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The Climate of the Isles of Scilly with special reference to their suitability as a Health Resort.

by

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St. Marys.
Isles of Scilly
18th June 1895.

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The Climate of the Isles of Scilly. With Special Reference to their suitability as a Health Resort.

The group of islands known as the Isles of Scilly is situated about 27 miles W.S.W of the Lands' End in Cornwall. The exact geographical position is in Latitude 49.55 N and Longitude 6.19 W. until recently very little was known about them by the public, and I think it is a perfectly safe statement to make that very few medical men have the smallest idea that there is anything special in their climate

Within the last ten years the progress of the Narcissus Culture in these islands has been so great - exporting as they do over 200 tons of cut flowers in the season - that the eyes of very many in the United Kingdom have been attracted towards them. Besides which many descriptive articles have appeared from time to time in various magazines and papers by visitors who have been struck

of the peculiar charm of the place.

There has not been however any article treating of the climate of the islands so far as I can learn except one by myself which was published in the Lancet of April 1893 and from which article I will take leave to quote as I proceed.

At the outset the following quotation from a work written towards the close of the last Century by the Rev John Trowbeck Chaplain to the Duke of Leeds, then Governor of the islands, and published about 1795 will not only prove interesting in a general way, but also will serve to show that as early as the end of the 18th Century the Isles of Scilly were recognised as having a finer, and warmer climate than that of the mainland.

"The air here being so brisk and healthful, that sickness is very seldom known amongst the inhabitants it being fanned by the sea breezes proceeding from every quarter, and is not at all infected by unwholesome vapours arising from large

marshy grounds: however the sea fogs are more commonly seen here than in more extensive tracts of land.

In the months of June and July, the air is filled with offensive vapours, which are not easily dispersed, by the inhabitants burning ore weed to make kelp: and in the Summer the air is sometimes exceeding hot on account of the reflection of the Sun from the sand; and in the Winter the sand is apt to be blown up from the coves which renders walking out very disagreeable when the wind blows hard without rain.

It is never so cold here in Winter, as in England. Ireland and other neighbouring Countries. Frost and Snow are very seldom known and never continue longer than a few days. Frost seldom happens unless the air is Calm, and it is generally gone after the Sun has shined two or three hours. The Summers are not scorching by reason of the frequent Summer breezes blowing over the islands. The inhabitants know but

little of sickness or diseases, for although the air has not been reckoned so good since the making of salt was introduced - which as the ore used of which it is made does not contain anything more noxious than a few particles of salt, so it has seldom been found to have any disagreable effect on their constitutions.

The people of these islands are seldom afflicted with ague, and a fever is very uncommon; but the smallpox and the measles are the most frequent and fatal distempers, hence those that are temperate live to a good old age. but unhappily spirituous liquors are too much used in these little islands."

For twenty five years there has been an Observatory Station under the control of the Meteorological Office on the largest island of the group - St Marys. From the first this was completely furnished with all necessary instruments with the exception of a Sunshine Recorder, has been in position, the instrument having been

Since February of last year -1894- a Sunshine Recorder

obtained mainly through efforts on my own part.

The monthly return of observations for the Meteorological Office passes through my hands and from it I furnish the Cornwall County Council with a summary of the months observations for their monthly Climatological Report for the County. The data therefore which I will furnish may be relied upon as being as accurate as any that can be obtained and all from Official Sources.

The data supplied will conform all that Ironbeck has stated with regard to the salubrity and mildness of the climate though his conclusions were arrived at before Meteorology was known as a Science and probably without the aid of any instruments at all except it might be a Thermometer and Barometer.

Dr Theodore Williams President of the Royal Meteorological Society states that "Meteorology is undoubtedly the basis of all sound Climatology; and the

result of a patient observation of temperature, of moisture, of air pressure and of wind, for a series of years are the best foundation for the claim of a place professing to be a Sanitorium". With the exception of the data relative to sunshine all the statistics of climate which I will furnish are derived from observations extending over 20 years - Dr. Theodore Williams in his Lumleian lectures on Aero-Therapeutics in Lung disease describes the principal factors of Climate as follows:

1. Latitude - naturally the greatest influence as describing the position of the sun towards the earth in a certain region, and thus determining the length and intensity of sunshine

2. Altitude by which the effects of latitude may be to some extent neutralised for even in the tropics at a height of 16.000 feet snow and ice may exist, the temperature falling in ascending mountains 1° F for every 300 feet

3. The relative distribution of land and

water and especially the presence of vast tracts of either ocean or desert the former accentuating extremes of temperature and the latter tempering them.

4. The presence of ocean currents flowing from higher and lower latitudes (as the case may be) and qualifying thereby the climate.

5. Proximity of mountain ranges and their influence on the shelter from wind and on the rainfall.

6. The soil, its permeability or impermeability to moisture

7. The rainfall, its amount and annual distribution.

8. The prevailing winds.

He next indicates what he calls the elements of climate which are five in number.

a. Temperature.

b. Hygrometry.

c. Atmospheric pressure

d. Wind force.

e. Atmospheric electricity

I will now briefly examine the relationship of the Scillies to these factors and elements so far as the material at my command will permit.

1. Latitude. The Scillies lie to the South of England and therefore have very advantage which their geographical position confers as compared with the mainland of England.

2. Altitude. This factor has no influence or bearing upon the Scillies at all as no part of the habitable islands rises 200 feet above the sea level.

3. The relative distribution of land and sea. There is not any part of the five inhabited islands that lies more than one mile from the sea. hence the land has little or no modifying influence upon the temperature The temperature of the islands is practically that of the air over the sea surrounding them

4. The presence of [illegible] currents &c. Dr. Williams says that the fourth factor is perhaps the most important of all, and

certainly so to Great Britain and Ireland for without the influence of ocean currents our climate would resemble that of Labrador. Of them the Gulf Stream, the current which affects our shores has the very marked effect which is here indicated upon the Climate of Great Britain how much greater must the effect be upon these small islands whose shores are washed by this warm and genial current and no part of which as I have already said is more than one mile distant from its waters. I again quote J. Williams in his lectures above referred to at this point.

"It will be seen from Diagram 2. issued from the Meteorological Office which is the result of numerous observations of the Channel Waters made at the various light ships and coast guard stations that the temperature of the British and St. Georges Channels varies according to the proximity of the Gulf Stream the nearer to the Stream the warmer. The difference in water temperature between the sea off Scilly

Isles and that off Sussex amounts to 5° F., ~~from~~ the sea off the Norfolk coast being still cooler and showing a difference of 10° F. from that of Scilly. The air temperatures follow the marine being from 1° to 2° F. lower. There are few better instances of the warming and equalising effects of an ocean current than this by which a northern island is made a participator in the warmth of the tropics without their extreme heat".

Very much regret not being able to reproduce the diagram here referred to.

5. Proximity of mountain ranges &c. This factor again is not one which has any influence or bearing on these islands except in as much as their absence indicates that no shelter is to be derived from such a source.

6. The soil its permeability or impermeability to moisture. This is a factor of considerable importance as it influences not only the hygrometrical but also the temperature of the air. The Scillies have a light loose sandy soil which is very permeable to moisture.

4. Rainfall its amount and annual distribution.

W. Scott in his Elementary Meteorology says that the three principal causes of rain are as follows.

1 The ascent of a current of damp air which is chilled by expansion as it rises.

2. The contact of warm and damp air with the colder surface of the ground.

3. The mixture of masses of hot and cold air

The second of these is the cause which obtains almost invariably in the Scillies and hence the rainfall is moderate in amount.

5. The prevailing winds. This is an important factor as regards the Scillies as they have a very marked influence on temperature. For nearly three fourths of the year S.W & westerly winds prevail and of course they are mild and frequently moist.

The elements of climate as defined by D. Williams will be discussed in greater or less detail under the following heads into which in treating of the climate of

the Isles of Scilly from the point of view of a Health Resort I think my subject is most appropriately divided

1 Temperature
2 Hygrometry
3 Sunshine
4 Rainfall
5 Atmospheric Pressure and Prevailing winds.
6 Nature of Soil.

1 Temperature Mr. R. H. Scott in an article in Longmans Magazine in June 1892 on the Climate of the British Isles makes the following statement. "The warmest spot (taking the whole year round) is the Scilly Isles. They are a whole degree warmer than either the west of Cornwall or the Channel Islands..... In Winter the lines of equal temperature run generally North and South the warmth lying to the South westward." The geographical position of these islands is sufficient explanation of their superiority in this respect. This part of my subject naturally subdivides itself

with two - a. mildness of Temperature b. Equability
a. Mildness. The mean temperature for the
whole year is 52°.1 F.; the mean temperature for
the Winter months i.e from November to April
inclusive is 47°.05. the mean temperature for
the Summer months is 57°. The mean
minimum temperature for the whole year is
48°.5 and the mean maximum temperature
for the whole year is 55°.5

Vide Table I at the end.

The absolute maxima throughout the
twelve months in the year 1881 which is
an extreme example ranged between 97°
and 70° and the absolute minima between
29° and 52°. But to take the most recent
example obtainable that of last Winter
which is widely recognised as a very cold
season. the absolute minimum in December
1894 was 35° and the absolute maximum
55°. In January 1895 the absolute minimum
was 24° only and the maximum 46°

The normal mean temperature for February
i.e. taking an average of 20 years is 45°.9
and the mean for the current year was 37°
Considering the extreme degree of cold

which was experienced throughout England and the Continent generally, this is comparatively speaking a moderate departure from the normal and probably no other place not even in the South of France could show so small a departure from the average. This however is merely a pious opinion in my part and cannot be substantiated by any figures at my command.

The two coldest months in the year are January and February the mean for each being the same 45°.9. The two warmest months in the year are July and August the mean for the former being 60°.3 and for the latter 61°. It will be noticed from the above that while mild in Winter it is yet cool in Summer though this is not in any degree peculiar to the Scillies but is the common characteristics of all coast stations as has been pointed out by Bayard in his English Climatology 1881-1890.

b. Equability. The mean daily range of temperature is 5°.8

If the months are taken separately it is

found that the month showing the least mean daily range is October with 5°.9 and April gives the highest with 8°. Again if the mean maximum daily range is taken it is found to be 11°.5, April showing the greatest daily range with 15° and November showing the least with 2°. The mean of the least daily range for the year being 3°.5. It will be remarked that April thus shows not only the greatest mean range but also the greatest daily range.

The mean range of temperature for the whole year is 15°.1 i.e. the difference between the mean temperature of the warmest month and the coldest - while if the six Winter months are taken the mean range is 3.4° degrees only.

I have already pointed out that the mean temperature for the six Summer months is 57° and the mean for the Winter months is 47° or a difference of 10 degrees. All these statistics demonstrate that equability is a marked feature in the climate of the Scillies. But I will turn now from Meteorological

statistics and adduce evidence of another kind to confirm these and to demonstrate the contention that the climate of Scilly is both mild and equable, is no mere matter of theory derived from statistics but has been put to the test of practical experience

Tropical, not to mention Subtropical plants will grow in the open air only where they are not exposed to very low or great vicissitudes of temperature. Here is a short list of such exotics grown in these islands, and more particularly in the Abbey Gardens at Tresco:- Anopteris glandulosus of Van Diemens Land; Correa virens - C. cardinalis and C. alba of new South Wales: Araucaria Bidwillii - A. Cookii and A. excelsa of Norfolk Bay, Norfolk Island; Abutilon vitifolium of Chili; Aloe socotrina - A. Barbadoes and A. spicata, also very many other varieties from the Cape of Good Hope; Dasylirion acrotrichum of Mexico; Dracaena draco of the East Indies and Teneriffe; Puya lanuginosa of South America; and Cassia corymbosa of Buenos Ayres. This last might

be greatly extended by the enumeration of many other specimens of exotic flora - for fifty species of mesembryanthemums clothe the rocks of Scilly and eucalypti and bamboos grow well. There seems to be no possibility of doubting or disputing the positive proof which the growth - luxuriant growth too not mere existence - of these exotics furnishes of the mildness and equability of the climate of the Scilly Isles - They are unimpeachable evidence of the practical accuracy of the statistics brought forward - The means and methods of taking meteorological observations are liable to error for it has been pointed out that the surface temperature of the ground is often from five to ten degrees lower than that indicated in the minimum thermometer in ordinary screens. As the plants in and passing through the ground will feel and have to contend with the real temperature, their very existence is the best test of temperature and in the case of Scilly at least is strong presumptive evidence

that the thermometrical readings and the surface temperature correspond very closely.

To the above might be added the fact that the common hedges in Scilly are Veronica Traversus and Escallonia macrantha

The potent factor in this remarkable mildness and equability of temperature is the all pervading influence of the Gulf Stream which bathes the shores of these islands. Then again the amount of land is so small and so cut up into islands and the islands again so full of bays or Ports as they are called here that the land has no modifying influence upon the temperature.

I will conclude this part again quoting Mr Williams who said in a discussion on Bayards paper already referred to;

"Respecting the warmth of the sea coast stations in Winter compared with those inland it was interesting to observe the effect of the warm water in the South west upon the temperature of the air in the neighbouring coast. the higher temperature

of the air in the west as compared to that in the east being due to the warming influence of the waters of the Atlantic.

The following figures of average sea and air temperatures in the month of February at five stations clearly showed this effect

	Sea Temp:	Air Temp:
Scilly Isles	49°	47°
Falmouth	48°	46°
Torquay	46°	45°
Dover	43·5°	42°
Yarmouth	39°	40°

It would be noticed that the further places were removed from the influence of the Gulf Stream the less mild their winter climate became. For the year 1894 the lowest sea temperature recorded was 49° in February ascending steadily and gradually to 59°·5 in July and remaining very much the same through August and September being 59°·3 and 59° respectively after which it descended as steadily and gradually as it rose to 57° in December. During the current year the sea temperature

went as low as 44°2 in February but rebounding to 49° in March, it ultimately reached 57° in May or 1° degree only below the corresponding month in 1894.

2. Hygrometry. The mean value of the Dry Bulb temperature for the whole year is 52·3° and of the Wet Bulb 50·3°.

Vide Table II at the end

The mean relative humidity for the whole year is therefore 86%. It is moreover to be noted that even in the hygrometrical condition of the atmosphere equability is the distinguishing characteristic of these islands. For if the mean values of each month are investigated separately the relative humidity is found never to exceed 88% and never to fall below 86%. In this Connection there are two points to which I wish to call attention, because they are a departure from the common experience of most places.

1. The relative humidity of these islands is greatest in the Summer months whereas in other places it is least during the same period 2. When there seems to be some

connection between the amount of rain fall and the degree of saturation of the air with moisture as a General Rule, but this is evidently not the case in these islands, for it is during the dry months the highest degree of Relative humidity occurs and during the wet days the lowest - of course I must not be understood to mean that during the time Rain is actually falling the hygrometrical condition of the atmosphere is not relatively higher than during dry weather but that the Rainfall is not, as in most places, the principal factor in raising the relative humidity. In other words, that the degree of relative humidity is due to some other cause than the amount of rain in Scilly. I will take two places for comparison - One an island - Jersey - and the other on the mainland - Margate. In the case of Jersey the cold and wet months give an average of about 90% and Margate 86%, No doubt this peculiarity of little varying relative humidity accounts in some measure for our mild Winters and Cool Summers in

Whereas the warm and dry months give, in the case of Jersey about 80% and for Margate 77%

other words

for the marked equability of Temperature which is the distinguishing characteristics of these Islands. It is also to be remembered that it is to this condition is due the fact that the day time is less warm in Summer and the night less cool in Winter than in most places.

3. Sunshine. As I have already indicated I am unable to show the results of a series of observations extending over a number of years with regard to the very important matter of Sunshine. It was only in February 1894 that a Sunshine recorder was obtained for this Station Consequently there are but ten complete months available for the year 1894 and five for the current year.

Vide Table III at the end.

During the ten months from March to December of last year 1555.1 hours of Bright Sunshine was registered. This gives an average of 155.5 hours per month and of 5.2 hours per day during that period.

The following places exceed Scilly in the amount of Sunshine for the same period;

Jersey by 68·5 hours, Guernsey by 39·9 hours, New Quay in Cornwall by 29·7 hours and Falmouth by 9 hours. Then the following places fall short of Scilly in amount of sunshine - Hastings by 32·5 hours. Westbourne 43·4 hours, Eastbourne by 54 hours and Torquay by 98·3 hours. As these places stand at the top of the list as compared with other stations in the United Kingdom it will be seen that Scilly occupies a very good position and enjoys a relatively large amount of sunshine.

The month which showed the highest total hours of sunshine was May with 254·3 being equal to a mean of 8·2 hours per day and Scilly exceeded every other place. The month which registered the smallest amount was November with 56·8 hours or 1·9 hours per day when Scilly was behind every other on the above list. The total sunshine registered for the first five months of the present year amounts to 814·7 hours May registering 301·4 hours being in excess of last year while March and April fell

slightly behind last year with 166·7 and 174·2 respectively.

4. Rainfall. The mean for the year is 34·38. The wettest month in the year is December with a mean fall of 4·02 in: And the driest month in the year is May with a mean fall of 1·78. Probably the principal reason for this very moderate rainfall as compared with other places on the South west and west coasts is the fact that the land lies low and offers no obstruction to the passing clouds. One point of interest and importance in connection with the rainfall here is that it is rare for it to fall continuously for twenty four hours. Still more uncommon is it for rain to fall continuously for two or three days in end; I do not know of any record to that effect. More common - indeed the rule - is it for the rain to fall during the night and for the day to be fine or vice versa. The days on which town young children require to be confined to the house on account of rain are few and far between. I may at once say that there are only few days throughout the year in

vide Table IV

which the youngest oldest or most delicate person may not enjoy some time in the open air.

5. Atmospheric Pressure and Prevailing Winds - The mean value of Barometric pressure for the whole year is 29.947 and the mean value for each month ranges from 29.856 in April to 29.996 in June. This shows that taking one month with another there is but little variation in Atmospheric pressure and that the range is small.

But on the other hand it must be borne in mind that these islands lie in the district in which gales occur most frequently - the average being twenty two per annum, and that at such times there must be a considerable range of pressure registered. I do not propose to enter into the relationship of atmospheric pressure and climate - In a general way a high mean is indicative of fine weather and vice versa - One of 28 stations in the United Kingdom Scilly stands 9th in order from highest to lowest.

It is further to be borne in mind that our

prevailing winds tend to keep the barometer low, notwithstanding which its relative position as compared with other places is comparatively high. The presumption therefore is that Scilly enjoys a proportionately large share of fine weather. I have no satisfactory data of the prevailing winds but Mr. R. H. Scott furnishes the following in his notes on the climate of the British Isles, in the South West of England. "In fifteen years there were 328 gales and of these no less than 80% were westerly i.e. ranging from S.W to N.W. and the remaining percentage easterly i.e ranging from N.E. to S.E." So that it is reasonable to infer that the prevailing winds are westerly & that too in a very large proportion.

This however is so much the general experience of all places bordering on the Atlantic that the want of statistics is of less importance. Still it would have been more satisfactory to have been able to show the exact proportion in which westerly winds prevail. These are of course warm and mild winds. The cold winds are north and east

winds as is the experience everywhere else in the United Kingdom but even these are some-what tempered in their bitterness by the miles of water they must pass over before reaching the islands. In places sheltered from the winds as for example the Abbey Gardens in Tresco, one can wander about in comparative comfort and not be aware as far as one's own sensations are concerned that an east or north wind is blowing. Unfortunately the amount of shelter to be obtained from any wind is not great and is of very limited area -

6. Nature of the Soil. This is a local factor of much importance in estimating the climate of any place. Soils which hold and accumulate moisture have been shown to have a close connection with the production of diseases of the lung.

Dr Buchanan in our own country and Dr Bowditch in America has placed this beyond dispute I think - The porous soils are generally conceded to be the healthiest

The whole of the islands are composed

of granite and much of the soil is made up of disintegrated granite. The soil is light loose, and sandy. Thus it will be seen that it is neither very absorbent or retentive of moisture, but on the contrary porous, easily and rapidly drained. A sandy soil is easily warmed and has a tendency to accumulate heat because it is not a very good heat conductor, thus absorbed heat is of course given off by radiation at night and is one of the factors which tends to keep the nights warm. The ground is for the most part undulating and rain disappears at once on the slopes. But even in the low lying and level parts water is found to lie for the briefest space of time. After the heaviest rainfall in the course of an hour the most delicate person need have no hesitation in walking abroad so far as any danger to damp feet is concerned. Probably no consideration of the climate of a place would be complete without reference to the condition of the atmosphere as regards its purity or the reverse. And in

this connection might be discussed C. William
fifth element of climate viz: atmospheric
electricity, but the subject is too vast and
too obscure to be capable of satisfactory
treatment within the limits of such a
paper as this. To this extent however I
venture to refer to the subject. Under certain
electrical conditions of the atmosphere
ozone is more or less freely produced, and
the air of the ocean is said to have a more
abundant supply of ozone than that
on Continents and Cities. If this be so
then the air on these islands must be
much more abundantly charged with ozone
than any part of the United Kingdom or
the Continent. A glance at a map showing
the geographical position of these islands
will establish this at once. Ozone is known
to be a most powerful disinfectant and
antiseptic consequently any emanations
from the soil the products of putrefaction
or decomposition will be acted upon at
once and destroyed. thus insuring the
purity of the air. But And above this

the purity of the atmosphere in these islands is further insured by the fact that there are no Public works and manufactories to contaminate the air and the processes of Agriculture as ordinarily carried on are not calculated to contaminate the air being much less if much greater in extent than from the limited area capable of cultivation or at all events cultivated, takes place in the Sicilies. Then there are the winds to which the islands from every quarter are freely exposed and which N. Williams says "serve a distinctly hygienic object in dispersing noxious exhalations from animal & vegetable life, in permitting free evaporation and thus preventing accumulation of moisture and maintaining the circulation of the air which is necessary for the purification of the atmosphere." I think the purity of the air of these islands is clearly established, indeed it is highly probable that much of the Ozone in the air finds but little occupation for its energies and

finds itself free to pass on to regions where its services are in much greater demand.

From a careful consideration of the statistics and data cited in the foregoing pages I think I am entitled to summarise as follows. The climate of the Isles of Scilly is favourable to the claim of the place being considered a Health Resort in respect to the undermentioned points.

1 Temperature; - Mild and equable.

2 Relative humidity - Stable that of a moist climate though not in any degree excessive

3 Sunshine - Abundant

4 Rainfall Moderate and occurring under favourable circumstances for the health seeker.

5 Atmospheric Pressure & Prevailing winds Favourable and not such as are calculated to try an invalid

6 Nature of Soil Extremely favourable and such as gives every facility for open air exercise on foot and without danger of dampness

4. Purity of air and electrical condition of the atmosphere. Not to be surpassed any where either at home or abroad.

The one weak point to be set against all the above favorable conditions is the general want of shelter from strong or cold winds when they do blow and during the occurrence of such this want of shelter is a very serious inconvenience and cannot be minimised. On the other hand it is to be noted that cold winds are only about 20% of the whole and that gales though numerous, there being an average of about two per month, are not as a rule long lasting. Indeed very many are confined to the night season alone and very rarely do they exceed twenty four hours in duration. Then again a very large proportion of the total number occur in November and January so that some months are entirely without any. Of course this is more especially the case during the Summer months.

Snow is very seldom seen and hardly

over lies any length of time as a rule it quickly disappears before the rising sun. When it is remembered that during the very great and prolonged cold of last Winter the maximum degree of frost experienced here was 5 degrees and that for two mornings only it must be conceded that in ordinary seasons there can be little to try the invalid who may be Wintering here.

In Conclusion I propose very briefly to consider the class of cases likely to be benefited by residence in these highly favored islands. Life in the islands may, so far as climate is concerned, be very aptly compared to life on board ship with this very great difference that the conditions of living are much more favorable on the islands to that on board ship.

Confinement in close and badly ventilated Cabins is a contingency of more or less frequent occurrence. Then, if a steamer there is the unpleasant smell and the continuous vibration caused by the engines

and in any kind of vessel there are noises incidental to the working of the ship. Then there is, for the invalid at least, the monotony of the voyage and the want of ability to communicate with one's friends speedily and easily. The limited amount and variation in the want of exercise too that can be taken is a decided drawback. Then again there is the matter of food supplies, these at the very best can neither be so good or fresh as can be obtained on shore.

Dr. Williams in his Lumleian Lectures already more than once quoted says the cases in which sea voyages are indicated are: -

1 Chronic pleurisy and chronic emphysema 2 Chronic bronchitis 3 Various forms of scrofulous disease including scrofulous phthisis. 4 Haemorrhagic phthisis. 5 Tuberculous excavation where the cavity is limited and the disease unilateral. 6 Neuroses the result of overwork and especially insomnia -

With regard to the forms of phthisis

especially benefited by sea voyages, I would place the scrofulous or strumous form first; next the haemorrhagic type, marked by limited consolidations and long recurrent haemoptysis; next, the chronic unilateral cavity cases, without great local irritation. Whether sea air promotes the fibroid process or no, I cannot say; but to judge by my cases contraction of cavities takes place very frequently during sea voyages. Cases of early consolidation do not progress so well as in certain of the climates, though they do not fare badly."

I think that the climate of Pau would suit such cases admirably, as from what I have pointed out the Pyrenees may be looked upon as quite comparable though in many respects superior to sea voyaging.

Then lastly for rachitic and delicate children the free and open beaches, and sands and the breezy downs furnish a play ground unsurpassed in healthgiving qualities in any part of the United Kingdom.

The limits of this thesis would not

per is, nor indeed have I accumulated sufficient material to be of any value in furnishing a detailed statement of cases which have been benefited by a more or less prolonged residence in these islands. Before concluding I desire to call attention to the fact that in the four years I have been resident in Scilly, there has been but one slight epidemic of Scarlet Fever, one of which was clearly imported and one case of Measles, and that for twenty years previously there is no record of any Infectious disease. Trondbeck from whom I quoted at the outset says that Small pox and measles were the most fatal distempers among the islanders. At present I do not know more than one person that bears marks of small pox on her person in all the islands, showing that in the last fifty or sixty years small pox has not occurred either very extensively or frequently. This comparative immunity from infectious diseases has no doubt in the past been in great measure due to the isolated position of

which was quickly stamped out, two cases of Typhoid Fever

the islands. This isolation is of course becoming less marked every year with the increasing business of the islands and greater and better facilities for travelling. On the other hand improved, enlightened and ever increasing sanitary supervision will have great effect in preventing the spread of infectious disease from one community or district to another and the Scillies will still continue to possess that measure of isolation which their geographical position confers.

This practical immunity from infectious diseases which the islands enjoy added to the meteorological statistics and data which have been furnished with regard to the climate of the islands is of importance and the whole constitutes a claim to the islands being considered a Health Resort of no mean value -

J. Thornton Macklin

St. Mary's
Isles of Scilly
18th June 1895

Table I.

Showing the mean Value of the daily Maximum and Minimum Temperature and of the Maximum and Minimum combined for each month and for the whole year.

January.			February.			March.			April.			May.			June.		
Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.
48·8	42·9	45·9	48·9	42·8	45·9	49·5	42·5	46·0	52·1	44·7	48·4	56·3	48·2	52·3	61·3	53·0	57·2

July.			August.			September.			October.			November.			December.		
Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.
64·4	56·2	60·3	64·9	57·0	61·0	61·8	54·7	58·3	56·6	50·2	53·4	52·4	46·7	49·6	49·5	43·4	46·5

Annual		
Max.	Min.	Mean.
55·5	48·5	52·1

Table II.

Showing the mean value of the Dry and Wet Bulb Temperatures for each month and for the whole year.

January.			February.			March.			April.			May.			June.		
Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.
46·4	44·9	86%	46·0	44·4	86%	46·0	44·2	86%	48·6	46·6	86%	52·7	50·3	86%	57·3	55·2	87%

July.			August.			September.			October.			November.			December.		
Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.	Dry.	Wet.	Humidity.
60·2	58·1	88%	60·9	58·8	88%	58·4	56·3	87%	53·7	51·6	86%	50·0	48·0	86%	47·0	45·1	86%

Annual.		
Dry.	Wet.	Humidity.
52·3	50·3	86%

Table III

Comparison of Bright Sunshine registered during the Ten months March to December 1894 at Scilly with other Stations along the South Coast of England and in the Channel.

— Stations arranged in order of greatest aggregate —

Months.	Jersey. Hours.	Guernsey. Hours.	Newquay. Hours.	Falmouth. Hours.	Scilly. Hours.	Hastings. Hours.	Westbourne. Hours.	Eastbourne. Hours.	Torquay. Hours.
March.	212·6	215·7	211·0	186·2	189·5	201·3	212·8	200·9	182·4
April.	172·8	191·3	196·0	178·6	177·6	179·9	182·0	178·0	169·9
May.	222·9	227·3	249·2	248·5	254·3	227·2	210·8	213·4	202·8
June.	201·5	209·2	174·7	188·0	178·0	194·2	172·5	192·5	184·8
July.	169·7	178·7	165·1	181·5	152·5	192·1	188·9	196·1	160·9
August.	192·7	183·3	168·4	164·8	181·1	151·2	101·0	146·8	157·1
September.	173·0	162·3	171·9	165·5	189·6	127·6	138·8	124·9	156·4
October.	123·7	102·2	121·9	116·1	112·2	78·4	92·3	87·0	91·1
November.	86·6	73·7	73·0	62·3	56·8	102·0	83·0	93·4	74·1
December.	64·1	47·3	49·6	66·6	59·5	64·7	65·6	64·1	73·3
Totals.	1619·6	1591·0	1580·8	1558·1	1551·1	1588·6	1507·7	1497·1	1453·8
Scilly + — each other Stations.	+ 68·5	+ 39·9	+ 29·7	+ 7·0	.....	— 32·5	−43·4	−54·0	−98·3

Table IV.

Showing the Mean Rainfall for each Month and for the whole year.

Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
3·78	2·71	2·40	2·27	1·73	1·84	2·46	2·39	3·41	3·70	3·72	4·02	34·38.

Table V.

Showing the Mean Value of Barometric Pressure for each Month and for the whole year.

Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
29·969	29·959	29·947	29·856	29·974	29·996	29·974	29·962	29·971	29·910	29·897	29·951	29·947