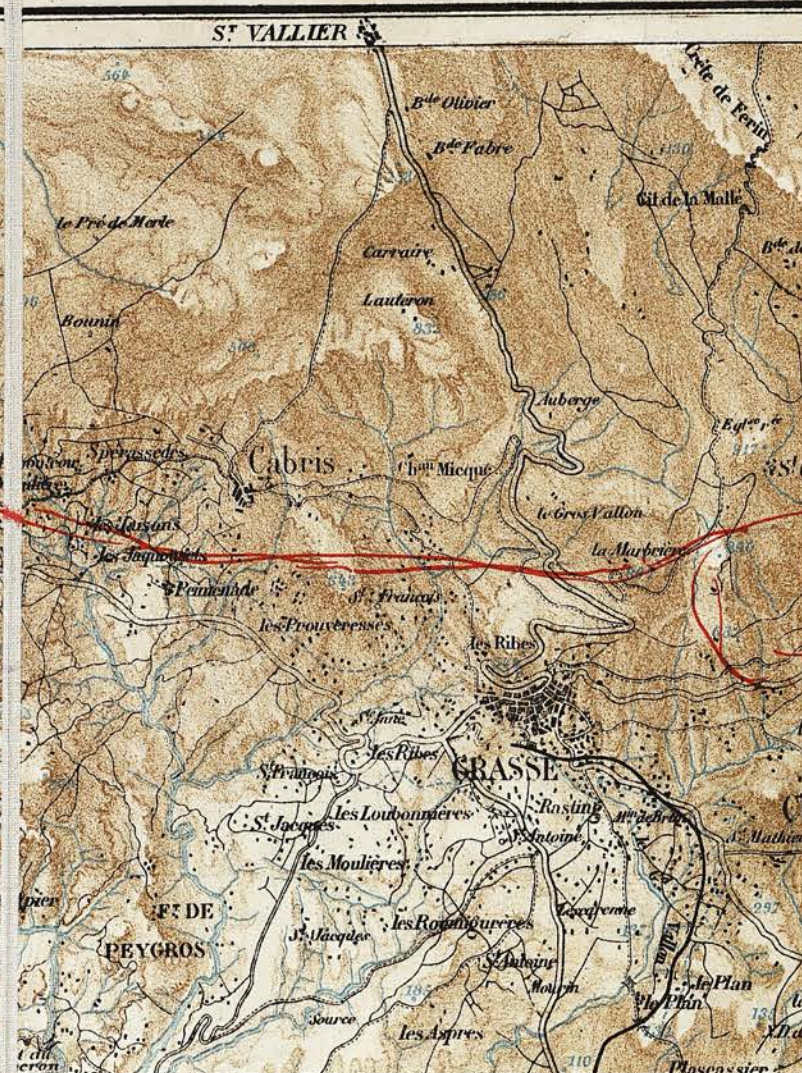
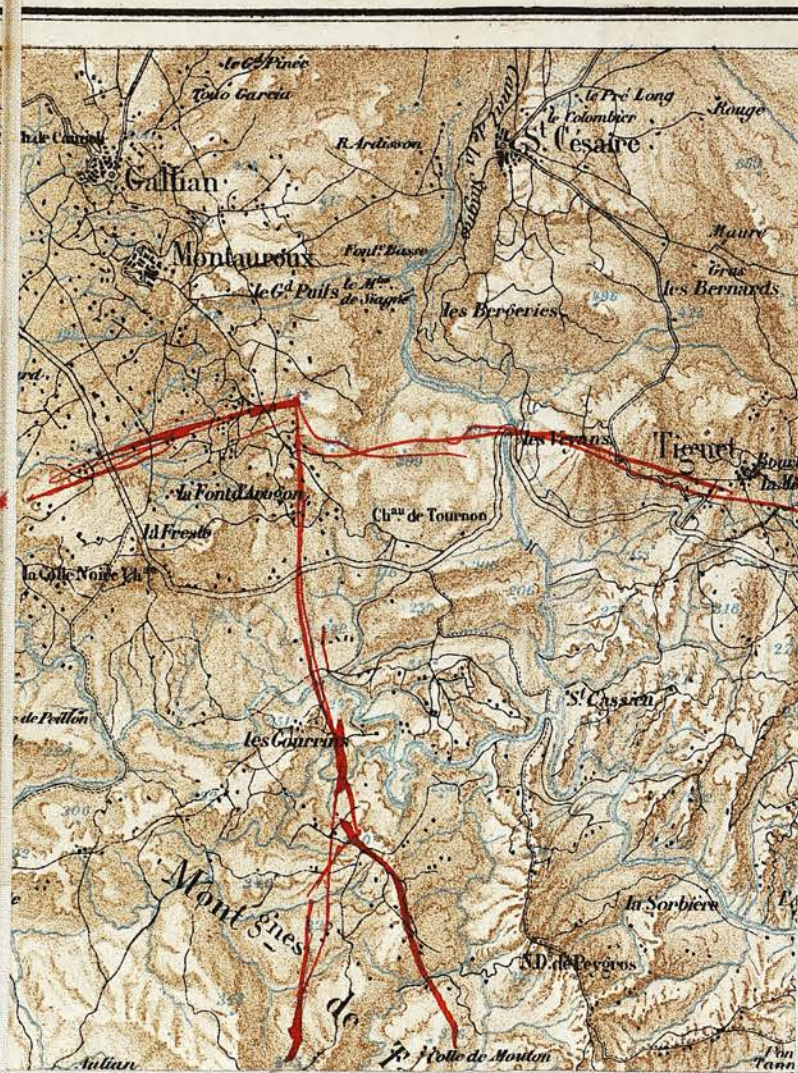
On looking more closely you notice that the site of each Villa has been chosen for some special reason, either for the view or for the shelter or for both, & is surrounded by a garden in which are many beautiful tropical plants even in winter.

Due inland from Cannes at a distance of about 2 miles lies the little village of Le Cannet, right in the bosom of the hills & sheltered all round. It promises to be a more popular place of resort in the future owing to its sheltered position & its distance from the sea.

The scenery of Cannes is very fine & of infinite variety. If you are living in one of the hotels on the hills, as I ~~was~~ ^{was} ~~present~~, & your room has a South Exposure you have the sea stretching in front of you in all its varied humours - to the West you have the rugged range of the Esterels, in front & towards the East the Isles Lérins - while around you lie the thickly wooded slopes with their studded Villas. Nothing is finer than the sunset

TOURIST'S MAP OF CANNES AND ITS VICINITY.

HEIGHTS
RES.
(Départementales)
(de communication)

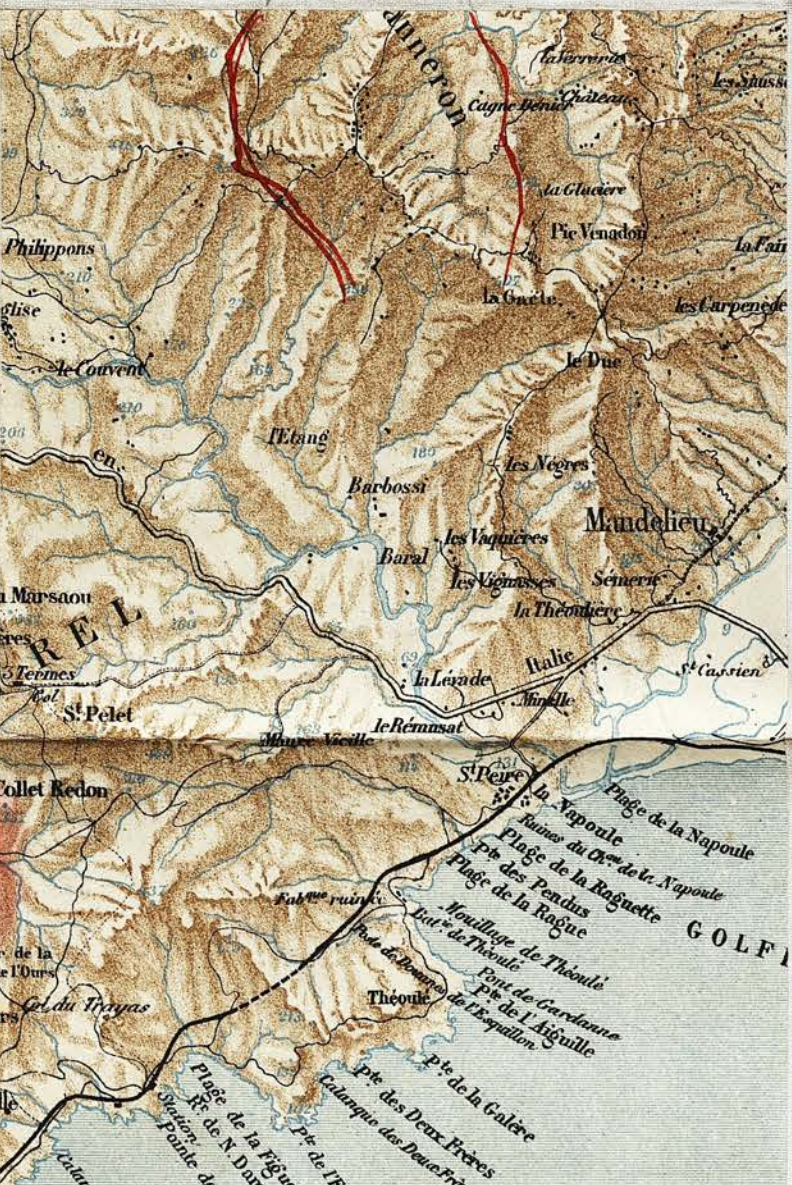
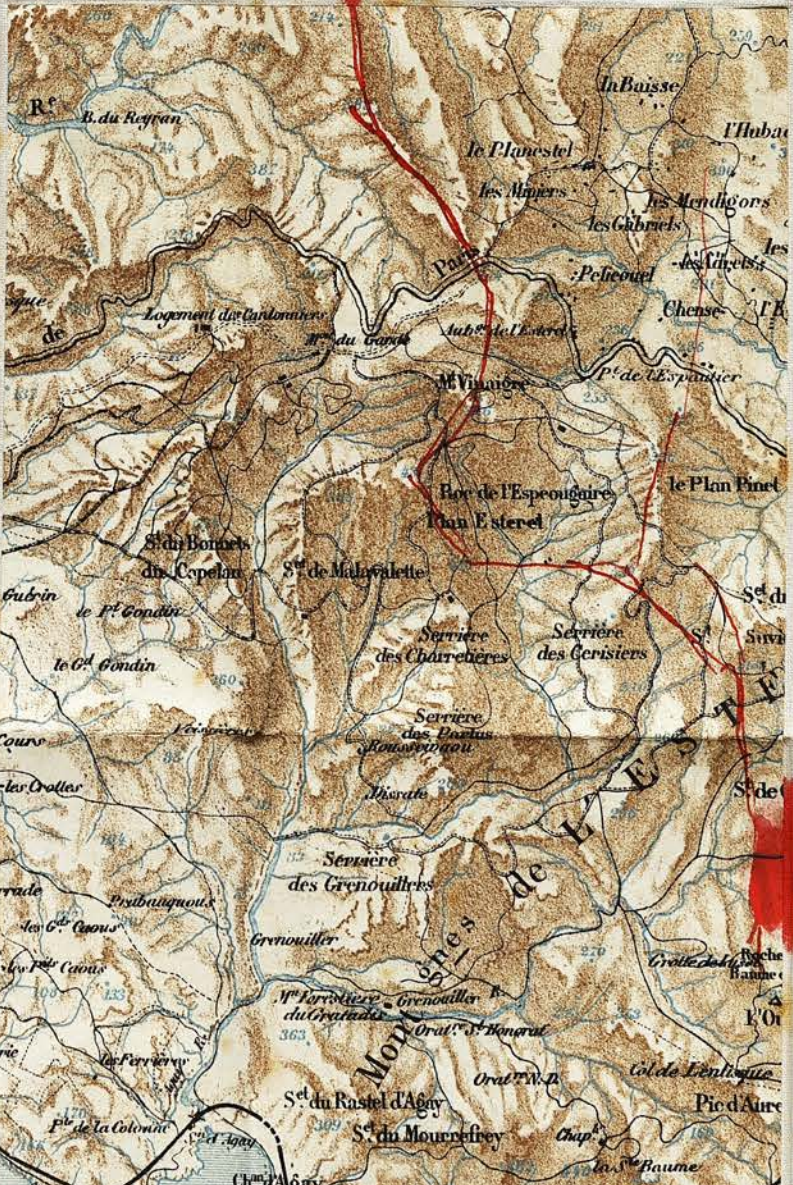
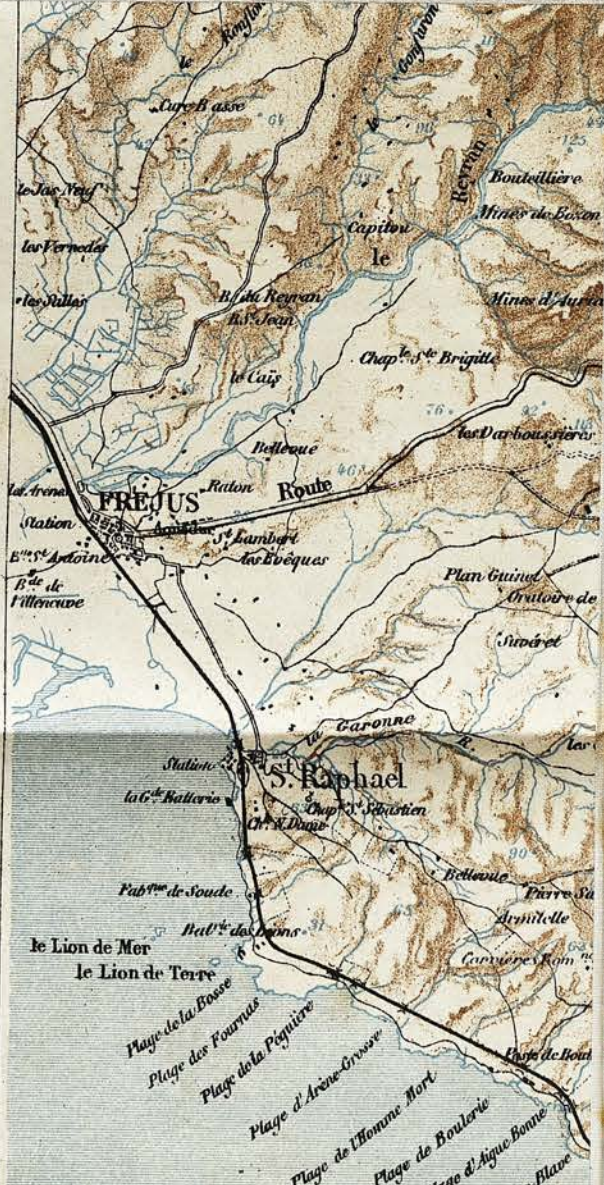
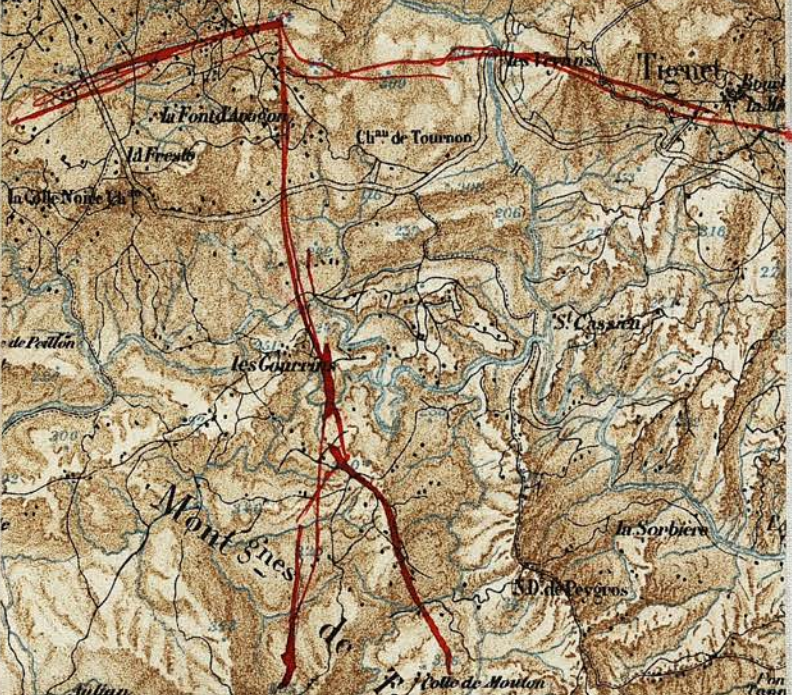
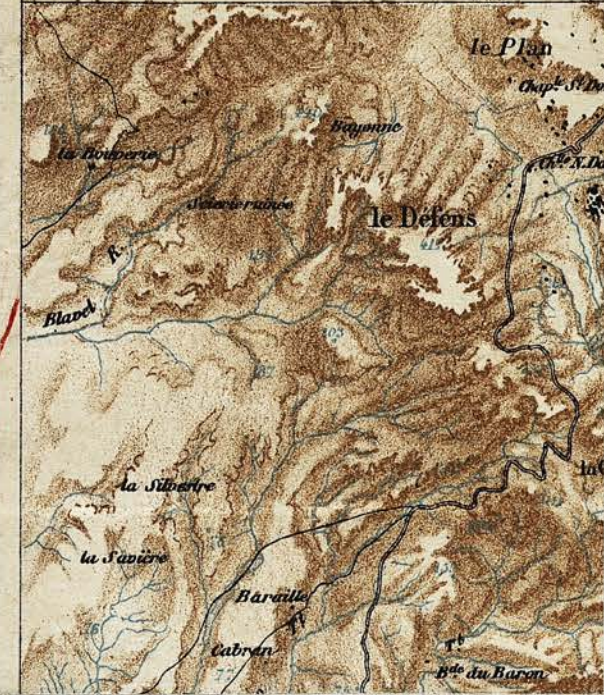




*Red lines showing inner barbed
road curve - second barbed
behind fence - the height
are in metres*

THE FIGURES INDICATE THE HEIGHTS OF MOUNTAINS IN METRES.

- ==== High-Roads (Routes Nationales et Départementales)
- ==== Secondary Roads (Chemins de grande communication)
- Bye-Roads (Chemins vicinaux)
- Paths (Sentiers)
- +—+— Railway (Chemin de fer)





Red lines showing inner barrier
 and outer - second barrier
 behind fosse - the heights
 are in metres

over the Esterels; & the Grillaup after slow throwing up the bold outline of the hills against the sky reminds one somewhat of the autumn sunsets in the Western Highlands of Scotland.

Climate.

But to the medical man who looks on Cannes chiefly as a Health Resort, a more important aspect is the climate.

This subject should more properly be dealt with in considering the Riviera as a whole, but at the same time there are many characteristics peculiar to Cannes which lead medical men to prefer it or the reverse.

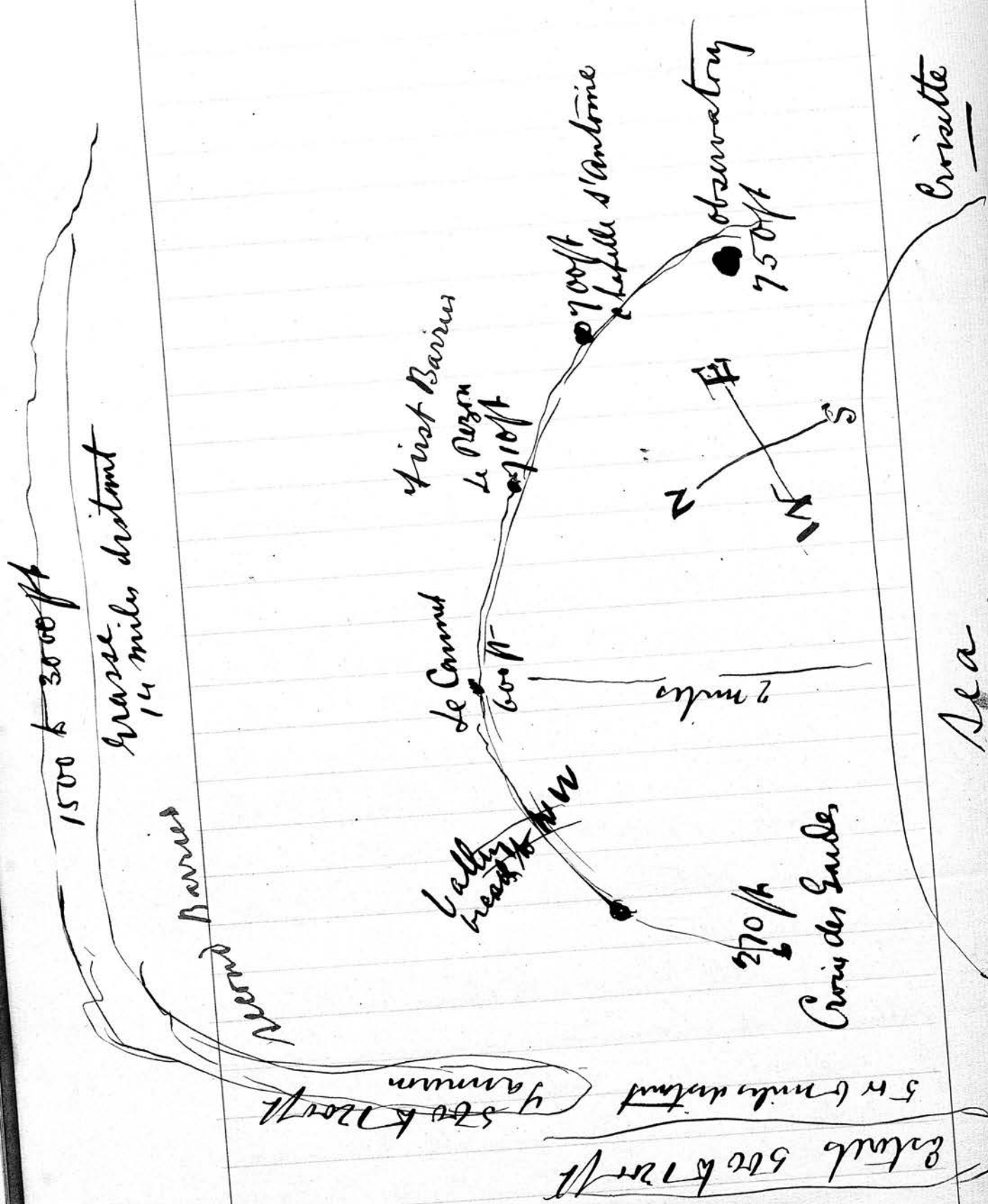
Cannes is I believe generally acknowledged to be more bracing than the other more Eastern resorts & the geographical & geological features are sufficient to account for this.

Shelter.

Here it will be well to describe the hills round about in relation to their power of affording shelter to the town.

In going up, as I did, to the top of one of the small hills behind the town

Diagram showing the
sketch round Cannes



you cannot fail to notice that the hills are divided into three divisions rising up one behind the other with increasing height.

In the first place, within a radius of say two miles of the middle of the town there rises a semicircular ridge of low hills covered with pines up to the summit beginning towards the East in the Californie about 850 feet high & running behind the village of Le Carnet where it is about 700 feet high & ending towards the West in the Croix des Gardes about 400 feet high - Between the Croix des Gardes & the hill of Le Carnet there is a broad valley running N. W. in the direction of Grasse which breaks this almost barrier & gives entrance to the cold N. W. Wind. This is the first range, a small ridge in the form of a semicircle stretching about 4 miles from horn to horn & having a radius of about 2 miles, with an altitude ranging from 400 to 850 feet but with a break to the North West.

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Sketch of Cammus showing the two ranges of Hill Shelters

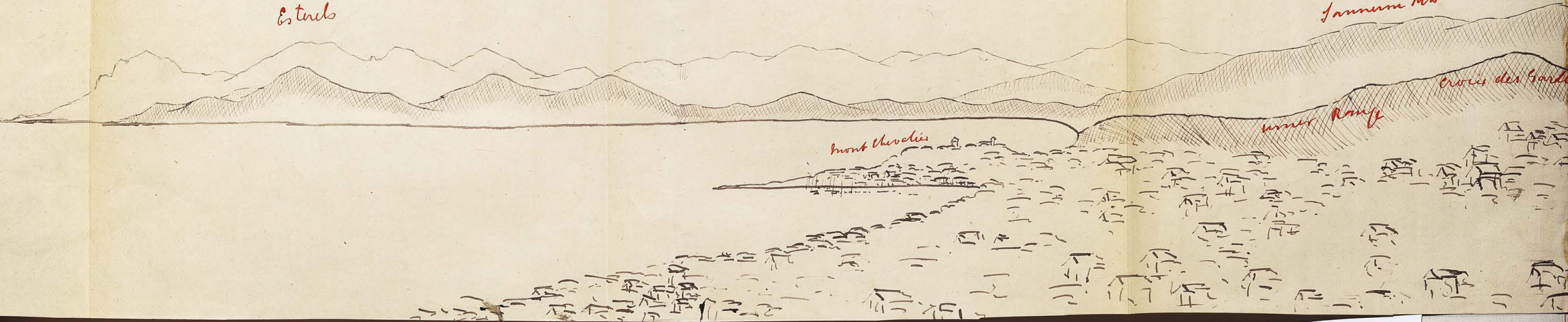
Estrels

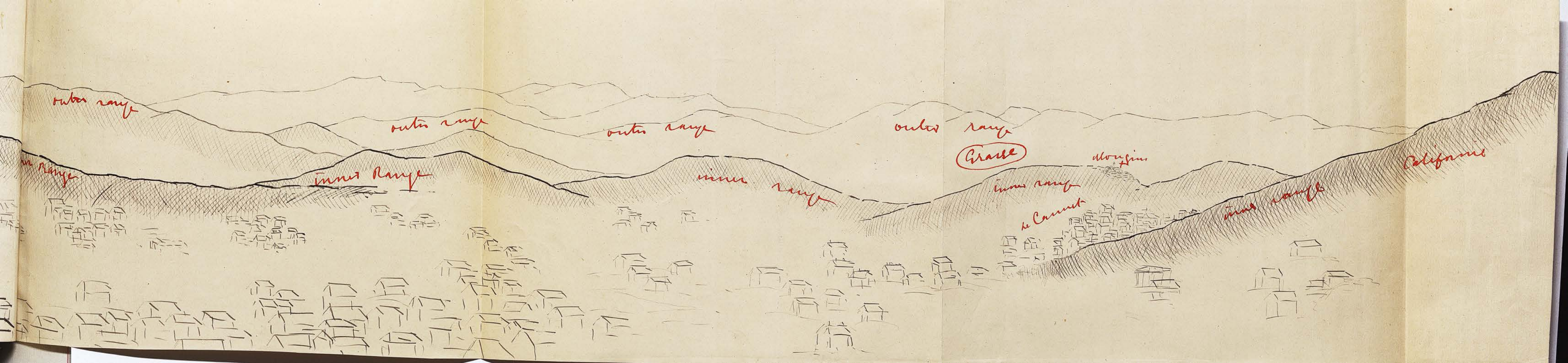
Jannura Mts

Croix des Gardes

Inner Range

Mont Chevales





outer range

outer range

outer range

outer range

Grass

Douglas

inner range

inner range

inner range

inner range

California

Le Cannet

Outside of this there is a higher & more extensive range of hills which begin about 12 miles to the West in the picturesque peaks of the Esterels which jib out to sea & effectually protect the town from the West. A little to the north these are taken up by the Janneron mountains which merge into the offshoots of the Alpes Maritimes rising up behind the town of Grasse about 12 miles to the north of Cannes. This range may be said to run due East & to come down south jib behind Nice.

The Esterels run from 600 to 1200 feet while the hills behind Grasse range from 1500 to 3000 feet.

This the second barrier efficiently protects from the West, North West, North Winds & North East, but not from the East.

Thus by these two ranges Cannes is protected fairly well from wind from West, North & East.

Behind this second barrier while standing in the Observatory on the

California you see towering away in the North East & North the snow clad summits of the Alpes Maritimes.

Dr. Sparkes in his most valuable work on the Riviera asks "How is Cannes sheltered from wind?" The answer "most inefficiently" & no doubt there is a good deal of wind at times but I think anyone reading the above account of the hills which I have simply described as I see them every day that I go up to look, will admit that it would be difficult to devise better shelter consistent with openness.

Winds.

There is most wind in Autumn & Spring. When visitors first arrive there is generally a good deal of wind & when they are leaving the weather has again become boisterous often & changeable. In Winter however from say the middle of November to the end of January or middle of February there is usually calm weather & bright sunshine.

The two chief winds are I. the N.W. Wind or Mistral & II. the East

wind. The N. W. wind being cold & dry, the East being warm & wet.

The Mistral is a cold dry wind which comes from the north west over Europe depositing its moisture & heat, as it passes over the mountain ranges on its way and which when it reaches the Riviera is not only cold but from its excessive dryness causes an increased sensation of cold by rapidly evaporating moisture from the surface of the body.

It flows chiefly in autumn & Spring especially the latter & occasionally is very violent & disagreeable, but as a rule it reaches Cannes as a cool breeze making the air fresh & dry & probably preventing the place from becoming close damp & relaxing. Probably we owe a great deal of both health & comfort to the well abused Mistral. A good medical authority here tells me that in a residence of 5 years he has never yet experienced a regular Mistral. He also assures me & I hope to test the fact for myself, that if there is a cool pleasant breeze

from the S.W. here, I have just to ascend the Esterels to find a furious gale on the other side.

The Mistral as I have said has a very bad name, & there is no doubt that it does not suit many people. Its chief characteristic is its dryness, highly nervous people are seized with headache whenever it blows.

It is destructive to plant life & when it blows hard the leaves become yellow & the more delicate plants die.

But many people rather like it. I have not experienced a regular Mistral yet, but in early December we had a gale from the West which had what is called a great deal of Mistral in it & was really a deflected Mistral & I cannot do better than describe its effect on me.

During the night as the wind got up it became very cold & I had to put extra coverings on the bed. In the morning when I looked out everything seemed wonderfully beautiful - the air was clearer - the sea more blue, the Esterels

nearer & greener than usual, the sunbeams danced on the sea & everything seemed very lovely - As for myself it is difficult to describe the exhilarating effect the wind had on me. I felt inclined to run & walk any distance, & could hardly sit still & could scarcely sit out the service in Church (it was Sunday) & for two days after I still felt unusually light & lively.

It does not affect all in this way. Those of neurotic tendency dislike it very much, as it produces a nervous irritability which is most distressing & many people have the sensation of a tight band round the head while it is blowing; also those whose chests are not strong require to be careful when this wind is blowing, both for the cold & for the clouds of dust which it raises.

The East wind is also very prevalent especially in spring. Unlike the Mistral it is a moist wind & is usually followed by rain.

From this wind comes is

not well sheltered excepting the ridge of the California, & that this is a fairly efficient protection will be tested by first taking up quarters in the Grand Hotel California & then descending to say the Hotel Mont Henry not ten minutes walk distant, but lower down & completely sheltered. In the Grand Hotel California you have the full force of the East Wind & it is not so suitable for Phthisical cases.

Temperature. From November to April, for we are only interested in what we may call the winter months, the mean temperature is about 9° to 10° higher than at Greenwich. Dr. March finds that the mean temperature during six seasons was 50.8.

	From November to April			
	Max.	Min.	mean	Greenwich
Nov.	58.8	46.5	52.6	42.8
Dec.	52.5	40.1	46.3	40.7
Jan'y.	54.0	42.0	48.0	38.9
Feb'y.	55.5	42.1	48.8	39.7
Mar.	57.6	44.4	51.	41.5
April	62.	49.1	55.5	47.2

This means that the actual temperature

is never even in mid winter below an average April at home, while the greater part is a good deal higher, but even these figures give no idea of the difference because it is to be noted that these temperatures are taken in the shade, while the heat here is chiefly from the direct rays of the sun, so that when one is in the sun the heat is like that of midsummer & in the shade like spring.

It is never to be forgotten that this is essentially a winter climate although very mild & those who come here expecting eternal summer will certainly be disappointed. For instance the other night in early December the minimum temperature at my window was 29° & must have been lower on the pass - it is not uncommon to have hoar frost on the grass.

The sun is too hot for much exercise as a rule. You cannot walk far without feeling tired, but you must at the same time wear heavy flannels, as you are apt to catch

a chill on getting out of the sun.

Rainfall.

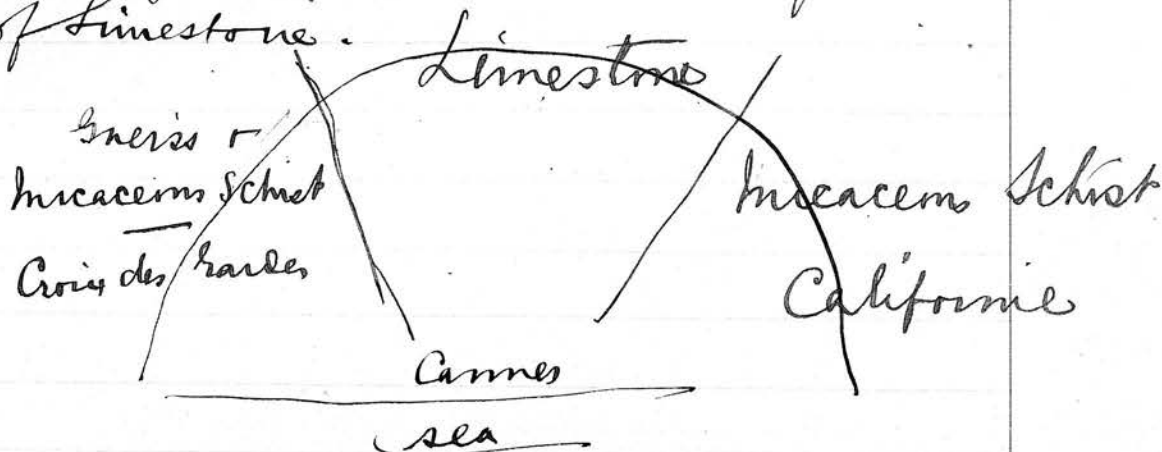
The rainfall for the season averages about 20 inches, which is much higher than at home, but this is owing to the fact that the rain when it does come is so much heavier, often raining for days together. In reality you may calculate on 5 days out of the seven to be five bright sunny days, & often you hardly get a rainy day in December & January. The most rain falls in autumn & Spring.

Geological Features.

I have indicated that the town is surrounded by a semicircle of hills - Now there are two different formations, micaceous schist and limestone.

The hills at the two extremities of the little range, the Californie of the East, & the Croix des Gardes on the West are composed of a gneiss & micaceous schist resembling red granite in appearance but friable & in some parts breaking readily under foot - but between these

two points it is as if a wedge of limestone had been driven & the range from Le Pez on right round is composed of Limestone.



The sloping Valley enclosed by these hills is composed of the detritus of the rocks & is an argillaceous clay, very porous, containing masses of limestone of all sizes. - Dr. Charles had it analyzed at home & it was said to contain only 17% Clay & a good deal of iron.

The level ground on which the town proper is built is a compact sandy soil.

Thus it is to be noted for practical sanitary purposes - that while the town itself is on a compact sandy soil, the most of the villas & hotels are built on the solid rock & have a considerable fall. Indeed the Beau Site Hotel is built

in a cutting of about 60 feet deep of solid gneiss.

Between the solid rock & the town a certain number of houses is built on this detritus which I have mentioned, but this is of so little depth, as to be of small consideration. The point is that the soil is a dry one, & that a damp stiff clay soil does not exist.

As a rule the villas & large hotels are built on solid rock, & their cesspools are in the detritus above it - the "pit-pit" mentioned elsewhere for the reception of waste water is also in this loose porous soil. These conditions continued with the great slope on which the houses are built indicate a very favourable soil for building.

I ought to add that the Esteros are largely composed of Porphyry & to note that Dr Sparkes & others have very properly complained that the roads are macadamized with Limestone which soon breaks up into dust & on a windy day the clouds of white limestone

dust are most unpleasant & injurious. I am glad to notice that these remonstrances have borne fruit & now there is established a crushing machine at San Raphael, & porphyry road metal is being laid down - but it is only being used on the roads to the west of the town & still the road to Antibes & other roads are metalled with limestone & when the wind is at all high, the clouds of dust are not only very unpleasant, but most injurious to those who are sent here for their chests & who are thus compelled to inhale particles of limestone. It should be insisted on that all the roads should be metalled with porphyry.

Water Supply. Cannes is supplied with water by a Canal derived from the Seigne at St Cesaire in the North West. This Conduit furnishes water to Cannes, Le Cannet & Vallauris.

The Canal at the East extremity of the Commune of Cannes is at a height of about 500 feet above the

Sea level. The water of the Siagne is clear & of good quality. It is filtered through a bed of stones. During heavy storms the waters of the Siagne become very turbid & at such times it is not allowed to enter the Canal.

According to analysis the water contains per litre

Magnesia Salts	0.0442 grammes
Carbonate of Lime	0.0361 "
Sulphate of Lime	0.0350 "

The Canal consists of an open aqueduct accessible to every body; it is at a higher level than the houses & therefore is not contaminated by sewage in any way & traverses a country very little cultivated.

The Canal is said by the Director M. Mauwarc, to be able to supply 80,000 M.C. per day & could with but trifling expense double that quantity.

As a matter of fact the canal brings 25,000 M.C. per day which makes 1250 litres ^{≈ 250 Gallons} per head, estimating the population at 20,000 persons.

Of this 15,000 M.C. are utilised by the inhabitants of the Town & Territory of Cannes. The surplus is lost in the small streams. Of these 15,000 M.C. the administration takes for the public service 5000 M.C. for fountains & watering the streets.

I have taken these figures from Captain Douglas Galton's Report & they show that Cannes is well supplied with water.

The Canal is about 20 miles long begins at 1000 feet above the sea & ends about 500 feet. The Canal is certainly quite open, but the water is fairly clear & by the time it reaches the table it is beautifully clear.

There is no reason why persons in the habit of drinking water at home should be afraid to do so at Cannes.

It is of excellent quality & most pleasant to drink. It is considered by some to be a little constipating but this is doubtful.

Vegetation a test of the Climate - Many people are fond of comparing this climate with Mentone. But there is no reason why they should do so.

It is admitted that Cannes is about three degrees colder than Mentone & much more open.

Everyone says that Cannes is much more bracing, & all who are in fairly good health, & in fact all but those in advanced Phthisis prefer Cannes, but the point is not whether it is or is not more cold & windy than Mentone, but is it sufficiently mild for invalids. This I shall treat of elsewhere, meantime I shall just say that the vegetation is not a bad guide. I am not a great botanist, but I see here in December the orange tree in groves not only bearing golden fruit, but its blossom forming the staple for large distilleries of perfume both here & at Grasse.

The Lemon tree is rarer & it is a much more tender plant. Dr. Bennet in his most valuable book which is

still one of the best guides to the Riviera & which one can only speak of in the highest terms - says in alluding to the Groves of Lemon trees at Mentone "at Cannes they are all but unknown". Now in the first place, they do grow here very well. I have myself seen many trees bearing fruit well. One gardener has 200 to 300 trees growing - & they are to be seen in several nursery gardens here. This shows that they can be grown here, although I am quite ready to grant, not so well as at Mentone, but I wish to point out that quite as potent a reason for their not being cultivated is the Commercial one - oranges pay better - Lemons when grown have to be shipped off to the Italian Markets to compete against home grown fruit, whereas orange blossom is saleable at once & on the spot for distilling.

The climate is quite mild enough for the Lemon. This should never be forgotten.

Then the date palm, flowerishes here, & many other tropical palms - In mid winter you have Roses, Marshal Neil, Gloire de Dijon &c in profusion & I can buy beautiful buds of Marshal Neil roses to send home at a penny each all December.

I might name many others, but I merely wish to indicate the mildness of the climate & I think I have said enough to shew this, & I shall just repeat that I have seen 300 or more Lemon trees growing in a garden with no particular shelter & bearing fruit abundantly.

A more delicate plant is the *Sparmannia africana* & I have noticed several plants here, & it was interesting that after a pretty severe mistral those plants which were exposed to it shewed yellow leaves indicating the blighting power of that wind.

Medically Considered. In considering this question it is merely necessary to recapitulate what I have said about the climate & geographical position of Cannes & allow those with

greater Experience than I have to form their own conclusions - You have a place where during the worst months of the year in winter the temperature has a mean of 50° & is between 9° & 10° above Greenwich; where the air is warm, yet keen fresh every day & exhilarating; a place sheltered fairly well from all winds except the southerly, yet not so as to make it close & smothering; where the patient 5 days out of seven, can be in the open air all day long, without fear of catching cold, if he takes the commonest care. This indicates a climate which should be life to a great number of cases.

Let me indicate the effect of the climate ^{*} on me, & the life I lead here.

At home I had been losing health & flesh for some time & even although I was improving when I left, I had an indescribable lassitude, & was easily knocked up, could not study & moreover was greatly troubled with dyspepsia. When I arrived first, I felt tired & lazy, inclined to be sleepy

during the day, but at night sleep was very broken - in a week I began to feel this laziness leave me & my sleep improved. I began to have a great desire to be moving about & doing something, a pleasant feeling in the muscles as if they were getting stronger, a sort of tingling as if the circulation were improving.

The feeling of exhilaration was such as I have never felt before. I longed to be talking to people or doing something active & felt an increased interest in everything. In fact I seemed to be gaining new life. My sleep improved, & yet I awoke early & was eager to be up & out - most unusual for me. I was not able to walk far - say six or eight miles being sufficient, but this is owing to the heat of the sun. Indeed I felt as if life which had been rather heavy on me for some years, was coming back in a great wave & I was brighter & happier than I had been for years.

My digestion improved daily - formerly I had been constipated & had felt an unpleasant gnawing in the epigastrium. This gradually improved & my bowels became quite normal.

As to the life I led, I rose at 7.30 & breakfasted on coffee & french bread & butter. After breakfast I walked till 12.30 & the walks are endless & most lovely. At 12.30 dejeuner is served - & in the afternoon I walked, drove or paid visits - dinner at 6.30 - bed about 10. I slept with my window wide open & was thus practically in the open air all day & all night. There are endless excursions & amusements & I found the day all too short.

Such a climate as this must be good for Phthisis especially in the early stage. Such a patient can be out all day, all the winter through. He need never get wet - he need never be dull - he lives in the sunshine.

Districts

Here it is to be pointed out that there are several climates in Cannes, & that it

is all important for an invalid to make a good choice of a residence. As I have said elsewhere there is the district by the Seashore sheltered & mild but close - then there is the district on the rising ground of the Californie to the East & towards the Croix des Gardes.

For early Phthisical cases not afraid of fresh breezes & of a little climbing, undoubtedly the most suitable part of Cannes is the rising ground, a radius extending from the slope of the Californie & passing behind the line of railway across the Boulevard du Camer, the Boulevard de la Foucière & so through to West Cannes beyond the Mont Chevalier. This district is on a slope, has a beautiful view, is in the line of all the walks & drives, is quite in the country, & yet close to town - & it includes many of the best Hotels, such as the Californie (which is rather exposed) Mont Henry, Prince of Wales Paradise, Richmond, Beau Lau, Beau Site & many others all of which are to be recommended.

for rich patients. It also includes the best Villas.

More advanced cases of Phthisis do better by the sea in that part of Cannes between the Railway line of the sea. They are sheltered better, have no hills to climb, are close to the beautiful drive along the seashore & can sit there in the bright sun & watch the sea as long as they like. They are also in the midst of cheerful society & are close to the town & the shops.

Bronchitic Cases also do well in Cannes & are better I think in the higher district.

Asthmatic patients get great relief here, but of course the success depends on the cause of the symptoms. This capricious complaint gives the Doctors a great deal of trouble - no two cases are alike.

One case I know of could not live in the Hotel Californie; he was always ill there - Whenever he came to the Hotel Mont Henry, ten minutes walk distant, he was quite well. Another

case I know of can only live at the Hotel Californie, but Cannes as a whole suits them all, & they are able to be out in the bright sun all day long & be to all intents & purposes perfectly well.

I cannot bring this too strongly before those who are suffering at home & have the means at any rate to try the effect of this climate.

For diseases of the digestive tract - dyspepsia, gastric Catarrh &c, Cannes pre-eminently among the health resorts of the Riviera is beneficial.

Everything is in favor of the digestion, a dry exhilarating climate where the sun is bright & you can be out in it all day long. Many people find the climate bilious, at least they are bilious when in the Riviera, but this may be due to the style of living & possibly, to some extent, to the hardness of the water preventing free movement of the bowels.

The other classes of disease are dealt in talking of the Riviera as a whole

But I should mention that this climate is found very suitable for pelvic congestions - I am told that many patients sent here for other complaints & suffering at the same time from pelvic disorders have experienced speedy relief & this is accounted for by the dryness of the climate promoting free action of the skin & thus relieving the internal organs.

Drainage. After all for practical purposes the subject of drainage is the most important of all the points I am taking up. The subject of the climate has been exhaustively dealt with by many able writers & I can add very little to their observations, but few if any of these works deal very minutely with Drainage & besides the Sanitary Condition of Cannes has altered vastly during the past few years. I cannot emphasize too strongly the importance of this subject. You are sending invalids & their families to a health resort at great expense & inconvenience to them & surely you ought to be assured

that the drainage is at least fairly good.

I may say here that I should have been quite unable to investigate this subject had it not been for the great kindness of Dr. Edmonstone Charles, who with Dr. Frank, has done more than any one to improve the state of drainage here & it is to him chiefly that we shall be indebted if the new scheme comes into operation, of which I shall have to speak presently.

I have also investigated the drainage under the guidance of Mr. George Russell, the Sanitary Engineer here. He is the only English Engineer in Cannes & from a residence of 20 years knows the place thoroughly & besides he had a good schooling under Douglas Galtou.

I owe my information chiefly to him & to the admirable report on the drainage of Cannes issued by Douglas Galtou in 1883 which every one sending patients here should read.

Firstly let me give the reader an idea of what is meant by French

drainage, if you can call it so.

The simplest form is a barrel generally kept at the top of the house into which the Excreta are emptied daily & which when full is carried into the fields - Very unpleasant but not actually unhealthy - A great part of Old Cannes where the common people live is still in this state. The next plan is the French idea of a Cesspool.

This Cesspool is generally under the floor or behind the house. The Closet communicates with it by an Earthenware pipe which plunges to the bottom of the pit; it is absolutely untrapped, & when you open the valve of the Closet you receive a blast of sewage gas into your face. Of course these Closets use a very small quantity of water. This is the French System & I suppose was at one time very general all over Cannes.

I shall here define what Mr Russell means by "satisfactory drainage" on the Cesspool principle - The Cesspool

to be some distance from the house & to be lined with Portland Cement to prevent soaking into the ground, to be shut off from the soil pipes by a siphon trap which is ventilated on both sides; the soil pipe before it reaches the trap having a ventilated opening on the ground not only giving egress to gas but admitting a current of air which will ascend the pipe. The pipe being carried up often beyond the roof & there is thus a free draught - There is also a Ventilator beyond the Siphon trap which effectually does away with the danger, gas being forced past the trap. The Cloach pans to be of English make & well trapped. Therefore when I talk of "Satisfactory cesspool drainage" I mean the above system.

The Cesspool system is practically universal here. Each house has a cesspool behind or under it which receives the excreta of the household & which is cleaned out periodically.

The waste water used in household purposes is run by pipes into main

Sewers which open into the sea wash of the Lighthouse - a great part of it also runs into the Rivulets which run through the town into the sea - into these drains no sewage is allowed to be sent. Now when the cesspools are full they are emptied by what is called the *Compagnie des Vidanges* & the operation is carried out by means of iron drums from which the air is exhausted by means of an engine & a pipe being inserted into the cesspool the contents are rapidly sucked up & little smell is caused thereby.*

* These drums merely exhaust the liquid part, leaving the solid sediment untouched.

I need not detail the objections to the Cesspool system, but a great one is that only a very small quantity of water can be used in the water closets, otherwise the Cesspool would be filled in no time.

Formerly this difficulty was got over by the proprietors having an overflow pipe into the rivulets, so that when the Cesspool filled up the overflow run into them

This was universal at one time but of late years the authorities have vigorously taken the matter up & have closed up every overflow pipe in the place. There are probably several here & there surreptitiously kept open, but it is against the law & is efficiently checked by the Compagnie des Vidanges, who being paid by the cubic metre keeps a very sharp look out on the cesspools & if they notice that one has not been cleaned for some time they suspect an overflow & have it promptly closed.

Since Captain Douglas Galton wrote his Report, & in consequence of it, the improvement here has been vast, & the present condition of affairs is that in Cannes proper, meaning the district between the line of Railway & the Sea the great bulk of the drainage is by cesspool, probably about $\frac{1}{3}^{\text{rd}}$ of this on the French system, nearly two thirds "satisfactorily," more or less, on the English - that is at any rate with a siphon trap - the remainder being on the

primitive barrel principle already described. This owing to the vigilance of the Compagnie des Vidanges & the Municipality works fairly well.

I ought to mention that with a few exceptions which I shall afterwards describe, no sewage is thrown into the sea whatever, a fact of importance & not generally believed; & without any exception no sewage is thrown in between La Croisette & the Lighthouse. I would emphasize this fact, because the bathing place is situated here. Often times in warm weather the shore smells unpleasantly & this may be accounted for by the fact that several streams run into the bay carrying the surface drainage & may at times have sewage sent into them, but I should say the quantity was inappreciable, but on this point I am a little uncertain.

I should mention that when Mr Russell took me down to see the outlet of the main sewer for the waste water of the town, it was almost clear &

considering where it came from, wonderfully so.

So far I have described the drainage of Cannes proper which includes the native population of places of business, but with the exception of one or two hotels does not include the English element which after all is that which concerns us.

It is certainly of great importance that the native part should be properly drained, but it is perhaps of greater importance that the English residences should be above suspicion.

Elsewhere I allude to the drainage of the principal Hotels & I shall now say a word or two about the Villas - Many people who find that they have to live here permanently naturally prefer to take a house of their own to living in a Hotel, & it is of the first importance that the drainage should be sound; & I will shew how this may be ascertained without difficulty.

— Messrs Taylor & Riddett the well known Bankers & Agents here have most of the Villas passing through their hands. When any one employs them to rent a Villa, they insert in the agreement that the drainage must be examined by their Engineer & that all his suggestions are to be carried out. If the proprietor objects to this they will have nothing to do with the Villa. The Engineer, Mr Russell makes his Examination & if the Villa does not correspond in its drainage to what I have described as satisfactory, he insists on its being made so, before he will give a certificate.

The proprietors at first used to kick against this, but they found it to their interest to comply & now most of the Villas are on a "satisfactory" footing. Note that no one should take a Villa without consulting these Gentlemen or Mr. Rouse.

I have said that all the drainage is on the cesspool principle with one

or two Exceptions & I shall now describe them.

In West Cannes (Lord Brougham's Park) west of the Mont Chevalier there is a pipe which has been laid by Mr Russell - which drains the Hotel Belle Vue, & several of the Villas around including the Baroness Rothschild & embracing a population of about 400 souls. This pipe runs into the sea about half a mile west of the Lighthouse & to a distance of about 20 feet.

Near this also is the pipe from the Hotel Beau Site running also about 20 feet into the sea - & although there is no tide to speak of, I could see no sign of paper or any sewage on the shore. I walked for several hundred yards on either side but could see nothing.

The Grand Hotel de Californie to the East of Cannes, up on the Hill Californie is also drained by a pipe running into the sea.

These are I think the only exceptions. The improvement in the Hotel systems is due to the English medical men here who whenever an outbreak of Typhoid has taken place in any hotel have insisted on a complete overhaul & revolution before they will send patients there again - & the consequence is that by degrees most of the Hotels have put things in order. And are endeavouring to have it as a universal rule that each Hotel shall be able to shew an Engineer Certificate at the beginning of the season to the effect that the drainage is good & the cesspools have been cleared. Persons applying for accommodation would thus be able to see this Certificate in the Office.

This Cesspool system is not bad when it is carefully worked & properly supervised, but it is dangerous in many ways & for some years the Municipality have had various plans under their consideration.

I am glad to say that there is

Some ~~every~~ likelihood of a scheme being carried out before next season which will not only render this place the best drained of any in the Riviera, for I believe it is that already, but equal to any English town.

The system which has at last received the approval of the local authorities is what is called the Shore Hydro-pneumatic System. By this system the sewage is collected at various points in Ejectors & by air pressure is propelled along.

As soon as the Ejector is filled an automatic Valve admits the compressed air which forces the fresh sewage either into a rising main under pressure or into a gravitating sewer, & so on to the place where it is to be treated, the conveyance being so rapid that there is no possibility of the generation of foul gases by decomposition.

I should explain that drainage by gravitation is impossible because the town itself is on a dead level,

+ the only system which has been considered practicable is that of Pneumatic Propulsion - but from the Rue du Redan to the point where it is proposed to carry the Sewage, about 2 miles west of Cannes there is a fall of 1 in 1200. Now between the Croisette & the Rue du Redan it is proposed to have six Ejector Stations, each containing two Ejectors. The sewage of the town will be propelled by these to the point at the Rue du Redan, from which point it will proceed to its destination by gravitation. The drainage from the houses on the slope above Cannes will descend by gravitation to the Rue du Redan & there join the Main Sewer.

The sewage will thus be carried right away from Cannes. This is a very rough outline of the scheme, but I may say that it has worked very successfully at Eastbourne for several years.

It is confidently believed that the approval of the French Government will be gained, so that the operations may be commenced next May & be on the road

towards completion by the beginning of next season. One great benefit which would arise would be that whereas at present proprietors of houses with cesspools are afraid to put in English Closets owing to the quantity of water they use, filling up the cesspool rapidly, under the new system almost every one would adopt the English system. This in itself is a great gain.

Hotel Beau Site. I have had an opportunity of inspecting the system of this Hotel.

Formerly they had cesspools, but owing to an outbreak of Typhoid there some years ago they had the whole system altered.

The Hotel is built in West Cannes, at an elevation of about 200 feet above the sea - it is built on the solid rock. The Closets are all supplied with Jennings Valve & Washout fixtures. The soil pipes are iron & all run down the outside of the house into a central drain. They are provided with a Siphon trap - Doulton or other English make & on the near side of it is a ventilating opening which carries

a draught up the pipe beyond the roof. On the other side of the siphon trap at the drain junction is a Manhole which acts as an Excellent Ventilator. The main house drain is made of glazed Earthen ware pipes laid in Portland Cement & at the junctions between them & the soil pipes & at all the turnings are provided inspection openings with well made junctions of Portland Cement.

Several of these were opened in my presence & the pipes were absolutely clean & odourless.

An important element in this system is that above the junction of the soil pipes, there are three sources of water for flushing. Ist There is an automatic flushing tank which discharges over 100 gallons every hour down the pipe. II. The water from the Hydraulic Lift discharges into the sewer many hundred times a day. III. The Bath & other waste waters are sent into it by a separate pipe. The pipes run into the sea. Hotel Provence. This Hotel is drained on the cesspool principle. There is a

large cesspool at the back. Round the house there is a large air drain or covered in trench along which the pipes run which not only acts as a ventilator but enables the proprietors to have the pipes examined easily. It was quite sweet. From the Cesspool there is an overflow pipe opening into the main sewer.

The Closet fixtures are Lemings plunger Valve, & the water Closets are beautifully sweet.

For a Cesspool system this Hotel is very good & I can recommend it as perfectly healthy.

Hotel Mont Henry. The drainage is similar to the Provence - the traps being English & the pans Lemings. The proprietor is a German who might not be supposed to pay so much attention as an Englishman, but they are beginning to find out here that if they don't have English sanitary arrangements no one will patronise them. The arrangements in this Hotel are sweet & good.

Hotel Belle Vue. Is drained in the same manner as the Beau Site. I was taken over it by Mr Russell the Sanitary Engineer. It drains into the sea & has no cesspool - all the soil pipes are trapped before joining the main house drain.

The pipes are all of glazed earthenware set in Portland Cement. The drain pipes are all ventilated on both sides of the siphon traps so that there is no chance of gas being forced back. The main drain is flushed by the water from the Lift & also by a flushing tank which discharges its contents, about 100 gallons every few hours. The fittings are Pearsons & Jennings & the W.C.'s are well ventilated.

Hotel Californic. This Hotel also has no Cesspool but is drained into the sea.

Thus I may say, summarising these facts about the Hotels that there are three Hotels which drain directly into the sea without Cesspools. The Beau Site

the Belle Vue & the Californie & of course these are the most perfectly drained of all - & Mr Russell says are to be considered as quite safe.

Next and nearly as good, but on the cesspool plan are the Provence and the Prince de Galles - then the Mont Henry - The other large Hotels may be looked on as fairly good - Most if not all are fitted with English Closets & the Cesspool is shut off from the house. Still there are cesspools.

I have been able to inspect the drainage of a Villa here belonging to an English tenant. It is hardly a fair specimen as it is probably the best drained & ventilated in the place, but I am assured that many others are very well drained.

It is of course on the Cesspool principle - There is a large cesspool at the back of the house, coated with Portland Cement. The soil pipe communicating with it is a large iron pipe running down the outside of the house

projecting several feet above the roof. Between this & the cesspool there is a most efficient Alliers trap which I saw acting & I can answer for the force of water which descended into it when the water closet was put in action. Just on the inside of the trap there was an escape pipe for gas leading also above the roof & besides there was a grating opening above the ground.

The water closets themselves are Doulton's Valve & Brighton Excelsior, were thoroughly ventilated by an aperture in the wall opening below the seat & there was an excellent flow of water. There was absolutely no smell of any description.

The water from the Sinks & Baths is not run into the Cesspool, but at some distance from the house there is what is called a "puit perdu" - a pit covered up & not communicating with any drain & into this the waste water runs & gradually soaks into the Earth.

This "puit perdu" is a decided evil, for the water & the organic matters in

suspension filter into the earth and constitute a constant source of danger.

I have detailed the drainage of this Villa because the work was done by Mr Russell the local Engineer shewing that such work can be done on the spot.

Grasse.

109.

Grasse is a quiet little Village about 12 miles inland from Cannes, which is far too little known as a health resort. It is a most useful adjunct to Cannes as a place to send those invalids to who find the air of Cannes too exciting.

It lies on the south side of the second range of hills which surround Cannes, at an elevation of 1200 feet, facing the south & surrounded on the three other sides by hills which run up to 3000 feet.

It has thus a southern exposure & is sheltered from the prevailing winds even better than Cannes itself. The air is soft & mild & those who live there tell me that it is a much less fatiguing air than Cannes, & that they never feel tired.

I went out to see it one bright morning in December. The train takes 40 minutes to go, the ascent being very stiff. The Railway Station is below the town, which is situated on a very steep slope & extends 500 feet above the station - It is a picturesque old town, traversed by

narrow old streets which the sun can never reach, but as you reach the higher level you come into a broad road which runs through the town & out Eastwards into the Country - About half a mile along this road is the Grand Hotel de Grasse, a splendid new building with about 80 Bedrooms - This is the Hotel which I can highly recommend for invalids. It stands at 1200 feet above sea level, facing due south - From the terrace you have one of the finest views the Country can boast of, across the valley to the sea, embracing Cannes & the Estrelles - There is always a cool breeze playing round it - The rate of pension for South towns is from 10 to 14 fr per day.

I mounted the hill behind Grasse as far as 2500 & there was at least 500 feet still above me - From this point I saw Nice, Cap Martin, Corsica, & of course Cannes & Antibes - a magnificent view.

The air was delightfully fresh

+ reminded me of the air one meets up the Scotch hills, such as Cairn Gorm + Ben Nevis & Thui in August, when there is a beating sun, but a cool breeze + you feel as if you could walk for ever.

The air at Grasse certainly seems less exciting + I should say more bracing than at Cannes + seems admirably suited for those neurotic cases which don't do well in Cannes. It is also suited for those who do not care for gaiety + excitement + who are able to enjoy mountain climbing. Even for those who can't walk much, I saw numerous drives, + many picturesque villages perched on neighbouring heights forming interesting objects to visit.

But for hill climbers it is a charming place. As I said the hills range up to 3000 feet, + from the tops you see northwards the snow clad heights of the Italian Alps, + the view seawards is unequalled.

I would draw special attention to Grasse as many people are apt to pass

on from Cannes if it does not suit them & seek for a more pleasant climate elsewhere, when probably they will nowhere else get such a combination of bracing cheerful climate without the excitement.

The Hotel is supplied with water not from the source which supplies Cannes, but from the hills above & I can testify to its being a beautifully clear water & most pleasant to drink.

Grasse is more sheltered than Cannes from the N.W. Wind. The day I was there, there was a considerable west wind blowing in Cannes, & on the Esterels a friend told me that the wind was so cold that he could not sit down, whereas in Grasse there was hardly anything more than the gentlest breeze, even when I ascended 2500 feet.

Grasse is a centre for distilling perfumes & for making fruit provisions & in the fields around you see rows of violets & ip jasmim bushes in full bloom in mid December & the air is filled with their fragrance.

The weak point of Grasse for invalids is that it is dull. There are few villas + no English people living there except those in the Hotel, - and the only occupation is walking or driving. This should cure itself however as the place becomes more popular + I certainly think that visitors should not leave Cannes without spending a few days at Grasse.

Ayires

114.

I have described Cannes at some length taking up the various heads in detail + I propose in future rather to compare each place as I describe it with Cannes. This I think will be more useful than were I to describe each place in detail.

Ayires then, is the inland resort on the Riviera - if two miles can be called strictly inland.

The town proper is situated on the side of a hill from 100 to 200 feet above the level of the sea facing S.W.

Between this and the sea there is a flat level plain, & here & there you observe swampy pieces of water which are the salt pans. Towards the S.W. the town is partly sheltered by the Mont des Oiseaux about 600 feet high but to the S. + S.E. it is quite open to the sea. The Mont des Oiseaux & the range of hills on which the town rests both run almost due west & form a funnel along which the N.W. wind blows with great vigour. It is true

(Draguignan)



*the allude
NS
bying port
madam F*

(Tour de l'Annonciation)

P. 115

TOULON.

(Draguignan)

255	256	257
247	248	249

a	b	d	i
e	f	h	

Les Travaux sur le Terrain ont été exécutés par M.M.^{rs}
 Lespinas, Cap. a 1861. Déguyllé (P^{re}), Cap. c 1861.
 Viret, id. b id. Bourgeois, id. f id.
 Populaire, id. e id. Garin, id. h id.
 Martin, id. d id. Deltat, id. i id.



Red lines marking of the
1 2 3

RADE D'HYÈRES

(Marseille)



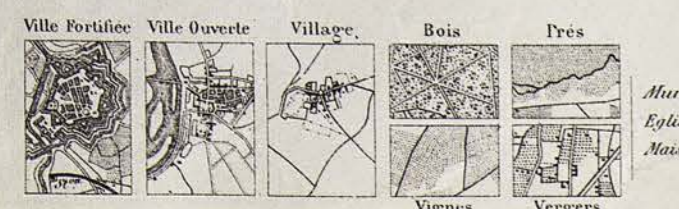
Red lines marking off the three divisions of Hyères allude to - No 1 being the town lying part into which the town is spread in No 2 is Crostibelle the lines also show the response to the N.W. winds - the Mistral



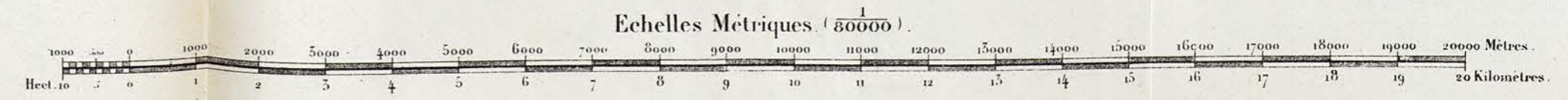
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DERNIERE REVISION (1883)

Imp. Zinco-graphique du Dépôt de la Guerre.



Murs et haies	Puits et Fontaines	Clocher ayant servi de point trigonométrique	Chemin de Fer	Limites administratives
Eglise	Mouline à vent	Côte de nivellement	Gare	d'Etat
Maison isolée	Point Trigonométrique		Tunnel	de Canton
			Passages	de Com.
			en dessous	d'Arrond.
			à niveau	
			en dessus	





(Tour de l'annonci)

allure
in port
de l'annonci
de Gènes

Administratives
de Canton
de Cam^{ee}

Echelles Métriques. (1/50000)
0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 11000 12000 13000 14000 15000 16000 17000 18000 19000 20000 Mètres.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Kilomètres.

TIRAGE DE DÉCEMBRE 1884

Gravé le trait par Rouillard, la lettre par Huey, le figuré du terrain par Soudan, les côtes par Beaupré.

350000
Long. E.

that about 10 miles west there are fairly high hills Mont Jarn & Mont Coudon running up to about 2000 feet & forming a barrier in that direction but they are too far off to constitute much protection & are not sufficiently continuous, & in fact when the N.W. wind blows it comes along this valley in great force as a deflected west wind.

It must always be borne in mind that Ayres as a health resort is divided into three sections.

First there is the town proper on the side of the hill facing south & sheltered to the north & west. Skirting this on both sides are most of the Villas & best hotels at an elevation of 150 to 200 feet above the sea & more or less sheltered from the west wind.

Second - There is a wide plain between the hills & the sea absolutely flat and studded here & there with salt pans. Of late years the Municipality have created beautiful boulevards along this plain towards the Railway station &

are encouraging building.

This is strongly condemned by the English Medical men because it is fully exposed to the Mistral, & because it being on the level is exposed to the damp cloud of vapour which rests on it at night.

They are of opinion that there is a slight tendency to Malaria on the plain & that patients who have the material taint run great risk in living there; moreover they find that neurotic subjects, the very cases which derive benefit from this place as opposed to the seaside resorts have neuralgic symptoms developed & aggravated there, which are quite removed if the patients live in the upper town.

The authorities are much averse to this opinion gaining currency, but it should not be neglected for all that.

Third - The Costebelle - on the side of the Mont des Orseaux facing the sea.

This, from its proximity to the sea is quite a different climate from Hyères proper & more approaches Cannes. It is sheltered to the North West, & is

Exposed to the South & East, but the force of the wind is broken by the islands.

Let me summarise what I have said with regard to shelter & positions, for it is considered of great importance in Hyères & is not dwelt on in the books.

Hyères as a whole is sheltered from the North & ~~North West~~ & South West, but is exposed ^{to the North West & to} the West badly - to the South, East, & South East.

The first mentioned district flanking the old town on the side of the hill is most to be recommended. It is to some extent sheltered from the West wind, it is at an elevation of 200 feet, is quite above the plain & its exhalations & commands a beautiful view.

The hill is composed of Schist & the houses are built on solid rock, so that there is no danger of collection of organic matter in subsoil.

The Hotels situated there are the Hotel Continental which I can most heartily recommend; the Hotel des Isles d'Or,

the Hotel des Hesperides. Patients cannot go wrong at any of these Hotels. The Hotel des Palmiers is a little lower down.

The plain again is exposed to all the winds except north & south, & exposed to the damp exhalations.

Dr. Biden tells me that often when he has to go over to Costebelle at night he descends into this cold chilly vapour & rises out of it again on the other side. This part is to be avoided.

Then the Costebelle, where there is the Hotel de l'Ermitage - a lovely situation on the southern face of the Mont des Orseaux sheltered from the north & west in the bosom of the pine clad hills with the beautiful view of the sea & the islands.

This, as I have said, approaches Cannes in its climate.

Water Supply. Till a few years ago the supply was very far from perfect, being derived from well in the Town, but at that time a source was discovered some

miles from the town which seemed to be inexhaustible. It is believed to come from a great distance as it is a hard water, containing much lime salts & therefore quite different from the Schist formation where it comes to the surface.

It is pumped up to a reservoir on a hill above the town, from whence it is led by pipes to the houses.

The houses have no cisterns but are supplied directly from the main.

The water is of good quality & quite safe to drink & there is sufficient not only for the town wants, & for flushing the sewers, but also it is said to supply Toulon were that required.

Drainage is I think very inferior to that of Cannes.

The principle is of course that of the cesspool, but the points of inferiority are that the pans & traps are mostly French & that the engineers who put in the fittings are French - also that there is no Compagnie de Vidangeurs, but the emptying of cesspools is done

by private enterprise.

The type of the drainage of the best Villas + Hotels is as follows. -

The Cesspool is close to the back of the house or beneath the floor - the soil pipe which is of large calibre + often of unglazed earthenware goes down to within a foot of the bottom of the Cesspool + opens above the roof. It is true that the water sent down acts as a seal but it is very imperfect.

Most of the houses have French closets which open directly into the main soil pipe. Many of the Hotels have English pans, which have a siphon trap, but even in these cases there is not the trap between the Cesspool + the soil pipe nor the Ventilators.

In the Hotel Peyron which is otherwise beautifully fitted up, the pans are French, + although there is no smell it is not satisfactory.

Moreover the closets are dark + badly ventilated.

The old town is of course entirely on the Barrel system.

Besides this, the emptying of the cesspools is a continual source of unpleasantness. They have not the pneumatic drum which I described is being used at Cannes & by which a cesspool can be emptied without anyone being made aware of it. But they have a simple engine & horse, & the smell is quite appalling.

To give an instance, one day I called on one of the medical men here & noticed a strong smell of Carbolic acid. He explained this by fact that the day before he had noticed that his cesspool was too full & had had it emptied & the smell was so bad that he had had to drown it. Of course as a rule this is done during summer.

But I have said enough to show that the drainage is very far from perfect & I do so in hopes that medical men will make inquiries for themselves before sending patients

there, & so gradually waken up the authorities to the need of good drainage. The medical men here say that the drainage is good enough & that epidemics are almost unknown, but even if this is the case it is no reason for tolerating such drainage as I have described.

The surface water & waste Culinary water are carried away by sewers & are used by an orange proprietor to water his Orchards.

They are, I believe regularly flushed. What I wish to advocate is that English Medical men should insist that in these Health Resorts the drainage shall be of the best. I believe that combined action could do it, & it would be a great help to the local medical men if the Faculty at home took the matter up.

Climate. The mean average is about 1° warmer than Cannes, & almost exactly that of Mentone & San Remo. Owing to the distance from

the sea the air is more sedative & less exhilarating.

Hyères is as I have shewn elsewhere exposed to the West wind, which is very prevalent here & often blows with great force. This is often confounded with the Mistral, because (where) the latter when it does blow reaches Hyères as a West wind, but it is rare in Winter & is much drier than the true West wind.

It is also exposed to the East wind which brings rain - & let it be understood that the West & North West winds answer in their effect to the East wind at home & the East wind here to the West at home.

As a matter of fact you have a dry climate with gentle breezes chiefly from the West, but also from the East, varied by occasional high winds. An atmosphere where you feel inclined to be out in the open air enjoying the sun, but where you have not the Jewish anxiety to be overdoing

yourself which many feel by the sea, & which is so dangerous.

Oranges grow of course well here & so do lemons, but they are not much cultivated as they do not pay. Even the Olive does not pay & is quite neglected, & in a few years most of the fine old trees will be rooted up & their places taken by vegetable gardens which are much more productive.

In the first week of January I saw peas & beans a foot high.

Dr. Biden very courteously took me for a drive round the district & pointed out that most of the villas are built on the side of the hill looking to the south & are fairly well sheltered to North & West. We also inspected the Hotel de l'Ermitage which is quite sheltered & has a most lovely view & is surrounded by lovely walks in the pine woods.

The walks & drives are endless & lovely.

Medical Aspect Hyères is of course suited for all the diseases which are benefitted by the Riviera as a whole, but especially is it suited for those neurotic & excitable cases which do not do well near the sea. The cases of Phthisis which are found to be particularly benefitted here, are cases in which there is active inflammation - rising temperature & night sweats & a good deal of cough. Under treatment the cough soon ceases & the symptoms subside & they do well.

They also say that cases where there is much haemoptysis do better here than near the sea.

Of course it is a question whether cases of active inflammation should be sent away from home till the symptoms have abated, but being in the Riviera it seems natural that they should do best in a non stimulating atmosphere.

The cases which do least well here are those in which there is intestinal complications as diarrhoea.

These cases they do not care to have.

Asthma both dry & moist do well & febrile asthma is very amenable to treatment.

But let me insist here that all cases must be under treatment from the first. The climate is not sufficient of itself to cure or alleviate.

Patients should remember that they come here because at home they are not doing well even with the aid of drugs & diet, & they should not delude themselves, as they often fatally do, with the belief that the climate is to do everything. They should not only be under medical advice from the commencement, but I do not hesitate to say that they should do nothing without sanction. Numbers of cases come to the Riviera recommended to medical men but when they arrive they either feel too well & they think they will try to do without medical aid for a time & they go on by themselves until something happens & they

127.

Get a relapse, & then the Doctor is called
in.

Nice

128.

Nice has of late years been out of favor with medical men & the causes are not far to seek. It is not the climate, for Nice differs but little from Cannes, but it has become too large. It is a Paris in miniature with all its attractions & dissipation, & invalids are led insensibly into all manner of gaiety & into forgetting the precautions against the changes of climate which one requires to take.

and vice

At Cannes people all live by rule, are never out after 4 in the afternoon & spend the evening quietly at home.

There is nothing to go out for & no temptation to be out at or after sunset.

At Nice on the other hand the bulk of the Hotel residents are in good health & in search of enjoyment, there are theatres & an opera, numberless balls fancy & otherwise, the shops are lighted up brilliantly & there are many temptations to transgress.

Also there is the neighbourhood of Monte Carlo, which has done much

to harm Nice. This applies also to Mentone, but somehow the people who frequent the tables live in Nice rather than in Mentone.

Another objection to Nice is the defective drainage. I have described it elsewhere & it is utterly bad, & although the Bill of Health is not unfavorable still physicians are justified in not risking their patients in a place where the sanitary condition is so bad.

Nice then is a town of over 60,000 inhabitants & is composed of an old & a new town. Roughly speaking these are separated from one another by the River Paillon. The old town is clustered round the Chateau Hill a low eminence of 200 feet on the top of which lies the Cemetery.

It is composed of tall lands of houses traversed by narrow tortuous lanes which rarely see the sun & where you feel a deadly chill as you pass along. The smells are very unpleasant, & the stunted appearance

of the children suggests bad hygienic conditions

Nice faces the South & is enclosed in a triangle, the base of which is formed by the Sea & the sides by ranges of hills which culminate in Mont Chauve a lofty peak which runs up to over 2500 feet, & which is about 3 miles from Nice.

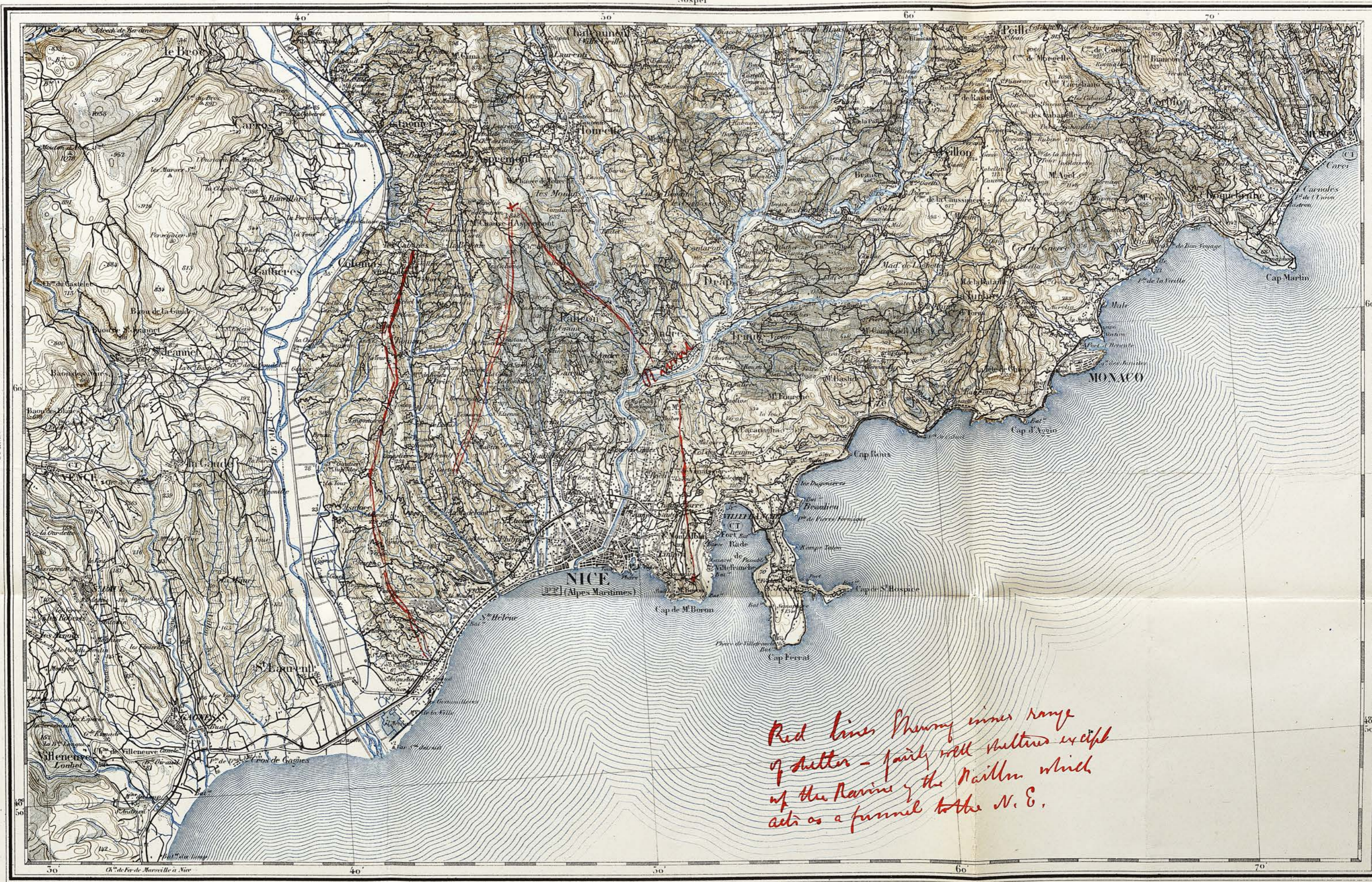
To the West & north the range of hills average about 600 feet Mont Chauve being almost due north, but these hills are far too distant to form complete shelter.

To the East from Mont Boron through Mont Vinaigrier & Mont Gros the hills run from 600 to 1100 feet & form an effectual barrier to the East. Between Mont Chauve & Mont Gros there is a deep ravine through which the Torrent Paillon comes in a north Easterly direction, forming a funnel through which the North wind blows without resistance right over the town.

From Mont Chauve a spur slopes very gradually south towards the Sea & on this slope Cimieis & Carabacel

NICE.

Sospel



*Red lines showing inner range
of shelter - fairly well sheltered except
of the Narine of the Maillon which
acts as a funnel to the N. E.*

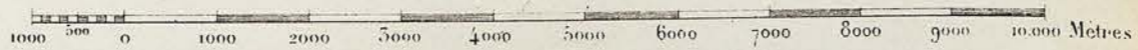
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Publié par le Dépôt de la Guerre.

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Paris - Imprimerie Lemerrier et C^{ie}

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PARIS
NICE - 15, QUAI MASSÉNA

are situated two suburbs which answer to Newington & Morningside

It will thus be seen that Nice is sheltered from the East Wind very completely, but is exposed to the South, South East & South West winds & is partially exposed to the North West & West winds.

When the Mistral blows the town catches almost the full force of it & as I have said the North & North East winds whistle through the town & are very cutting.

Thus Nice is not so well sheltered as Cannes & although the Thermometer shows very little difference, invalids often find it to their cost.

These hills are all composed of limestone, and Nice itself is built on a soil composed of the detritus from them, a loose light soil containing limestone boulders & stones very dry and porous.

From a medical point of view Nice is to be divided into two sections, one

including the park facing the sea & the other the suburbs of Cimiez & Carabacel

Cimiez is quite different from Nice in every respect, it runs back ascending gradually to a height of 500 feet & is composed of isolated Villas surrounded by their gardens. It is drier and warmer & is more sheltered from the North West wind & being composed mostly of Villas inhabited by English families its drainage is very much superior to the town.

The objections against Nice do not hold good as regards Cimiez, as you can live there as quietly as at Cannes or Mentone, with the advantage of the proximity of Nice if more society is desired.

Carabacel is at a lower level than Cimiez & is between it & the town.

Medically speaking, the town near the sea is stimulating, bracing & strengthening & is suited for lymphatic & scrofulous cases & all cases which require a filip to the system - Chlorotic

+ anaemic cases all do well there.

On the other hand Cimiez is far back from the sea & high up & is suited more for chest cases, phthisis, bronchitis & asthma. These find the close neighbourhood to the sea too stimulating.

Dr. Meyhoffer who has been here for many years, & has had a long experience tells me that Nice as a whole is best suited for Respiratory cases - Phthisis both tubercular & inflammatory, although he did not seem to admit that there was any distinction - but that acute cases & those with haemoptysis should be sent to Cimiez.

Bronchitis with much expectoration -

The dry form should not be sent here -

Pleurisy with effusion -

Asthma - This is so capricious that you never know how it is to do, but by trying the different districts you generally find one to suit it.

Digestive Tract. Dyspepsia, gastric Catarrh & all disorders of digestion derive great benefit here as in the East of the

Riviera.

Nervous Cases. Cases that are due to too much brain work do well, but cases which can be traced to no such cause, hysterical cases & neurotics generally should not come here.

Paralysis after fevers & Locomotor Ataxy do well & cases of paralysis generally are benefitted as much as such cases can be.

Heart Cases. Such cases as require stimulation do well, as Fatty Degeneration, dilatation & Valvular Disease where Compensation is sought for but where rest is required as in Angina pectoris this climate is detrimental.

Anaemia & Chlorosis & sickly young children all do well.

Drainage. I asked an English Sanitary Engineer in business in Nice, what was the state of the drainage. "It could hardly be worse" he said - & indeed he spoke the truth.

Nice is entirely on the Cesspool.

system, & that in its worst form.

The type is a Cesspool situated under the floor of the house. The soil pipe which is about 7 inches in diameter & either of unglazed Earthenware or of iron pointed with putty, penetrates directly into the cesspool as described in my remarks on Caves.

The water closets are untrapped & open directly into this pipe & of course the quantity of water thrown down is very small. The Cesspools have with hardly an exception, an overflow pipe into the main sewer, although this is strictly prohibited by law. My informant has seen all this for himself.

The Cesspool is emptied by the Engine & crane from which the air has been exhausted which system is inodorous & expeditious, but it is to be observed, that it carries off only the more liquid portion of the contents, leaving the more solid to be a foundation for subsequent accumulations. These Cesspools are not ventilated. As I have said the soil

pipes are 7 inches diameter & the supply of water is inadequate to flush them & the consequence is that in time the sides of the pipes become coated with faecal matter leaving only an aperture of about 2 inches.

I need hardly point out that the column of air exposed to this accumulation must become very poisonous, & that when the valve is opened the greater part of it is thrown into the dwelling.

Moreover if there is the slightest leakage in the valve, as must often be the case, the heated air of the house will cause a constant up current of this poisonous gas.

As a fact sometime ago a waiter in a restaurant wishing to destroy some letters set fire to them & then put them into the water closet; when a violent explosion took place & he was a good deal injured about the face.

The soil pipes mostly run down inside the house & many of them do not open on the roof but have a closed end.

These facts speak for themselves.

I went through the old Town of Nice & went round to the back of some of the houses. The old town consists of lofty lands packed close together, the streets not being more than about 12 feet across. The smells are dreadful and various.

I should say the greater part of these houses have no drainage but are on the Barrel or "tinette" system & this, although not very dangerous to health, cannot be altogether safe in Summer.

But a large proportion of the houses have a Cesspool under the basement & a closet on each story opening directly into it. The smells speak for themselves.

The Hotels are mostly fitted with English pans, Jennings notably & others, are well trapped, but the Cesspools are underneath the houses & the pipes go directly in, so that they cannot be said to be properly ventilated, not even the best of them - And I am told that one of the most recently built Hotels the Terminus Hotel at the Railway station has its

Cesspool directly underneath the house, & the pans are all untrapped French pans.

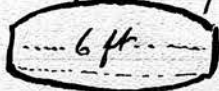
Some of the Villas especially those owned by English proprietors are being better drained now, but I suppose there is hardly one of them drained as they are in Cannes.

Then again the "Eau de Menage" which includes bath & sink & other waste water from the house, is run off by separate pipes into the main sewers.



The surface water is also run into these sewers. These sewers run into the River Paillon & so to the sea; also they run directly into the sea in front of the Promenade des Anglais & they are very foul - being never flushed.

Not only are the Eaux de Menage run into them but as I have said, most of the Cesspools have overflow pipes into them; also a great deal of foecal matter is thrown into them surreptitiously.

The greater part of these sewers are of this shape



so that when there is not much rain to flush them there is

a large accumulation at the sides - & even now when they imitate our egg shaped model they make the bottom flat thus  in place of  so that

there is still apt to be an accumulation at the sides. - The Pullon is thus an open sewer & when I add that all the washing is done in it, it will be allowed that the sanitary state of Nice leaves a great deal to be desired.

While I have thus given a very un-
inviting account of the drainage it is only fair to mention that the Medical men do not think so badly of it here. They point out that Typhoid & other Fevers are scarce especially in winter, & that the cholera when it did come last Summer never assumed the character of an epidemic, but that there were not more than 250 Cases in all mostly sickly children in the poorer part, & that it never spread.

This immunity they ascribe very much to the great dryness of the climate,

& they are of opinion that for French people the Cesspool System is the safest, as they would probably mismanage any other.

This should be borne in mind, for it is just as unwise to magnify the danger, as to ignore it, & people may come here with at any rate as much safety as to other French towns & with a great deal more than some of them.

But on the other hand it is no reason for letting things go on as they are.

Because the climate is so good as to counteract the effect of bad drainage, that is no excuse for not using every endeavour to improve the hygienic condition of the place.

And as Nice is essentially a Health Resort, & exists chiefly as such, surely the authorities should do everything to give it a good name.

But it would be unjust to condemn Nice without mentioning that Cimiez is in quite a different position. The Villas are detached & in the hands of wealthy & enlightened people & are

mostly in a good sanitary condition.

The English Villas at least many of them have passed through the hands of the English Sanitary Engineer.

Mentone.

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Mentone is only second in importance to Cannes as a health resort, & indeed is by many considered the most important town on the Riviera.

It lies in $43^{\circ} 47'$ North latitude at a distance of 15 miles East of Nice, 35 from Cannes & 5 from Monte Carlo & it is within $2\frac{1}{2}$ miles of the Italian frontier, a walk into Italy being one of the favorite journeys of those who cannot climb or indulge in much active exercise.

During the Winter season the population reaches nearly 15,000, being double that of the Summer months.

The Bay of Mentone faces in a South Easterly direction & extends from Cap Martin on the West to Cap Mortola to the East, about four miles from horn to horn. This Bay is divided into two equal parts by the promontory on which the old town is built, which juts out into the sea, & forms a bold headland, crowned by the Cemetery, & the slopes of which are covered with the closely packed dwellings of the

original Mentone.

From this old town the more modern town has gradually spread on either side & it divides Mentone into what is recognised as the East & West Bays. This division is important as the climate varies greatly in each.

When Dr. Berner many years ago left home in search of health, he travelled along the Riviera until he came not only to Mentone, but to the East Bay, & there he has remained ever since.

The town itself then lies between the two Bays, & unfortunately the only access from the one to the other is by a long narrow sunless street, along which a wind blows which chills you to the marrow & which must be productive of great mischief to invalids. It is in this street that the principal shops are unfortunately. Now I am glad to see they have commenced making a Boulevard which begins near the Italian frontier & is to go behind the town & when this is made it will be a great gain for



*Red line showing shelter
the rays having a radius
of from one to three miles
in distance -
the inner line shows the
shelter of the East Bay*

*Heights are in
feet*

Chemin de fer
Route Nationale
Routes carrossables
Routes mulâtières

M E R M E D I T E R R A N E E
C A R T E
D E M E N T O N

LIBRAIRIE CENTRALE

BERTRAND & QUEYROT

Propriétaires Editeurs

1882



SIGNES CONVENTIONNELS

- Chemin de fer
- Route Nationale
- Routes carrossables
- Routes mulâtres
- Sentiers
- limite d'Etat

*Red line showing shelter
the range having a radius
of from one to three miles
in distance -
the inner line shows the
shelter of the East Bay*

*Heights are in
mètres*

M E R M É D I T E R R A N É E

MENTON

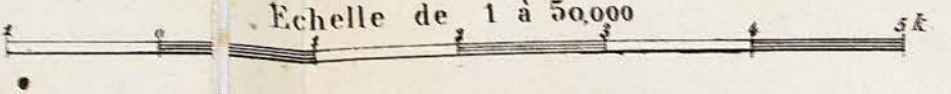
LIBRAIRIE CENTRALE

BERTRAND & QUEYROT

Propriétaires Editeurs

1882

Echelle de 1 à 50,000



those who can only bask in the sun,
 & cannot risk chills.

The Climate of Mentone is considered
 to be the mildest & least bracing of all
 the resorts & the arrangements of the
 hills around it will shew that this
 must be so.

One cannot trace here as at Cannes,
 three distinct barriers to the winds,
 but still there are very marked ranges
 which act as most efficient shelter.

First then there is a lofty well marked
 range of hills which encloses the whole
 Bay of Mentone.

To the West it begins beyond Cap
 Martin above Monte Carlo with Mont
 Azel 3400 feet about four miles west
 of Mentone & describes a semicircle
 having a radius of from 3 to 4 miles
 through Mont Baudou 3780 feet, Cime d'ours
 3932 feet, Mont Rasel 4000 feet, Mont
 Gran Mouch 4478 feet, back past the
 Roc d'Ormea 3330 feet & the Percean
 3575 feet the spurs of which encircle
 the East Bay & Mont Bellinde which

overhangs Cap Mortola is over 1500 feet high.

This is what I may call the centre range of shelter & it will be seen that it encloses both Bays in a very thorough manner.

Between Passet & Cime d'ours winds the carriage Road from Mentone to Turin & this pass which is the lowest point in this range, is 2574 feet above the sea.

Behind this range rise the snow clad heights of the Alpes Maritimes & the Italian & Swiss Alps which break the force of the Northerly winds, but also cool & dry them.

But there is an inner circle as it may be called, & this divides the East Bay from the West.

The West Bay is much the more open of the two, for there is nothing between the hills already mentioned & the sea, with the exception of one or two isolated peaks which only concentrate the wind into funnels. The valley is intersected

by three torrents which run in a North Westerly direction & which have formed deep forges in the Mountain Sides, cutting through what would have been but for them an inner barrier of several hundred feet high. Thus the back ground of the West Bay is a more or less gradual slope running back & rising gradually for 3 miles intersected by torrents forming ravines. The larger of these is the Torrent du Carri, along which the Turin Road winds. It runs N. N. W. & opens out into the West Bay. Now while the high range of hills is able to give shelter from the full force of the wind. The cool air filters down these forges & causes constant movement of the atmosphere. This keeps the West of Mentone very fresh & cool, & although it is not so bracing as Cannes still it is never very close.

In the East Bay on the other hand there is a semi-circular unbroken inner range of hills rising about 600 or 700 feet & coming close down to the waters

Edge. This is formed by the spurs of the Brecon which rise up behind to a height of 3575 feet. The houses & hotels are built on the face of the hill for the most part & as has been said, it is like a plate warmer before the fire, this semicircular slope facing the south, shutting out the breeze from all quarters except the south & south east. This bay is undoubtedly close, for the wind from the north direction passes right over well out to sea.

Meteorology. Mentone is a little warmer than Cannes as will be seen by the following figures.

Cannes (Marsee)

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Average
Mean Temp.	52.6	46.3	48.	48.8	51.	55.	50.4

Mentone (Andrews)

Mean Temp.	54.1	49.68	49.05	48.63	50.71	56.69	51.5
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This is not a great difference, but as Marsee points out the greatest degree of cold in December at Cannes is 33° while at Mentone 36° , a difference of 3° which

is sufficient to account for the difference in the vegetation

	<u>Mentone</u>	<u>Cannes</u>
Relative Ammidity	72.8%	73.
Rainy Days	47.	45.6
Rainfall	16.87 inches	20.3 inches

These figures will show that really there is very little difference between Cannes and Mentone + yet there is a very great difference, + the cause must be the other factors, namely wind + shelter.

Mentone is infinitely more sheltered than Cannes, even the West Bay. For while at Mentone there is the middle range averaging 3000 feet at a distance of 3 miles from the sea forming a complete semicircle - at Cannes the range which is 2 to 3 miles distant is only 56700 feet high, while the range which runs up to 3000 feet is 12 to 14 miles off + the west horn is only 1000 feet high at the most - and besides all this the East Bay is further protected by the inner slope on which that part of the

town is built.

The East Bay is absolutely sheltered from all winds except the South & South East - & the West Bay only gets the Mistral in a very modified form.

The vegetation shows the effect of this, for while I have stated that at Cannes the Lemon trees can grow & as a matter of fact do grow, although not cultivated for profit - still they never attain that luxuriance & perfection which is seen at Mentone.

There you have Lemon Groves along the hill sides, not only facing the South & sheltered, but along the valleys of the Carri & Borrigo thoroughly exposed to all the wind that Mentone ever gets. The reason of this is not so much the average temperature, for that is but slight, as that there, there never is the very low temperatures that sometimes occur at Cannes.

Water Supply Is Excellent in quality.

The same Compagnie du Eau which supplies Nice also supplies Mentone.

The water comes down from the

mountains under ground, & at a considerable depth below the surface of the Valley of the Carrei there is a substratum of rock along which it runs. A dam has been built down to the level of this rock to raise the water to a certain level, and powerful Engines pump it up to a reservoir 200 feet above the sea, from which the town is supplied.

The supply 400 Cubic Metres a day to the town for all purposes - Of this 300 C.M. go to subscribers, the remaining 100 C.M. being used by the town for watering Streets, the public Laundry & flushing drains. 400 C.M. is equal to 88000 Gallons & as the limited population is 15000 this is a very small allowance according to our notions, being less than 6 Gall. per head per day. It is not that the supply is insufficient for the requirements, for the Director of the Company tells me that he could supply more than double the quantity, but for one thing the authorities use a very small quantity in flushing the

drains, only 4,000 gallons once every four days being sent down.

Compare this for a moment with Cannes which according to Douglas Galtous Report receives 15,000 M.C. a day equal to 7 $\frac{1}{2}$ litres or 161 gallons per head per day, taking the population at 20,000, and notice that of this the administration uses 5000 M.C. or say 53 gallons a day for public fountains, watering the streets &c. Probably one reason why Cannes uses more water is that it is cheaper. I understand that an English Company built the Canal & then became bankrupt, & the Town got the works very cheap & is able to supply the water at a very low figure. Be this as it may the water supply of Mentone is for sanitary purposes very insufficient.

In the course of a year or two the Compagnie is going to bring the supply to Cap Martin from Nice when they will be able probably to give Mentone as copious a supply as Cannes now enjoys.

The quality of the Mentone water is better than Cannes I should say; it is softer & contains no carbonate of Lime & only a small quantity of lime.

Drainage. I feel some diffidence in criticising the drainage, because authorities seem to unite in praising it or at least in not condemning it. Dr. Marceh says that the Sanitary condition of that Resort is "in every way satisfactory" and the local medical men say that it is much better than it used to be.

I should just like to quote two facts on this subject. First it is the general custom to have an overflow pipe from the cesspools into the public sewer.

This is contrary to Law, & we have seen that in Cannes it is quite the Exception. Here it is the rule, & inspectors made no search of it to me. This is the first fact - & the second is what I mentioned above on the authority of the Director of the Water Company, that the sewers are only flushed once every

4 days with 88,000 gallons of water which is quite insufficient to carry away accumulations. Dr. Carzenave de la Roche in his Book says that the drains are flushed daily, & that in addition to the 88,000 daily, they get four times that quantity of water from the old sources. I can only give my authority for my statement. I shall mention another fact. Dr. Siordet told me that there was only one really well drained Hotel in the place, the Belleme; that some years ago when the Duke of Cornwall (I think) came to live there, Mr Russell the Sanitary Engineer was brought over from Cannes to put it in order & that it was consequently quite the most healthful hotel from a Sanitary point of view.

In the East Bay several of the hotels & blocks of houses are drained into the Bay without the intervention of cesspools & looking over the sea wall you see 2 or 3 large iron pipes dipping into the water not more than 6 feet from the

shore. In addition to this most of the public sewers drain into this bay. At times the smell is very offensive. The proprietors of hotels in deference to the wishes of their clients have fitted their closets with Jennings' fittings & the consequence is that they use a large quantity of water; hence the overflow pipe into the public sewer, & hence the insanitary condition of the water of the East Bay, in spite of the Books.

I have I think said enough to show that Mentone is much inferior to Cannes in its drainage. I could say a good deal more were it advisable.

Medical Aspect. Wherein does Mentone differ from Cannes? It is closer of course & less exposed to wind. Dr. Cazenove de la Roche in his suggestive little work on Mentone to which I shall have to refer says that "Cannes constitue un climat sec et tonique" "Hyères est non moins tonique, mais moins excitant" "Menton participe dans ses effets de

climates participant et sedatifs" Four-
sedatifs he calls it - and indeed each
bay has its own climate - the West
bracing & exciting, the East Sedative.

In deciding where your patients
are to go you must be guided a great
deal by the Constitution, & Dr. Barrety
& other writers lay stress on the two types
of Constitution, the lymphatic or scrofulous,
& the Arthritic.

In scrofulous phthisis says Dr. Barrety
the Constitutional reaction in the early stages
is comparatively slight even though the
Extent of mischief be considerable. It
is associated with enlargement of the glands
This type does best at the more bracing
places, as Cannes & Nice, & in these
places, at the most stimulating part,
near the sea. In Mentone they do
best in the West Bay, indeed only do
well there.

In Arthritic phthisis, tolerance is
much less, Constitutional reaction takes
place early, & it is out of all proportion
to the Extent of the local mischief.

Disorders of the Nervous System are very often met with both at the outset & during the whole course of the disease.

The febrile disturbance is excessive, the pain very severe, & the patient suffers from intercostal neuralgia, spasmodic cough & paroxysms of dyspnoea.

Pulmonary congestion, Congestion of the pharynx, larynx & Bronchi are frequent & so is haemoptysis which is often abundant. The patient is very susceptible to atmospheric changes, perspires profusely, suffers often from congestion of the liver & likewise from frequent & profuse diarrhoea.

These cases do best in the more sedative climates of Hyères & Mentone & Cimiez, & in Mentone in the East Bay.

Dr. Cazeneuve de la Roche says candidly that in cases of torpid Phthisis where the Constitution is markedly scrofulous or tubercular, the climate of Mentone is not sufficient & he recommends Cannes for such, but for simply torpid cases he says that the West Bay

of Mentone is very suitable.

He cites several very interesting cases of his own.

One aged 35, phthisical mother, gouty father, sister phthisical, temperament lymphatic, had a double cavity in active progression on his arrival. Haemoptysis frequent & abundant - three winters had been spent at Pisa, Pau & Sicily without any result - night sweats.

He went to the West Bay & at the end of the first winter, one of the Cavities was in process of cicatrization & she was much better. There had been no haemoptysis all winter. After two winters the recovery was complete.

He gives other cases of similar temperament but I shall just mention a case of the nervous temperament.

A young woman of 26, mother of 4 children, temperament nervous & bilious exhausted by two frequent confinements & by sorrow. Intense hepatic dyspepsia & periodic menorrhagia. The cough was dry, expectoration scanty.

streaked with blood, skin dry, small pulse, slight night sweats, evening rise of temperature. Sleep disturbed & nervous system in a state of extreme tension. After six months in the East Bay she had regained flesh evening fever had disappeared with the cough, appetite & strength & sleep had returned. He says that she never returned, but passes her winters in Paris now.

He also cites cases of Haemoptysis which did not get relief at Cannes but underwent complete cure at Mentone.

I should here say that what we want are cases. There is plenty of statistics of meteorology & so on, but what is wanted is an exhaustive list of cases carefully taken extending over many years. This is the only way to settle the merits of the various resorts.

This was pointed out to me by many of the local medical men who very naturally resented men coming out for a flying visit & then writing a book

condemning or praising this or that place, but it rests with these local physicians to correct this by their own publications.

Dr. Cazeneuve de la Roche makes one curious observation - he noticed that he & members of his family lost flesh after living sometime in Mentone.

This led him to observe the inhabitants & the result was that he noticed that they were all thin, light wiry in build & in no degree inclining to Embonpoint.

He thus took cases of visitors, weighed them periodically & found that those who came fat & inclined to obesity gradually became thin without being the worse for it.

To conclude, Mentone is specially adapted for cases of Phthisis of the arthritic & nervous types, cases of haemoptysis. That it is less suitable for cases of scrofulous diathesis.

It is of course suited for cases of anaemia & chlorosis in common with the rest of the Riviera.

Nervous cases which find

Came to Excise should try Mentone
before leaving the Riviera.

TACCLIA.

Tende



Extrait de la Carte de France au 80,000.
Publiée par le Dépôt de la Guerre.

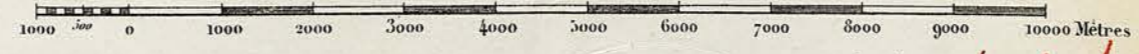
Les courbes de niveau qui sont régulières dans la partie française, sont fictives dans la partie italienne.

Vintimiglia

Paris. Imprimerie Lemercier et C^{ie}

Teinte conventionnelle pour les bois.

Echelle (1/80,000)



To the West La Colla is about 200 ft above the sea & the hills rise gradually in an embosomed range to Mt Biagne over 3000ft high about 5 miles distant - To the East Cap Verde is 300ft high rises also with mt head to Mt Biagne - San Remo is they well sheltered for the West. North & North East, but not so well for the East.

San Remo.

161.

I shall be very brief in my description of San Remo, for my stay there was curtailed. I had only been there two days when I was summoned home by my father's illness. I was therefore unable to examine the sanitary conditions of the town. At the same time I was able to observe the general disposition of the hills around & the amount of shelter afforded by them, & I was able to form an opinion as to the desirability of the place.

San Remo then a town of 15,000 inhabitants, is situated in the western Riviera in a bay of the Gulf of Genoa, about 4 miles in breadth.

The latitude is $43^{\circ} 48'$, longitude from Rome $4^{\circ} 43'$ & it faces the South.

It is 16 miles from Mentone, 31 from Nice & 85 from Genoa.

The bay is bounded by Cape Verde to the East 350 feet high & Cape Nero to the West about 800 feet high.

Shelter.

The old town is much in the form

of a triangle, the base of which is towards the sea & it runs upwards & backward to a considerable height.

On either side of the base of the triangle the newer town spreads along the shore & extends nearly to Cap Verde on the one side & Cap Nero on the other.

Now the shelter here as elsewhere may be divided into three ranges.

The first is a range of low hills a few hundred feet in height running close behind the town & in fact the houses are built on it.

This range is intersected by numerous gullies & ravines thickly wooded, with rocky watercourses only full in times of rain. As you reach the summit of this barrier, you find that the ground shades backward & then rises gradually into the second barrier, which is one unbroken range of olive clad mountains several thousand feet high, the highest point being Monte Bisnono 4270 feet.

Behind this again is the range of the Alpes Maritimes running up

to 8000 feet.

Thus while the second barrier, being high & unbroken, shelters San Remo from the Northerly blast, the inner range is sufficiently broken by ravines to allow the cool air to filter down & keep the town from being close. This renders it more open and airy than Mentone.

San Remo is sheltered from the West by Capo Nero 800 feet high, & is thus well sheltered from the West, N.W. N. & N.E. but only indifferently from the East - by Capo Verde 300 feet high.

Winds. Now it is known that in the Riviera the farther you go Eastwards the less liable are you to the Mistral & the more to the East wind - Therefore San Remo is chiefly exposed to the East wind, which as I have shown elsewhere is a wet wind.

The Mistral is not unknown there but is shown by its extreme dryness & is seldom very disagreeable.

Geology.

The higher mountains are composed of Cretaceous limestone & on this are strata succeeding one another of grey & blue argillaceous shales, chalk marls & lastly come the Pliocene clays.

But for our purpose the important point is that San Remo is chiefly built on the Pliocene clays, whereas Mentone is built on Limestone & Cannes partly on Limestone & partly on porous micaceous schist.

Temperature.Mean Temperature

November	54.4	February	48.9
December	49.7	March	51.1
January	46.6	May	56.9
Mean for 6 winter months 51.3			
"	Mentone		51.5
"	Cannes		50.8

Climate.

Thus San Remo is slightly warmer than Cannes, & is the next most bracing resort on the Riviera. It is by its easterly position & by the arrangement of the hills, sheltered from the dry

Northerly winds & exposed to the moist East wind; the soil is largely of clay, less porous & more retentive of moisture than in any of the other resorts; the hills behind are clad with lemon & olive groves to a considerable extent.

These circumstances render San Remo less dry than the other parts of the Western Riviera.

Cannes owing to its comparative openness to the wind & to its soil, is exciting & many people cannot sleep there & find the climate too stimulating.

Mentone on the other hand is stimulating & exciting & at the same time close.

But San Remo is open & bracing, but sedative & but few people complain of sleeplessness.

I came here from Mentone, having found it close & enervating, but whenever I arrived here, I felt revived & had much the feeling of exhilaration that I experienced in Cannes.

Thus you have a climate less bracing than Cannes & as such perhaps

less suitable for scrofulous lymphatic subjects who require stimulating, but distinctly more sedative & more suitable for neurotic cases & all those who find Camme too stimulating.

Drainage. The drainage of the town proper I was not able to examine thoroughly but Dr Freeman said that it left much to be desired. In the Hotels however the case is different, & as I have said elsewhere, the West End Hotel where I lived was the best drained Hotel I had seen, for a Cesspool system.

The fittings were all English, Jennings I think. The water closets were large & well ventilated. The soil pipes ran down the outside of the house at the back, quite clear from the wall, opened above the roof - and the Cesspool was right at the back away from the house.

Most of the Hotels are well drained. The water supply is good & abundant.