

South Africa as a health resort : with especial reference to the effects of the climate on consumptive invalids : and full particulars of the various localities most suitable for their treatment : and also of the best means of reaching the places indicated / by Arthur Fuller ; together with a paper on the same subject by E. Symes-Thompson read before the Royal Colonial Institute ; reprinted by permission from the Proceedings of the Institute.

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UNION LINE. MAP OF SOUTH AFRICA.

MINERALS
DENOTED AS UNDER

GOLD	
COPPER	
LEAD	
COAL	
IRON	

ROUTES TO THE GOLD FIELDS.

WITWATERSRAND.

Cape Town to Kimberley by Rail	647	32
Kimberley to Johannesburg by Coach, via Potchefstroom	298	59
	945	91
Port Elizabeth to Kimberley by Rail	465	25
Kimberley to Johannesburg by Coach, via Potchefstroom	298	59
	763	84
East London to Aliwal North by Rail	280	34
Aliwal North to Johannesburg by Coach	330	144
	610	178
Durban to Ladysmith by Rail	180	15
Ladysmith to Johannesburg by Coach, via Harrismith	300	87
	480	102
Delagoa Bay to Komati by Rail	55	3
Komati to Johannesburg by Coach	300	112
	355	115

BARBERTON.

Cape Town to Kimberley by Rail	647	32
Kimberley to Barberton by Coach via Pretoria	480	132
	1127	164
Port Elizabeth to Kimberley by Rail	465	25
Kimberley to Barberton by Coach via Pretoria	480	132
	945	157
Durban to Ladysmith by Rail	180	15
Ladysmith to Barberton by Coach	474	119
	654	134
Delagoa Bay to Komati by Rail	55	3
Komati to Barberton by Coach	316	75



DISTANCES BY SEA
Miles

Cape Town

250	Mossel Bay
297	52 Kanyana
440	199 150 Algoa Bay
496	252 203 68 Kowie
560	320 268 135 65 East London
810	580 528 395 325 260 Natal
1120	900 848 705 635 570 310 Delagoa Bay

**NEW MAP OF
CAPE COLONY
NATAL
AND ADJACENT TERRITORIES.**

Railways
Proposed Railways
Boundaries of Divisions
Boundaries of Colonies &c.
April 1899
Coach Routes

THE UNION STEAMSHIP COMPANY, LIMITED,
ORIENTAL PLACE, SOUTHAMPTON; AND 11, LEADENHALL STREET, LONDON.

Shortest Route to the South African Gold Fields.

ROYAL MAIL STEAMERS SAIL FORTNIGHTLY FROM SOUTHAMPTON.

FAIRLY STEAMERS AS REQUIRED.

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SOUTH AFRICA

AS A

HEALTH RESORT.

W. B. WHITTINGHAM & CO.,
PRINTERS,
91, GRACECHURCH STREET, E.C., AND
"THE CHARTERHOUSE PRESS,"
44 AND 45, CHARTERHOUSE SQUARE,
LONDON.

SOUTH AFRICA

AS A

HEALTH RESORT,

WITH ESPECIAL REFERENCE TO THE EFFECTS OF
THE CLIMATE ON

Consumptive Invalids,

AND FULL PARTICULARS OF THE VARIOUS LOCALITIES
MOST SUITABLE FOR THEIR TREATMENT,

AND ALSO OF

THE BEST MEANS OF REACHING
THE PLACES INDICATED.

BY

ARTHUR FULLER,

(M.B., C.M. EDIN., M.R.C.S. LONDON (of Kimberley, Cape Colony).

Together with a Paper on the same Subject,

BY

E. SYMES-THOMPSON, M.D., F.R.C.P.

Read before the Royal Colonial Institute.

Reprinted by permission from the Proceedings of the Institute.

SECOND EDITION.

LONDON:

W. B. WHITTINGHAM & Co., 91, GRACECHURCH STREET.

1889.

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Cheaper and more satisfying than Tea.

EASILY DIGESTED BY THE MOST DELICATE.

INVALUABLE in FAMILIES, SCHOOLS, HOSPITALS, and
in all places where a **Refreshing** and **Nourishing Beverage**
is required at a **Moment's Notice**. **Milk not necessary**.

LANCET:—"Delicate flavour"—"PURE and unmixed"—
"goes a long way, and is really cheaper to use in
the end."

BRITISH MEDICAL JOURNAL:—"It is admirable"—
"flavour is perfect"—and "so PURE."

HEALTH:—"It excels in all the characteristics which
elevate Cocoa to the first rank as a food—"

"—ITS PURITY IS BEYOND QUESTION—"

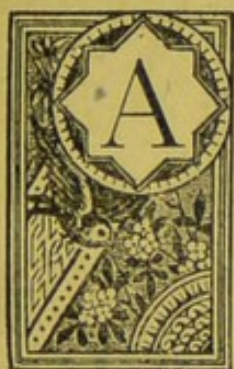
"—ONCE USED, ALWAYS USED—"

C. J. VAN HOUTEN & ZOON, WEESP, HOLLAND.





PREFACE TO SECOND EDITION.



DEMAND having arisen for a New Edition of this work, much additional material bearing on the places described in the First Edition has been included, together with particulars of other Health Resorts previously omitted. The claims of Natal, for instance, were not adequately put forward before.

The opportunity is also afforded to publish a Lecture on the same subject—*South Africa as a Health Resort*—by Dr. E. Symes-Thompson, Senior Physician to the Hospital for Consumption and Diseases of the Chest, at Brompton, in which will be found much additional information, and which conclusively shows the great value of Cape Colony and Natal for the sick and for the healthy.

"MONTSERRAT"
LIME-FRUIT JUICE.



TRADE MARK.

From the LIVERPOOL JOURNAL OF COMMERCE,
February 20th, 1886.

The "Hilda" has just reached the Mersey from Montserrat, her entire cargo, consisting of 50,000 gallons of lime juice, being the first arrival of the new crop. The demand for this article is increasing to such an extent that it may be of interest to the public to know that 180,000 gallons were sold during twelve months by the sole consignees, Messrs. EVANS, SONS & Co., Wholesale Chemists, Hanover Street, Liverpool.

In reference to the above, the public would do well to see that "Montserrat" Lime-Fruit Juice and Cordials only are supplied, and that the Trade Mark as above is on the capsule as well as label of each bottle.

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SOLD ON BOARD ALL THE CO.'S STEAMERS.





## PREFACE TO FIRST EDITION.

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THE object of the writer of this pamphlet has been to bring home to the public the value of South Africa as a health resort. He has been struck for some time with the inaccurate information displayed by writers of high authority in the climatic treatment of phthisis; of the facilities which now exist in South Africa for travelling from one place to another, and also of the localities which are enumerated as suitable for invalids.

The country is often spoken of as if a bullock waggon were still the speediest means of travelling; and in some very able lectures delivered last year the follow-



ing remark was made:—"The best mode to reach the high regions is still a well-supplied ox waggon from Graham's Town or Wynberg." The latter place, a suburb of Cape Town, and the residence of a large number of its business and professional men, is almost as innocent of the sight of an ox waggon as some pleasant little English village; while any traveller from the former place can accomplish his journey in a comfortable Pullman car in twenty-four hours to Kimberley, where he is almost within a stone's-throw of the Free State border. It is only fair to say that at the time these lectures were delivered the rail was not open to Kimberley, but it *was* open to the Orange River—a distance of about seventy miles from that town. The places chosen for recommendation as health resorts in these lectures betray (I must say it, and do so with all respect to the extreme value of the lectures alluded to) a complete ignorance of South Africa. Such places as Potchefstroom, Bloemhoff, Christiana, Pretoria, Utrecht, Standerton, Wakkerstroom, Witwaters Rand, &c., &c., are mentioned as suitable health resorts. The majority of them are places to which the term "trading stations" would better apply than that of villages, far less towns. Potchefstroom and Pretoria are indeed important places, but are not particularly suitable for invalids, especially the former; and out of a list of eight names mentioned, Heidelberg is the only one entitled to rank highly.



The writer offers this as an excuse to those who know South Africa for writing a short and, what must appear to them, incomplete description of the health resources of the Colony, trusting at the same time that it will prove of some real assistance to consumptive patients in their search for relief; and also by giving physicians and medical men at home a general insight into the climatic conditions and means of locomotion in South Africa, to enable them to recommend it with more confidence than they have perhaps hitherto been able to do. The author has further heartily to thank those gentlemen alluded to in the pamphlet who have so kindly assisted him with local details as well as valuable general hints.

The cases appended to the pamphlet are not as numerous as the author would have liked, but the difficulties of collecting them have been great. Such as they are, however, they will, he hopes, show that his sanguine view of the health resources of the country is not arrived at without good reason.

It is well the consumptive invalid should be informed, that in addition to the climatic advantages of the country referred to in these pages, the voyage to South Africa is one of the finest in the world. The Bay of Biscay once passed, fine weather may be anticipated for the remainder of the voyage at any time of the year. Not only is the voyage (which occupies about twenty days) a fine one, but the steam service is everything that could be desired. The Union



Company's and the Castle Company's packets, which convey Her Majesty's Mails weekly from Southampton and London respectively, are admirably appointed in all respects ; and as invalids are frequently passengers, it is within the writer's knowledge that especial attention is paid to their wants and comforts.





## SOUTH AFRICA AS A HEALTH RESORT IN CONSUMPTION.



THE Climatic treatment is of all other treatments the one which claims the greatest attention from the physician called upon to give advice to patients afflicted with or threatened by Phthisis, the reason of course being that although its symptoms may be palliated by the use of medicines and its onset possibly retarded by encouraging the general nutrition with various tonics and artificial foods, still there is no drug known to the Profession which exerts in any way a specific action in arresting or even checking the disease. By supporting the general health with these tonics and foods we hope to assist Nature in getting rid of the disease, but we know by experience that this treatment by itself is quite ineffectual and that under it alone the disease is too apt to run its course to a fatal termination.

While therefore we do not forget to bring these less important agents to our aid, we look to climate at once as our one great standby. The climate of South Africa varies widely in its different parts, but before



going into fuller details I shall shortly enumerate the most important influences which combine to produce what we term, as a whole, the "climate" of a country, considering them with special reference to the effects, deleterious or beneficial, which they are found to exert on the consumptive patient.

The principal features which go to make up a climate are—"temperature," "percentage of moisture," "atmospheric pressure," "sunshine," "wind," "rain and snow," "nature of soil," "elevation above sea level," and although they hardly come under the head of climate, we may add "hygienic surroundings," important as they are in relation to their influence on diseases of the chest.

It is unnecessary to go minutely into the details of all these, but a few general facts may be mentioned in relation to the more important of them.

Starting first with "*Temperature*," we find that a warm one, 60° to 80° F., is favourable to healthy and particularly so to consumptive persons, but it is by no means necessary to either; and other influences, more especially that of moisture of the atmosphere, play so much more important a part that it frequently happens that cold climates which have advantages in the way of dryness, high elevation, &c., such as the health resorts on the Swiss Alps, and the slopes of the Rocky Mountains in America, are far healthier than much warmer climates, which the dampness of the air and other circumstances render more deleterious to the



consumptive patient than is compensated for by the absence of cold.

Still we must on the whole consider a warm climate favourable to consumptive patients, and if moist warmth is to be avoided in seeking a place of residence, moist cold is doubly so.

“*Moisture*” must thus be considered as one of the most important items which go to make up a climate suitable or the reverse to the consumptive patient. Its influence cannot be overrated, and it may be positively asserted that no damp climates, whatever other favourable influences are present, and however mild they may be with regard to temperature, are well tolerated by the consumptive invalid. Dryness of the air, on the other hand, is of the greatest value. Both heat and cold are rendered more easily bearable when they exist in conjunction with it. We have often heard Colonists well seasoned to the hottest parts of South Africa complain that the heat of an English summer was more trying to them than that to which they had been accustomed in their own country, where the dryness of the air renders it far pleasanter and less enervating.

The same may be said of dry cold. It is not the bright cold day, when the sun shines like a ball of red fire, and the ground is hard under foot with a frost of perhaps 10° to 15° F., that is trying to the invalid, but the damp, muggy thaw which follows it, and which chills even the healthiest of us.



“*Atmospheric Pressure and Elevation*” may be taken together, the former being dependent upon and varying in accordance with the latter. A *high elevation*, and therefore a *rarified atmosphere*, used to be considered injurious to invalids, and was said to predispose to hæmorrhage from the lungs, but since the climatic treatment of phthisis has been more fully studied the very opposite of this is found to be really the case. And whether it be due in part to the rarification of the atmosphere, which has been asserted to act beneficially by causing increased expansion of the chest, or to the other associated conditions such as the facts recently discovered, that the percentage in the atmosphere of bacterial organisms diminishes as the elevation increases, the fact now stands that all our most recently approved health resorts are situated upon high elevations, often several thousand feet above sea level. “*Wind*” is of some importance also, and localities where strong winds prevail are not as a rule suited for invalids. Cold is much more easily borne in the absence of it. In another way, by causing dust, wind is harmful, and many climates are seriously impaired at certain seasons of the year by their dust storms. We look then upon wind as an injurious feature in a climate when it is at all excessive.

Of the remaining influences, “*Sunshine*” is of course beneficial, and sunny are always to be preferred to cloudy skies.

“*Rain and Snow and Nature of Soil*” are principally



of importance in so far as they affect the humidity of the atmosphere, but the nature of the rainfall and its distribution at certain seasons of the year should be noted. In many parts of South Africa, for instance, it may be literally said, that, "it never rains but it pours," and an inch of rain may fall in an hour, which would take a day in England. This of course exerts a marked influence on the humidity of the atmosphere, which is much lessened for the whole day with the more rapid down pour. Then again, its distribution with regard to seasons is of considerable importance, a heavy winter rainfall being productive of that damp cold, which is of all things most injurious. On the other hand, climates in which the rainfall occurs during the summer are much more readily borne, rapid evaporation causing a more speedy dispersion of the moisture in the surrounding air.

"*Hygienic Surroundings*" have long been recognised as of the greatest importance in the treatment of phthisis, and have been more than ever brought into prominence by the discoveries of Koch in relation to the minute organism which he believes to be the active cause of the disease. The more closely human beings are congregated together the more abundant will be that wonderful micro-organic life which goes on unseen, and often unheeded, around us and about us, exerting its baneful influence on the crowded millions packed in our great cities, sweeping them down in its epidemics of typhoid, it may be, or more insidiously,



but not less surely, eating away their lives with consumption.

Whether phthisis is infectious or not is an open question, but that it flourishes in thickly populated districts is without question, and this is true to some extent where sanitary improvements have brought these surroundings to the highest state of perfection. No doubt the better drained and better ventilated a house is the more healthy it is, and improved sanitation does much towards improving the health of our large towns; but what the consumptive invalid requires (and what he cannot get in the most sanitary of towns) is *pure unbreathed air*. He finds this only in the country districts, and he finds it to perfection at high altitudes in slenderly populated districts, of which there is no better example than the elevated plains of the Orange Free State.

To sum up, then, the points most to be sought after in a climate for the class of invalids we are considering are—dryness of atmosphere with rapid summer rainfall, elevation above sea level, absence of crowding, with a preference for warmth as compared to cold, a good proportion of sunshine, with as little wind as possible.

#### EUROPEAN CLIMATE.

From these premises we must conclude that England, and in fact the British Isles generally, are very unsuited to consumptive patients. The atmosphere even in the



middle of summer is essentially a moist, humid one, and in winter its damp coldness is particularly harmful. The same may be said of the greater part of Europe, for although the temperature varies considerably between the cold of Russia and the mild climate of Italy and the South of France, still speaking generally, with the exception of the high elevations now coming more into repute as health resorts, it possesses a humid atmosphere deleterious to the consumptive.

#### SOUTH AFRICA GENERALLY.

If we now turn to South Africa, we find that the climate on the whole is a very much drier one than that of Great Britain or Europe, and meets perhaps, as much as any climate in the world, the recuperative conditions laid down.

With regard to this, I have taken the average humidity of the atmosphere in eight of the South African towns\* without reference to their being specially favourable as health resorts, and find that in 1884, during the whole year, the average humidity of the atmosphere is 66 per cent. These records, however, are taken at 9 a.m., when it need hardly be pointed out that the humidity is far greater than at later periods of the day, and, as I have calculated, exceeds the average humidity for the twenty-four hours, in most cases where I can get the necessary details, by

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\* The towns are, Aliwal, Bloemfontein, Cape Town, Cradock, Graaff Reinet, Graham's Town, Queenstown and Ceres.



5 or 6 per cent. We may, I think, take the average all the year round humidity of South Africa at 60 per cent. Comparing this with English humidities (in which the mean between the maximum and minimum humidity for the twenty-four hours is taken as representing the day), I find that during the three summer months—June, July, and August—the average humidity is 69 per cent., or 9 per cent. above the all-the-year-round humidity of the Colony; while the three English winter months of December, January, and February show a humidity of 82 per cent., or 22 per cent. greater than the average of the Colony. Taking further into consideration that both the autumn and spring in England are damp, wet seasons, we may say that the average humidity of the Colony for all the year round is from 15 per cent. to 20 per cent. less than that of England.

The reader need scarcely be reminded that the seasons of winter and summer are reversed as compared with those parts of the earth north of the equator. The summer months in South Africa, October to March, are in all parts hotter than in England; but although the degree of heat varies much in different localities, it is only in a very few places that the heat becomes at all unbearable or anything to compare with Indian temperatures.

Rain falls very variously in different parts of the Colony; in the eastern and northern portions, except the coast, for the most part as thunderstorms during



the summer; and in the western provinces and coast towns, more after the manner of our English rains, viz., principally during the winter.

The fact of the rain through a large portion of the Colony occurring during the summer is of considerable importance. It eliminates that element of damp cold, fogs, &c., which has already been alluded to as in the experience of everybody most injurious to invalids; whilst the summer rains, which for the most part come in very heavy showers accompanying the thunderstorms, clear the air by rendering it cool and by the generation of ozone, while the humidity caused by the rainfall quickly passes off from the fact that the violence of the rain prevents the bulk of it soaking into the soil, and causes it to run off in streams to supply the rivers and dams in which it is collected.

Such a condition of things is bad for the husbandman, but good for the invalid. Elevation above sea-level is another feature of considerable importance in the climate of South Africa. It is a country of high table-lands and mountains. Elevated localities can be reached by railway within a hundred miles of each of the three leading ports in the Cape Colony. The Western line climbs to an elevation of some 2,000 ft. at the Hex River Mountains, within 100 miles of its leaving Cape Town; and the Midland and Eastern lines, starting respectively from Port Elizabeth and East London, soon mount by steep gradients to the highlands of the interior. While the rains are deluging



the coast lands in the winter months about Cape Town, the train will convey its passengers in a few hours to a frosty, clear, crisp air, where rain and moisture are almost unknown during the winter months. Higher and higher from every point of the coast the traveller mounts, until the spacious plains of the Free State are reached.

Another climatic feature must be referred to in speaking generally of the Cape climate, viz., the sudden changes of temperature, daily and otherwise. These are considerable and trying, but to the invalid, if care be exercised, *they are a saving feature in the climate*. If the heat of the day were prolonged into the night, as it is in the coast cities of America, it would be far more trying to the invalid; but the almost invariable coolness of the nights is refreshing and recuperative to the weak. Of course, however, it is a feature to be guarded against. In the coldest winter weather up country the sun is hot, and when it goes down, another garment or the shelter of the house is needed by the invalid.

It is impossible to speak of the climate of South Africa as a whole in more particular terms, varying as it does in its different parts, but sufficient has been said to indicate some of its beneficial characteristics, and all writers who have visited the country are loud in the praises of its beneficial effects on consumptive patients. It has some drawbacks in the way of strong winds—the south-easters at Cape Town, and the



occasional dust storms up country ; but these can be avoided in the one case by resorting to the sheltered suburbs of the metropolis and in the other case (being only of occasional occurrence) by remaining indoors. No stronger evidence of the highly beneficial effects of the climate in diseases of the chest can be given than the statistics collected by Major Tulloch of the health of English troops stationed in the country between 1822 and 1834, and which are quoted in Messrs. Silver & Co.'s Handbook to South Africa, and read as follows :—

ATTACKED ANNUALLY PER 1,000 WHITE TROOPS AT EACH OF THE FOLLOWING STATIONS.

| NATURE OF DISEASE.                                                                              | WINDWARD AND LEEWARD ISLES.     | JAMAICA.                       | GIBRALTAR.                     | MALTA. | IONIAN ISLES.                  | BERMUDA.                       | CANADA.                        | NOVA SCOTIA AND NEW BRUNSWICK. | CAPE DISTRICT.                 |
|-------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------|--------------------------------|--------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Diseases of Lungs generally .. }                                                                | 115                             | 18                             | 141                            | 120    | 90                             | 126                            | 148                            | 125                            | 98                             |
| Inflammation of Lungs and Pleurisy .. }                                                         | 23                              | 14                             | 2                              | 34     | 32                             | 37                             | 43                             | 35                             | 30                             |
| Phthisis Pulmonalis .. }                                                                        | 12                              | 13                             | 6 <sup>5</sup> / <sub>10</sub> | 6      | 5                              | 8 <sup>8</sup> / <sub>10</sub> | 6 <sup>5</sup> / <sub>10</sub> | 7                              | 5 <sup>5</sup> / <sub>10</sub> |
| Catarrh, Acute and Chronic .. }                                                                 | 75                              | 55                             | 86                             | 74     | 49                             | 74                             | 89                             | 73                             | 58                             |
| Deaths Annually per 1,000 of the mean strength from all Diseases of Lungs at same stations .. } | 10 <sup>4</sup> / <sub>10</sub> | 7 <sup>5</sup> / <sub>10</sub> | 5 <sup>3</sup> / <sub>10</sub> | 6      | 4 <sup>8</sup> / <sub>10</sub> | 8 <sup>7</sup> / <sub>10</sub> | 6 <sup>7</sup> / <sub>10</sub> | 7 <sup>1</sup> / <sub>10</sub> | 3 <sup>9</sup> / <sub>10</sub> |



It would be improper to quote these somewhat ancient statistics were they not thoroughly supported by the hospital records, and by the experience of many medical practitioners in South Africa. Unfortunately there are next to no medical or sanitary statistics in South Africa to supplement the hospital and military records, which are themselves not even summarised in any State papers.

#### SUITABLE LOCALITIES FOR PHTHISIS PATIENTS.

We can now pass to the more particular description of the districts and towns specially to be recommended, or in common use as health resorts; and if many places are little dwelt on or omitted, it is only because they are perhaps slightly less healthy or less easily accessible than those to be mentioned, or offer fewer attractions to the invalid; and while this preference be given to certain places, it must not be forgotten that South Africa generally is of the greatest value to the consumptive.

It is not too much to say that the Colony is peopled in its every part with a certain small contingent of those who, unable to stand the English climate, with its cold damp winters, owing to already developed or threatened symptoms of consumption, have come out to the Colony, and finding they can live in comparative comfort have settled down to regular employment. The professions show numerous examples of such



men, as does also nearly every branch of industry ; and the fact that a large number of these previous invalids are able to live in comparative comfort for years, earning their own livings, is one of the strongest proofs of the efficacy of the climate.

Of course, with a disease like phthisis, it need hardly be said that in many cases life is merely prolonged, and that in some no benefit at all accrues to the sufferer. These latter are indeed only too numerous a class, for the simple reason that the search for health is undertaken at a late stage of the disease when its cure, or even its arrest, is impossible. In some of the more rapid forms of consumption, cure is, it is true, from the first hopeless, but the writer has no hesitation in saying that out of the many patients who seek relief in the South African climate, and who come out at an early stage of the disease, very few gain no benefit at all : a goodly proportion have their life prolonged, and live in greater comfort in the dry sunny air than they could at least in Northern Europe ; while a not inconsiderable number, especially of those who come out when symptoms are first threatening, or before any actual tubercular disease is present, make a thorough recovery.

#### CAPE TOWN AND ITS SUBURBS.

To commence with, then, Cape Town is the first port by which the stranger reaches the Colony, and is



the best one, as a rule, for health-seekers to book to. For one thing, it is the only port in which he can land direct from the steamer on to the quay. All the other ports in South Africa are open roadsteads. The town itself is situated at the foot of Table Mountain, which rises an almost sheer perpendicular behind it. The population numbers from thirty to forty thousand, and includes contingents of Malays, natives, and half-castes. It is not a particularly well-built town, and has nothing very striking about it, either favourable or the reverse. The pleasantest part is that known as the Gardens, and lies on the Table Mountain side. It consists of a considerable number of private residences and a few good hotels, with almost no shops. It is by far the pleasantest spot to select for those intending to reside in Cape Town itself. As a rule, however, the residences of the better class business community are situated outside of Cape Town, and form a string of scattered villages running into one another, and placed along a line of rail which connects Cape Town with Kalk Bay, a small watering-place situated on the south side of the isthmus which separates it from Table Bay. Kalk Bay itself is much frequented during the summer months by the Cape Town people, and makes a pleasant change for those requiring a little sea air away from the dust of Cape Town. The distance to it is only sixteen miles.

The other villages—of which the principal are Mowbray, Rondebosch, Claremont, and Wynberg—all



lie at the foot of a mountain-range, the wooded slopes of which, meeting the more regular avenues of oak and fir which line for the most part the public and private roads all through this neighbourhood, make these suburbs the most delightful residences imaginable; and no one could wish to find a country affording pleasanter opportunities for riding, driving, climbing, and picnics. A fair number of hotels and accommodation houses are also to be found here, the best being at Wynberg and Kalk Bay.

The climate of this portion of the Colony is very nearly all that can be desired for the invalid during the *Midsummer months*—from the end of October to the beginning of March. The heat is moderate (the average maximum of Wynberg for the two hottest months in the year being  $80^{\circ}$  and  $75^{\circ}$  respectively), and the air dry and pure.

Cape Town itself is not to be recommended; the south-east winds, which blow very strongly through the summer months, make the town dusty and disagreeable through the day, and the nights are sometimes unpleasantly warm from the reflected heat of Table Mountain.

The suburbs, however, before mentioned escape most of these inconveniences; the nights are never hot, and the south-easters (though sometimes rather strong are very seldom sufficiently felt to be unpleasant or injurious.

It is admitted that the neighbourhood of Cape



Town cannot be as strongly recommended as some of the up-country health resorts, which have the additional advantages of high elevation and increased dryness of atmosphere. On the first arrival, however, of a patient during the months referred to, he runs no risk by a short stay in the Cape Town suburbs, which he may prolong as he finds it suits him; but he must hasten away before the winter rains set in, and he must bear in mind that, if he would secure permanent advantage under the best conditions, he will do well not to tarry anywhere on the coast, but to establish his quarters up-country with as little delay as may be. There can be no objection, however, for those who have greatly benefited by a change up-country, to get a change to the suburbs of Cape Town, or other seaport towns, in the summer months. It relieves the tedium of an up-country residence, particularly to those who do not ride or shoot, and is an agreeable and safe change, supplying the varied social advantages of a more civilised community. For such a change the neighbourhood of Cape Town is undoubtedly preferable to any other seaport, as comparatively little rain falls from November to March, while the eastern ports get their rains in the summer. It may be noted that very many delicate persons, whose business compels them to remain near Cape Town, find it suits them fairly well, and much better than a European climate. The writer has known many such who have held their ground for years, where life would have been impossible in England.



If patients are obliged to remain in Cape Town through the winter, the rain-damps will be avoided by a residence at Sea Point, about two miles westward of Cape Town, which is much dryer in the winter than the rich-foliaged suburbs on the other side of Table Mountain. There is sea-fishing from the rocks, and beautiful walks along a singularly bold and picturesque coast.

The winter months, however, in the whole district are not nearly so suitable for invalids as the summer. The weather is not cold, the thermometer rarely going below freezing point, but there is a good deal of rain, and the atmosphere is much more laden with moisture than in the up-country districts. Fogs and mists are not infrequent, and patients are strongly advised, if possible, even if they find the summer climate agree, to change their residence during the winter.

#### OTHER COAST TOWNS.

The other coast towns may be shortly alluded to: they are—1. Mossel Bay, which is a somewhat dreary place, with very little to recommend it, except as the port of a beautiful back country, inaccessible, however, by rail. 2. Port Elizabeth is a large and important colonial town, about forty hours' journey by boat, and about the same time by rail (which takes a long *détour*) from Cape Town.

Being such a large business town it would be



pleasant also to regard it as a health resort; but although some invalids who have come out, and have become tied there by business connections, have to a greater or less extent benefited by the change, and have undoubtedly lengthened their lives, still it cannot be regarded in nearly so favourable a light as many other places, being certainly inferior to the general run of inland colonial towns, and from a chest point of view, of other coast ports. It is built on the side of a hill rising almost directly from the sea coast, and is as well found in hotels, &c., as any town in South Africa.

The mean humidity of the atmosphere is 75 per cent. at 8 a.m., and is remarkably constant during both summer and winter months. The temperature also varies comparatively slightly during the year, the lowest recorded average maximum for one month being  $65^{\circ}$  and the highest  $76^{\circ}$ . The average minimum for one month never registered below  $40^{\circ}$ . It will be seen from this that as far as temperature goes the climate is equable, but the winds are boisterous and trying to a degree, and the summer south-easter brings a moist, enervating atmosphere from the sea most trying to an invalid.

Further up the coast we come upon Port Alfred and East London, the former the smaller and less important town of the two. East London, sixteen hours by boat from Port Elizabeth, is built on both sides of the mouth of the Buffalo River, where good



boating can be had: the neighbourhood in many parts is extremely pretty, though the town itself is not picturesque.

Almost the same remarks may be made with reference to its climate as were made about Port Elizabeth. The winters are mild and clear, and the summers not hot, the air is moister than that of most of the inland towns; and though making a pleasant seaside change, it cannot be specially recommended as a permanent residence for invalids.

I may add, however, that a resident writes me very strongly as to the beneficial effects of a residence just outside this town, where he gets an elevation of 200 to 300 feet above the sea, he himself having derived the greatest benefit from it. (*See case III, F. L., page 76.*)

Having shortly mentioned most of the coast ports, I propose now to take you back to the Western Province, and introduce you to the village and district of Ceres, which I shall speak of rather fully, as it has been much extolled as a health resort by those who have tried it, and I must mention that for the account here given, I am indebted almost entirely to Dr. Zahn, a medical practitioner of old standing and great reputation in the district.

#### CERES.

The village of Ceres is easily accessible from Cape Town, being only 84 miles by rail. Ceres Road is the



nearest station, and there is here an hotel from which conveyances may be obtained to Ceres, which is only 10 miles distant.

It is situated about 1,700 feet above sea level, in the midst of the most delightful mountain scenery, and has nearly all the attractions, including sanitary conveniences, that an ordinary traveller or invalid might expect to find in a small European township. It is well laid out, the streets being broad, cutting one another at right angles, and lined on both sides with beautiful oak trees. The Duars River, after passing through Mitchell's Pass, flows through the centre of the town, affording very secluded and well-protected bathing places at convenient distances.

The soil is sandy, mixed with boulders here and there, with occasional rocks of sandstone penetrating the surface. The subsoil is principally composed of yellow clay, and there is a marked absence of stagnant pools of water owing to the rapidity with which the river runs from a high to a low elevation, carrying with it in its course all decayed vegetable matter and other objectionable substances likely by their presence and exposure to be detrimental to the health of the inhabitants. In fact, the general sanitary condition of the village is good. There are boarding houses and hotels in the town where invalids and travellers will find fair accommodation.

At two hours' drive from Ceres an elevated plateau is reached of 2,700 feet above sea level, where a most



beautiful and dry climate may be had during the winter; and here are some of the finest farms for horse-breeding, cattle, and sheep to be found in the Western Province. Ceres was first recommended as a health resort by the late Dr. Leach, especially for patients afflicted with chest diseases. He says: "It is worth while for patients to remain at Ceres and try it for some time before proceeding to the still higher elevated portions of South Africa, as that might save them the inconvenience of a long and tedious journey."

At the beginning of last year it was again highly recommended by Dr. W. T. Hertz, in the "*Hamberger Zeitung*," who had previously resided at Ceres for some time suffering from phthisis, and who was compelled to leave the place to fulfil an engagement at Madeira. His opinion, as he expressed it, is to the effect that Ceres, as a suitable place for lung diseases, had not been sufficiently appreciated. He had been visiting several highly recommended health resorts in different parts of Europe, but had never met, he says, with a more delightful and suitable climate than that of Ceres.

Moreover, its elevation and sparsity of population confer upon it all the advantages of diminished bacterial life, which in the early parts of this pamphlet have been referred to as of so much importance in the treatment of phthisis; while the dryness of the atmosphere, more especially during the summer months,



and of the soil, a large amount of ozone in the air, and intensity of light, all tend to make the climate an agreeable one and highly beneficial to the invalid.

The average maximum temperature for the hottest six months in the year in 1884 was  $75^{\circ}$ , and in the hottest month only reached  $84^{\circ}$ . The average minimum or lowest night temperature for the same six months reached  $50^{\circ}$ , the highest recorded average for one month being  $55^{\circ}$  and the lowest  $45^{\circ}$ . The mean 9 a.m. humidity for these months is 61 per cent., which is very low. It will thus be seen that the previous statements as to the dryness of the atmosphere are fully borne out by these observations. The heat, it will be also seen, is not excessive, and the hottest days are easily bearable on account of the gentle westerly breezes, which generally spring up about 11 a.m. and last until sundown. The nights are delightfully cool and bracing, and the air being dry the invalid is enabled to sleep with open windows, a most desirable course to pursue when the climate permits it.

During the six colder months of the year the average maximum temperature is  $62^{\circ}$ , while the average minimum for the same period is  $38.5^{\circ}$ , the coldest month being July, when this latter record was  $31^{\circ}$ . The average 9 a.m. humidity during these months is 82 per cent.

It will be seen, therefore, that the winter months at Ceres are not so favourable as the summer, and are



not, in the writer's opinion, nearly as good as other parts of South Africa, such as Cradock and the Orange Free State.

On the whole, invalids not desiring to travel far are advised that in the summer months they can choose no pleasanter or healthier resort than Ceres, and Dr. Zahn specially recommends from September to May as the most appropriate period of residence. Still, it must be added that those unable to afford the luxury of a yearly change may, with care, during the winter months obtain great benefit from a permanent residence in this little town. In another way, by its easy access from Cape Town, it makes a pleasant and safe halting place for those arriving by steamer and wishing for a rest before going on to the higher elevations of the Free State. Dr. Zahn adds an interesting fact which I omitted to mention—viz., that during twelve years' residence in Ceres district he has only registered five deaths from consumption, excluding imported cases, and three of these occurred in the same family.

The Sanatorium at Ceres is likely to be soon enlarged. It is well managed, and from November to March is most salubrious; after that time it is somewhat damp from the excessive mountain rains.

#### OTHER WESTERN PROVINCE TOWNS.

Of the other Western Province towns may be mentioned, as all good during the summer months, Caledon, 60 miles from Cape Town—a picturesque and pleasant town—Tulbagh, a short distance down the



line, and Worcester, still further inland—all are pleasant towns with picturesque surroundings, the latter more especially so, all within easy reach by rail of Cape Town, and suitable centres from which to make walking and mountaineering excursions during the early summer months.

Malmesbury, too, from its high and bracing situation, is a suitable change in the winter from Cape Town. But with all of these places it must be noted that the winter rainfall is heavy, and the winter moisture correspondingly considerable.

Beaufort West is situated halfway between Cape Town and Kimberley, at a considerable elevation. I have been unable to obtain any meteorological observations of this town. The climate, however, is salubrious and dry, and should be good for invalids; and those having any friends in the district, or being drawn there by business connections, will find the climate a beneficial one. It has not a heavy winter rainfall like the districts previously mentioned and is therefore a better all-the-year-round residence. There are some fine farms and homesteads in the district, and we have known one or two consumptive patients, who were fortunate enough to get taken in at one of the farms near Nells Poort, greatly benefited by the change.

The whole Karoo plateau, from the top of Hex River Mountain on the Western Line, extending northwards beyond Beaufort, and eastwards to Middleburg and Somerset East, has a fine, dry climate for the con-



sumptive patient; and I may direct attention to the circumstance that there is a farm at an elevated spot near the town of Prince Albert, which will be found on the map, where patients are received under the care of Dr. Mearns, of Prince Albert.

THE EASTERN PROVINCE GENERALLY.

We will now glance at the Eastern Province inland towns and districts, and as has already been mentioned, the climate has this peculiarity, that the rainfall occurs principally during the summer months instead of the winter months. The following table clearly indicates this characteristic, the rainfalls mentioned being taken in each case, except that of Cradock, from an average extending over several years:—

| NAME OF TOWN.        | SUMMER<br>RAINFALL. | WINTER<br>RAINFALL. | TOTAL.  |
|----------------------|---------------------|---------------------|---------|
| Graaff Reinet .. ..  | 10 in.              | 4½ in.              | 14½ in. |
| Colesberg .. ..      | 8¾ „                | 4½ „                | 13¼ „   |
| Queenstown .. ..     | 16 „                | 4½ „                | 20½ „   |
| Aliwal North .. ..   | 19 „                | 5 „                 | 24 „    |
| Graham's Town .. ..  | 18 „                | 11 „                | 29 „    |
| Cradock .. ..        | 6 „                 | 3 „                 | 9 „     |
| Mean of Six Towns .. | 12.9 „              | 5.4 „               | 18.3 „  |

The effect of this is of course to make the winters, which vary as to temperature in different parts, always comparatively dry, and the reverse of what is found in most countries.



The summer moisture is not unpleasantly great, and shows in the above towns an average of 10 to 12 per cent. humidity less than in an English summer, while the winter humidities show at least 20 to 25 per cent. less than those of England, and in many places even a greater difference is observable.

#### GRAHAM'S TOWN.

To consider the towns more in detail, we may begin then with *Graham's Town*—a very pretty and very English town, easily accessible, at a distance of about 100 miles by rail from Port Elizabeth. It has a population of about 8,000 inhabitants, and lies at an elevation of 1,700 feet above sea level, in the midst of one of the greenest parts of South Africa. The surrounding country contains the most beautiful scenery and forms one of the principal ostrich farming districts in the Colony. The accommodation for travellers and invalids is good, and the climate of the usual characteristics of Eastern Province towns. It is, however, damper than some of the others, and its position, surrounded by hills, while conferring upon it some advantages in the way of protection from winds, &c., contributes somewhat to this fact. The high rainfall (29 inches) which it enjoys, while rendering the surrounding country green and beautiful, also brings its disadvantage in the way of moisture. Its average humidity is 71 per cent. taken at 9 a.m., and varies little during the winter and summer months.



Graham's Town is also connected by rail with Port Alfred a small seaport town only 42 miles distant by rail, where the sea air and beautiful scenery may be enjoyed.

The summer months are not as hot as in some other districts, the average maximum for the hottest month in 1884 not reaching above 80°.

On the whole, we may put it down as a very good health resort, its social conditions, surroundings and accommodation being specially good. Its climate, however, is certainly inferior for invalids to that of the Cradock district.

#### GRAAFF REINET.

Graaff Reinet is another Eastern Province town, connected by rail with Port Elizabeth, from which it is distant about 200 miles. It is the terminus of the line in this direction, and so is not in direct connection with most of the other towns without first going back to Port Elizabeth. It is situated in a valley of the Sneeuwbergen range of mountains, and is an extremely pretty and picturesque town. Its climate is a very good one; though hot in summer, the atmosphere is extremely dry, and the winters are moderately cold and very bracing. Its average humidity for the year is very low, being only 63 per cent., and the town may be commended to invalids as an excellent health resort, except in the hottest months of the year.



## CRADOCK.

On the main line of rail from Port Elizabeth to Kimberley, about 180 miles from the former place, we come upon one of the best health resorts in South Africa; in fact, if we except the Orange Free State, which is equal if not superior to it, this town and district have the best all-the-year-round climate to be found probably anywhere. The Cradock district, to which we refer, is an elevated plateau about 3,000 feet above sea level, situated to the north of the Winterberg range of mountains. The district is not as well wooded as many other parts of the Colony, and there is no green grass such as is to be found in the Graham's Town neighbourhood. It is, however, an excellent sheep-farming country, being probably one of the best in the Colony. The town is situated on the Great Fish River, has 2,000 inhabitants, is well laid out, and almost everything that could be desired from a sanitary point of view. It has many English residents, and is well provided with accommodation houses both for the invalid and travellers. With regard to its climate, the average maximum for the hottest six months of the year is somewhat high, reaching  $84^{\circ}$ , the average minimum, however, for the same six months being only  $51^{\circ}$ . The rainfall is very small, but occurs principally in thunder showers through the summer. The humidity (8 a.m.) during these months is 62 per cent. It will be seen from this that the



summer climate is very hot, the average maximum for the warmest month being  $91^{\circ}$ . It will be noticed, however, that the minimum temperatures are very low, showing the nights to be cool and bracing, and enabling the invalid to enjoy refreshing sleep after the heat of the day. The humidity also being so low (it must be remembered that the one quoted is an 8 a.m. record, and therefore above the average for the twenty-four hours), the dryness of the atmosphere enables the heat to be borne more easily than a much lower temperature would be if the atmosphere were moister.

In the colder months of the year the temperature is considerably lower; it is nearly always, however, warm in the daytime, though often sinking below freezing point at night. The humidity during the winter months is almost the same as the summer.

The efficacy of the climate in pulmonary diseases is well known and appreciated throughout the Colony, and its easy access by rail from Port Elizabeth makes it a frequent resort for invalids. Dr. Fehrsen, who has for twelve years enjoyed a very considerable reputation in Cradock, writes me as follows:—"Asthma is unknown here and so is phthisis, except what is imported, and numbers have had their health completely restored. I consider the winter months the best. The advantages of the town are: easy access from Port Elizabeth, good society (purely English), and good accommodation; the climate as dry as any



part of the Colony." This is indeed no over-statement of facts, and only bears out what is printed in nearly every work on South Africa. Not only is the town healthy, but residence on the farms in the district is equally beneficial and cannot be too strongly recommended.

I should therefore advise no invalid to leave South Africa uncured without, if it is in his power, first trying this, one of its best health resorts. Further, as a winter change from Ceres or Cape Town, it is also strongly to be recommended to those able to afford this luxury.

#### OTHER EASTERN PROVINCE TOWNS.

Going further east, and connected with the port of East London by rail, are King William's Town, 40 miles, Queenstown, about 130 miles, and Aliwal North, about 250 miles from East London. All these towns are health resorts of the same class as Graham's Town—the two latter, Queenstown and Aliwal, having the best and driest climate; the former, King William's Town, having a few compensating advantages in the way of accessibility and social advancement. They may all be used as centres in a trip through the Colony for exploring some of its grandest neighbourhoods, more especially that of Queenstown.

As places of residence, they are also of considerable value in the treatment of phthisis, and only inferior in



their all-the-year-round climate to such places as Cradock and the Free State.

There are many other towns, both in the Eastern and Western Provinces of the Colony, quite up to the climatic standard of most of these mentioned ; it would, however, be beside the purposes of this work to describe each of them in detail. Having warned the health seeker against the coast towns (with the exception of the neighbourhood of Cape Town) as being less suitable in most cases for permanent residence than the inland places, I feel there is no further warning to be given. Some places are better than others, and with the exception of the particularly noted portions of the Western Province, I think, on the whole, the Eastern Districts are the best ; but it may be taken for granted that the Cape Colony generally is beneficial, and those parts specially mentioned are so principally because of their accessibility or social features.

#### KIMBERLEY.

Kimberley, the City of Diamonds, lies in the most northern division of the Colony, Griqualand West. Originally a patch of barren "Veldt," later a town of iron, wood and canvas, it is now the most prosperous city in the Colony. The town is indeed absolutely devoid of the beautiful, either in its buildings or in its unpicturesque surroundings. Nor can one strongly recommend as a health resort a place with no drainage



at all, a fever of its own, and a death rate variously estimated at from 50 to 70 per 1,000. And yet, in spite of these disadvantages, one meets in Kimberley not a few consumptive persons doing their daily work and earning comfortable incomes, to whom life in the moister parts of the Colony and Europe would be impossible. The high death rate is due largely I believe to two factors. The large number of mining accidents amongst the natives, and the unhealthiness of the climate for young children.

I should advise no one to select Kimberley who can afford to study health only. But those who are unable to do this, but obtaining employment in so large a business centre, will find in Kimberley most of the comforts and luxuries of life obtainable and may hope to prolong their lives. The climate is in all respects similar to that of the Orange Free State, to be next described, its greatest drawback being the amount of dust with which the traffic and winds fill the atmosphere.

#### ORANGE FREE STATE.

We come now to the last portion of the Cape Colony to which reference is necessary at any length—viz., that portion of territory lying north of the Orange River, and between it and the Vaal, known as the Orange Free State.

Without going into its history, I may mention to



those ignorant of the fact that it is essentially the home of the Dutch Boer, and under a Dutch Government. In spite of this fact, however, there are very few towns in the country without a contingent, more or less considerable, of English. The business of the country, in fact, is done by the English almost entirely; and the towns being of course the business centres of the districts in which they are situated, always contain a social English element. Not that the English and educated Dutch do not mix socially with mutual advantage; that would be an undesirable and impossible state of things; but I only mention the presence of the English portion of the community to prevent the impression that people not knowing anything about the country might have, that they were going to a foreign country where they would find little in common with the people with whom they had to live.

As already mentioned, the Free State is situated between the Orange and Vaal Rivers. It is not picturesque, for the most part consisting of long, rolling plains of grass land, or veldt, as it is called, dotted here and there with small hills, and, except in a few localities, almost devoid of trees. It is an elevated plateau, lying from 4,000 to 5,000 feet above the sea level, and possesses a remarkably dry climate specially suitable to consumptive invalids. The only meteorological observations I have been able to obtain are those kindly furnished to me by Mr. Brebner, the Superintendent of Education at Bloemfontein, and it



is to be deplored that observations as valuable as those he has furnished me with are not obtainable from other parts of the Free State. Speaking of the Free State generally, then, the special features of the climate—its great dryness, and altitude 4,000 to 5,000 feet, and its sparsity of population—are those which recommend it most to the consumptive invalid. As in some portions of the Colony already alluded to, rain falls principally during the thunderstorms which occur at frequent intervals through the summer months, and this has the effect already mentioned of conferring on the winter months the dryness which in cold weather is so essential to health, without rendering the summer air permanently humid; owing to the rapidity of the downfall.

Every climate has its drawbacks, and the Free State has one, if only one, in its occasional fierce dust-storms. If these were of very frequent occurrence or long duration, they would undoubtedly be injurious to consumptive invalids; fortunately, however, they as a rule last only a few hours, and those lasting for a whole day or longer are of very unfrequent occurrence. While they last they are very disagreeable, and invalids should always remain indoors, for in addition to being unpleasant, the inhaled fine particles of dust are undoubtedly harmful to the lungs of the patient. But when we have spoken of these dust-storms there is nothing more to add unfavourable to the climate as far as the invalid is concerned, and they are



of little consequence as they do not confine him to the house for any length of time, as in the case with the Cape south-easter, which has its headquarters at Cape Town, and holds forth in full fury for days together.

Taking the Bloemfontein observations as the nearest we can get to those which would be representative of the Orange Free State generally, we find that during the six hottest months of the year the average maximum temperature is  $82^{\circ}$ , the average minimum for the same period being  $55^{\circ}$ , and the highest for one month being  $60^{\circ}$ ; the humidity during these months registered 55 per cent. as an average.

The heat of summer therefore is considerable, but perfectly tolerable with the dry atmosphere; the nights are deliciously balmy, and enable the invalid to sleep with doors and windows open during the night, or even to sleep altogether in the open air. This is of the greatest advantage to the invalid, who, above all things, requires as much pure air as he can get. The dryness of the atmosphere—humidity 55 per cent.—contributes largely to the safety of this procedure.

A little care, however, must be exercised. During the greater part of the summer months, and in most parts of the Free State, no dew falls; but there is about the middle of summer, either in January or in one of the months on either side of it, a rainy period, lasting for a few weeks more or less, but generally occurring at some time or other except in the drought



seasons. At this time there is in many parts of the country apt to occur a heavy morning dew, and it is needless to say that care should be exercised about sleeping outside during this time. With this exception, however, there are very few nights from the end of October until March when it would not be safe for even an invalid to sleep in the open air, and he has at any rate no fear in leaving open every available means for ventilation in his bedroom, a course which he should rigorously carry out whenever it is feasible. But the winter months are very different from the summer, and probably, for patients in anything but the later stages, it is the most beneficial time of the year of the two: it is certainly at this time of year a remarkable climate. The average maximum temperature for these coldest six months is  $66^{\circ}$ , and for the coldest month is  $56^{\circ}$ . This the reader would think indicates no extreme degree of cold, but when we look at the minimum record we find the average for the same six months to be as low as  $34^{\circ}$ , and that during the coldest of these months the average sinks as low as  $24^{\circ}$ , or  $8^{\circ}$  below freezing point.

What actually happens is that there are cold, dry nights, followed by comparatively warm, bright, sunshiny days. The humidity, in spite of the cold weather, when the air is only capable of holding a very small amount of moisture, averages only 61 per cent.

All this is very different from the patient's experience in England, where, when a frost sets in, it



generally lasts day and night through for a longer or shorter period, and is more or less accompanied by mist and fog.

In the Free State the bracing effects of the cold are felt and enjoyed without any of these moist disadvantages, and I must here again reiterate what has already been referred to, that the dry cold, unaccompanied by fog or mist, is not injurious to the invalid, as is abundantly proved by the beneficial effects of the health resorts on the Swiss Alps.

Dr. Herman Weber, in his recently delivered and very interesting lecture on the climatic treatment of phthisis, makes the following observations:—

“Many people still cling to the idea that warmth is curative of and cold injurious to phthisis, but this idea is quite incorrect. Another idea, that equable climates are best in the treatment of phthisis, should likewise be much restricted. The most important point of all good climates in phthisis is, as I have said before, purity of air.”

Again, later he says:—

“It is only a remnant of our old prejudices that can make us afraid of dry, calm, moderate cold.”

Later on, speaking of high altitudes, he says:—

“The main physical features important to us are—

“1. The purity or aseptic nature of air.

“2. Dryness of air and soil.

“3. Coldness or coolness of the air temperature, and great warmth of the sun temperature.



“ 4. Rarification and low pressure of the atmosphere.

“ 5. Intensity of light.

“ 6. Stillness of the air in winter.

“ 7. A large amount of ozone.

“ The effects upon invalids suited to such climate are increase of appetite, improvement of sanguification and general nutrition, strengthening of the heart and circulation, raising of the muscular and nervous energy, and of the activity of the skin.

“ Under the influence of such constitutional progress, which is assisted by the aseptic (pure), dry, and cold air, by increased ventilation of the lungs, and by compression of the diseased parts by healthy and emphysematous dilatation of the surrounding tissue, we observe a gradual improvement in the state of the lungs, leading to arrest of the disease and actual cure.”

Reading this, one feels that every condition is complied with in the Free State climate during the winter, for at this period of the year no dust storms disturb the air, and, although the country is not absolutely windless, still such winds as occasionally exist are not of a violent or disagreeable nature.

The cold winters then, so far from being injurious, are probably the healthiest times in the year; the alternation of hot and cold seasons relieves either from being too greatly felt, has a most invigorating effect on the constitution, and leaves very little to be desired



in the way of climate, by the consumptive invalid. Dr. Stollreither, of Bloemfontein, for many years an esteemed practitioner in that town, in writing to me upon this subject, regrets the absence of a proper sanatorium in Bloemfontein or some other portion of the Free State ; and if some such place could be established on the principle of our hydro-pathic establishments at home, with a few additional comforts for invalids, it would undoubtedly wonderfully facilitate the treatment and cure of phthisis in the country. He adds :

“ In spite of the insufficient accommodation, however, the results of the climatic cure are not only good, but often surprising.

“ Suffice it to say that I have seen many a perfect cure of asthma, laryngeal and bronchial catarrh ; consumption of the lungs I have seen greatly improved and even cured.

“ The climate is invigorating and strengthening, but there are two points to which I would draw attention, and which only too often prevent the beneficent influence of the climate on the sick organism. Patients often come up here with an idea that a residence of a couple of months is sufficient to cure them. Their business does not allow them to stay away a longer time from home. Of course those who come here with such ideas, who have not the time nor the means to stay here for their health alone, who cannot leave all other duties



of daily life behind them, and only care for the restoration of their health, may not expect much benefit from this most beautiful climate. It is too difficult to say what period is required for recovery. It may take years, it may be that you will never be able to leave the country without injury to your partly regained health, without risking a fresh outbreak of the disease.

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“It happens in almost every case that patients, after having been here some time, complain that they do not feel better—in fact worse, and often you hear them complain of being weaker than before; and I was only with the greatest difficulty and the full vigour of persuasion able to convince them that they must not expect from a climate so rapid a cure; that these symptoms are but natural on account of this most invigorating air, and that they will be followed by a most wholesome influence on the system. As by the change of climate the lungs and heart have to do more work than before, a feeling of weakness will soon be the result of it, and the more so the weaker and lower the system is. But this overwork is just a beneficial stimulus, and soon will give way to a feeling of improvement and strength.”

I think that further details are unnecessary, and sufficient has been said to convince anyone of the efficacy of the climate. I might go on quoting from this and that medical authority, but I think more



need not be said. I can only further add that I have never heard any medical man knowing the country to cast any doubt on its climate for phthisis, or in fact to do anything but describe it in the most glowing terms. I believe myself, that as an all-the-year-round climate it is unequalled in South Africa—unless Cradock district stand with it; and with regard to their relative value, it may be said that each locality may claim cures which the other has failed to effect, and that while some cases will benefit most in the one place, others will do so in the other.

As to the towns in the Free State, I need, I think, say little, but just indicate the most accessible.

#### BLOEMFONTEIN.

Bloemfontein, as the capital and largest town in the State, naturally first presents itself. Dr. Stollreither speaks well of its sanitary arrangements. The streets are wide, and the town is full of pretty gardens. It has a population of 1,800, and includes a considerable number of English inhabitants. It is most easily accessible by taking the rail to Kimberley from either Port Elizabeth ( $27\frac{3}{4}$  hours) or Cape Town ( $35\frac{1}{2}$  hours). From Kimberley it is two days' journey by cart or coach—110 miles. It can be reached *viâ* Aliwal North or Colesberg, both railway termini, but these routes are not so short or so convenient as the one mentioned.



The town is surrounded by low hills 200 to 3000 feet high, and is on this account somewhat warmer than some of the other Free State villages. The hotel accommodation is fairly good, and arrangements for lodgings for invalids can be made at various boarding houses in the town. The surrounding country has many excellent farms, and pleasant changes may be had in this way.

### BOSHOF.

Boshof is a pleasant little village only 30 miles from Kimberley, and about five hours' journey by coach. It is not picturesquely situated as to surroundings, but of late years it has thriven wonderfully, and gardens and trees fill the town, making it a pleasant relief to the eye during the summer months after the somewhat barren veldt through which one passes to get to it. The climate is almost exactly similar to that of Bloemfontein. The hotel accommodation is especially good. Its ready accessibility from Kimberley has made it a frequent health resort of the Kimberley people during the summer months. The sanitary conditions and health of the town are all that could be desired, and like other Free State districts, consumption is unknown in it as an idiopathic disease. I append here a few remarks contained in a letter from Dr. Watkins, who was for eight years a highly esteemed medical practitioner in the district:—

“I do not remember during a residence of eight



years in Boshof to have seen a single death amongst Europeans from idiopathic phthisis which had originated in the district, or within a radius of some hundreds of miles. I have from time to time seen patients suffering from phthisis which had developed in Europe or some of the coast towns, and many of these have marvellously improved in health during a residence in the Free State. Of course, no climate can be expected to effect a cure in cases of advanced disease with cavities in the lungs, dropsy, albuminuria, and so on, but I think I may say, that even in advanced cases life has always been prolonged, and many who have come with the disease in a comparatively early condition have apparently been cured. There is rarely a single wet day in the year. The rain falls mostly in storms, and passes quickly over, and there is an almost complete absence of the steady, drizzling rain of which we have so much in England. The Boshof subsoil is limestone, and the rains sink in very rapidly, so that half-an-hour after even heavy rains a long walk may be taken without any fear of wet feet. I can give you no analytical statistics of the number of the dreaded 'germs' per cubic foot or metre, but I am sure they must be very few from the ease with which surgical wounds, abscesses, and so on are kept perfectly sweet. I have not entered into the physical and social conditions of Boshof, but would simply add that an invalid may spend a pleasant as well as a profitable time there."



The other Free State towns are mostly easily accessible from the Kimberley, Aliwal, or Colesberg Railway termini, and are from two to three days' journey from these centres, some four or five days. I shall not attempt to deal with them separately, as almost the same remarks will apply to all, and I believe very little difference to exist in respective efficacy of their climates, which are very similar. Messrs. Silver and Co.'s handbook and a map will give any necessary information with regard to them. There is, however, one exception which must be made to this general statement in the town and district of Harrismith, which lies on the Eastern or Natal border of the Free State. Although this district enjoys an excellent summer climate, its mountainous neighbourhood influences the winter months unfavourably; they are very cold and often damp, early morning fogs and mists being prevalent, while during a considerable portion of this time of year very cutting winds prevail which are injurious.

#### TRANSVAAL.

The Transvaal, lying just north of the Free State, and separated from it by the Vaal River, has very much the same climate as the Free State. Its elevation is similar, but on the whole the atmosphere is decidedly moister. Being further inland, it is four or five days' journey to most of its inland towns from the nearest railway termini. Heidelberg, a town



lying south of Pretoria, has been recommended to me as one of its most suitable health resorts ; but Pretoria the capital and Potchefstroom have decidedly moister climates than the Free State towns ; of the two Pretoria is preferable.

The new gold fields in the neighbourhood of Johannesburg and Klerksdorp are also spoken of well, as having dry, bracing climates, more especially the former.

#### NATAL.

In a former edition the climate of Natal was hardly alluded to. I felt, however, that no book on South Africa as a health resort could be complete without some fuller reference to this thriving colony. I have no personal experience of the climate, but cannot regard it as being as suitable for the health seeker as the Free State, Cradock, or Beaufort West Districts. It is decidedly moister than these districts, and I do not think in any part can boast of the all-the-year-round dryness possessed by them, a factor to which I attach the greatest importance. There is no doubt, however, I think, that many parts of Natal rank only second to these places, and quite on a par with the ordinary Eastern Province towns, such as Graham's Town, Queenstown, &c. For the following account I am indebted entirely to Dr. Bonnar, Jun., who has for some years been in practice in Durban, and has had considerable experience of the climate. Dr. Bonnar writes :



“ In reviewing the special advantages afforded to patients by the different localities in the colony of Natal, a glance at its position and one or two of its leading physical features is necessary.

“ Situated more or less to the North-east of its sister, the Cape Colony, its seaport, Durban, is about 4 days by water from Cape Town. Between these two ports there is regular weekly communication, the well-appointed steamers usually touching at Port Elizabeth and East London on their way up the coast.

“ Looking broadly at its surface geography, we have stretching from its seaboard on the east, to its western boundary formed by the Drakensberg range of mountains, a gradually ascending series of well watered and verdant plateaux, each succeeding terrace land being more elevated than its eastern neighbours.

“ The climatic differences of these elevations as we proceed westwards are marked and form an important factor in considering the most suitable locality for those in search of health, more especially in connection with lung affections or a tendency thereto.

“ The coast belt extending inland for about 12 or 15 miles bears a more or less ever-green and semi-tropical appearance. Leaving this zone behind us, a few miles further inland bring us to a totally different region, especially as regards general aspect of country, average degree of temperature and humidity of atmosphere.

“ Gently undulating grassy slopes, ranges of hills, in



some places beautifully wooded and all well watered, now take the place of the luxuriant coast lands, and as we proceed further westwards, we find, on reaching Pietermaritzburg, the capital, we have, during the 71 miles journey by rail from Durban, gradually ascended to a height of 2,080 feet above sea level. Continuing our journey in a north-westerly direction, Howick, Estcourt, and other health resorts are passed, till we arrive at Ladysmith, the present railway terminus. The distance from the seaport to this town is 189 miles, the journey occupying about 14 hours, inclusive of stoppages. We have now ascended to a height of 3,300 feet, and are in a locality well-suited for particular pulmonary cases, specially during certain seasons of the year. Thirty miles westwards of this brings us to the Drakensberg mountains and the border of the Free State, the special advantages of which are elsewhere enumerated and commented on.

“*Durban.*—This is one of the prettiest and best laid-out towns in South Africa. Its streets are broad and clean, its parks sheltered, and its accommodation for patients, its boarding houses and hotels exceptionally good. No more beautiful suburb could be imagined than that termed the Berea which is situated on a hill of the same name, and overlooking the town, together with its landlocked Bay of 5 square miles, with the Indian Ocean in the background. The principal drive along the suburb extends for over 2 miles, and is



bordered by substantially-built villas and beautifully-wooded grounds. During the winter months, April to September, the climate is most enjoyable, though compared with the more inland and higher localities its percentage of atmospheric moisture is considerable. This averaged 74 per cent. during the year 1886, the thermometer registering for these months about 67° Fahr., the mean maximum being 78° Fahr., and the mean minimum 57° Fahr.

“Like all districts of Natal, Durban has its dry season during the winter when we have 6 months of bright clear sunny weather varied by occasional downpours of rain. Again referring to 1886, the meteorological statistics of the Durban observatory registered 40 days from April to September inclusive, on which rain fell, yielding a total of 11·6 inches. During the summer months—October to March—the climate is somewhat oppressive, the mean maximum daily temperature reaching to 85° Fahr., with a mean minimum of 64° Fahr. This, together with a moisture percentage 76 per cent. and a rainfall of 28 inches, renders the summer more or less relaxing. The soil is sandy and with macadamised roads, made especially with a view to surface drainage, all traces of ordinary rain disappear with amazing rapidity.

“Looking more especially at the adaptability of Durban and the Natal Coast belt generally for phthisical cases they cannot hold a first place as compared with such localities as Howick, Estcourt or Ladysmith.



The summer months are especially trying, but cases under my care have proceeded favourably and some exceptionally so, during the winter season. Those who dread a low thermometric register may be advised to locate themselves near Durban, between the months of April and September, and then they can with advantage proceed to a more elevated and drier district. Patients subject to bronchitic affections, especially those of a chronic nature, find as a rule marked benefit or entire immunity from the disease. Some whose condition has hurried them from the mother country, have, to my knowledge, been able after a few years' residence in Durban, to return to England, and with care stand its climate comparatively well.

“*Pinetown*.—A village which lies 12 miles inland from Durban and at an elevation of nearly 1,100 feet, was a favourite health resort for coast patients before the railway rendered locomotion to the more upland districts so easy. It is just outside the coast belt and enjoys a drier atmosphere than Durban. Residents still lay themselves out for the reception of patients.

“*Pietermaritzburg*.—Standing at a height of 2,080 feet above sea level Pietermaritzburg, the seat of Government, enjoys a fairly attractive climate; though compared with other parts of South Africa, it cannot be considered specially good for chest complaints. Its occasional hot winds are undoubtedly trying, and in the town itself the character of the soil favours the sus-



pension of a certain amount of dust in the air, should the weather be at all boisterous."

"It is a picturesque town with its red-tiled houses and numerous blue gum trees. During the summer the heat though sometimes trying is comparatively dry, and during the winter the climate, especially a little way out of town, is delightful. The mean average temperature from April to September, is about 60° Fahr., with a 9 a.m. humidity of 71.3. For the summer months—October to March—the mean average temperature is 60° Fahr., with a mean atmospheric moisture percentage at 9 a.m. of 73.6, and at 3 p.m., 70.5."

"Dr. James Allen, who has been practising there for a considerable period, writes to me thus:—

" 'The chest diseases which derive most benefit here are phthisis and chronic bronchitis. I do not think it is a good place for asthma. At the same time I may say with regard especially to phthisis, without entering into particulars of any case, that I have known instances where persons suffering from consumption have derived remarkable benefit from residence here. Speaking generally of consumption and chronic bronchitis, I may say that both diseases are very uncommon amongst the natives. On the whole, I feel I am justified in saying that those suffering from either complaint will derive considerable benefit from residence here.'

"*Howick*.—This is at present perhaps the most



fashionable resort for convalescents in Natal. Being but a little over two hours by rail from the capital, and standing at a height 3,400 feet above sea level; its clear bracing air and magnificent upper "Umgeni" falls, 307 feet high, and within a few minutes' walk of its principal hotels, form attractive features, especially to these who engaged nearer the coast cannot spare time to proceed for change of air to the further and still more elevated inland localities. One could not wish for a more healthy and reinvigorating atmosphere during the winter months; day after day being fresh and sunny, though at night the necessity for additional clothing is often felt. The village is comparatively sheltered by the surrounding hills, except towards the west, which partly accounts for its beautifully mild, though strengthening climate.

"During the summer months certain drawbacks must not be overlooked. Occasionally at this season, for several consecutive afternoons, we may have mists, not unfrequently accompanied by fine rain; and again towards the beginning of the warm season, high winds from the west prevail, usually continuing for one or two days, and followed by a "three days' rain." This, though beneficial to the farmer, is trying to the convalescent. The soil is porous and quickly absorbs any ordinary downpour of rain, and the absence of dust in the atmosphere is a beneficial and pleasing feature. The little village boasts of several boarding-



houses and two good hotels, and special conveniences are arranged for invalids.

"The hygienic surroundings are exceptionally good. Dr. von Mengerhausen informs me that from 1883 to 1887 he has only had one death from consumption and this case was brought to the locality, already the subject of far advanced disease. Asthmatic cases generally derived decided benefit, specially those where the disease has been contracted in a humid climate.

"*Estcourt* district has, with good reason, been looked on as possessing one of the finest health-restoring climates in the uplands of Natal, more especially for those suffering from the more serious chest affections. Standing at a height of 3,562 feet above sea level, the village occupies a site at the junction of the Little with the Larger Bushman's River, and is 76 miles by rail from Pietermaritzburg. Lovely little bits of river scenery are found within a short distance, and the roads in the neighbourhood are good. Being in the midst of one of the finest farming districts in Natal, cases are not uncommon where invalids, being so far benefited or restored by its charming climate, have been induced to remain in the locality, and themselves embraced successfully a farmer's life. In the village, good accommodation is afforded at the several substantial hotels, and for patients requiring special attention, arrangements can be made. In a wonderfully dry and invigorating atmosphere, markedly free



from dust, the patient has a perfect climate during the greater part of the year; but Dr. Brewitt (of this town) advises a change "overberg" to the Free State, especially during January, when a temperature and atmosphere similar to the Estcourt cooler months are obtained. Such a change is readily effected, Estcourt being but  $2\frac{1}{2}$  hours by rail from Ladysmith, which is situated a little over 30 miles from the "Berg," on the other side of which the Free State lies. He advocates, further, a change to the coast during June and July for those who prefer a greater amount of warmth than is present in the clear and cold up-country mornings and evenings during the winter season.

"*Ladysmith.*—Lying sheltered from the severe winds by reason of its protected position this town enjoys special advantages for invalids. While the winter months—April to September—are dry and bracing and specially adapted for phthisical cases, its summer is decidedly warm; but patients can readily remove to the adjoining Harrismith portion of the Free State, where the summer climate is most attractive.

"The lovely Drakensberg range, which separates the two countries, is but thirty to thirty-five miles from Ladysmith. Being in direct railway communication with Durban, and forming at present the terminus, Ladysmith is one of the busiest little towns in South Africa, scores of waggons constantly loading up goods and machinery for the Free State, the Rand and



Barberton Gold Fields. The town, which is built on a slope, is prettily laid out, the lower part being situated on the banks of the Klip River."

Dr. Procter writes to me as follows:—

"After now nine years' experience in the districts of Harrismith and Ladysmith, I can speak with confidence of the many beneficial results that I have seen with regard to cases of Phthisis, Bronchitis and Asthma. I believe that these localities have only to be better known to be sought after by invalids suffering from one or other of these ailments.

"I have never known a single case of phthisis which has not been benefited from residence in these up-country districts; and in some few cases, I have seen the disease quite arrested and the patient able to lead once more a fairly happy life. The high elevation of these parts and the warm and dry climate make them especially suitable for chest complaints.

"For consumption I believe that residence in the winter on the Natal side of the Drakensberg and in the summer on the Free State side, *i.e.*, in either the Harrismith or Bethlehem divisions, would give all that could possibly be desired or be obtainable in the way of climate; and I have, during my three years' residence in Ladysmith, seen several cases of asthma and phthisis which have wonderfully benefited by the climate.

"More extensive and interesting details could in time be collected and brought under general notice.



Nevertheless, the foregoing observations, so far as they go, may assist the enquirer in choosing his health resort and thereby fulfil their object."

For further details as to South African localities, I would refer the reader to a handbook on South Africa published by Messrs. Silver and Co., in which he will find additional information which may be both useful and interesting to him in travelling through the country.

#### GENERAL REMARKS.

In order to make this Book of more value to the health-seeker, a little practical advice may be given to enable him to get the fullest benefit from the climate, and make the most of the health resources of the Colony.

First of all, then, there are a large number of people who have, perhaps, a hereditary predisposition to consumption and suffer from chest weakness, manifesting itself principally during the winter in England by prolonged cold settling in the chest, and being got rid of with difficulty, leaving behind them a cough which lingers perhaps for months. Such persons are (as we all know) on the verge of consumption, and every winter they spend in the damp, cold climate of England is a source of danger to them, which only too frequently proves eventually fatal. To the wealthier classes change is easy, and they should not fail to avail themselves of it. They cannot do better than come out to South Africa and take advantage of its



climate. They should leave England in September and October, before the winter commences, and will arrive, after a pleasant three weeks' voyage (itself frequently of great service to the invalid), in Cape Town just as summer begins, and before it has become hot. If they are energetically inclined and in sufficiently good health, nothing can be more invigorating or beneficial than a course of climbing and mountaineering, either in the immediate neighbourhood of Cape Town, or making the village of Ceres their headquarters, from either of which places the most delightful of walking trips or mountain excursions can be undertaken.

A caution is necessary to persons undertaking such a course, that they should be extremely careful to take their exercise moderately. Nothing can be better for anyone without actual chest disease than systematic exercise of this kind; but if overdone, it may prove injurious. Let the patient feel his way carefully, and not go beyond his strength, never coming home *overtired*, and he will find in all probability considerable benefit accrue. Horse exercise taken in the same way, and with the same precautions also, cannot be too strongly recommended; and for those who find their strength insufficient for the more active exercise of walking, it is especially valuable.

Towards December the weather becomes hotter, and the invalid will probably feel less inclined to pursue walking and mountaineering, and may either



stay at Ceres or Cape Town for the rest of the summer months, not however at the latter place later than the end of February, or the former than the end of March. It is hardly necessary to urge that, wherever he stays, outdoor exercise of some sort—riding, driving, &c.—should form a prominent feature in his programme. If he care to make a tour of the Colony—and this, if judiciously undertaken, plenty of time being allowed for it, is, I believe, most beneficial on account of the frequent change of good climates experienced—if this is contemplated, he should start not later than December. He may take the boat round from Cape Town to Port Elizabeth (about thirty-five hours), where he will find excellent hotel accommodation, but where he had better not make too prolonged a stay. From here the rail may be taken to Graham's Town (100 miles), a comfortable and very English town, with very pleasant surroundings, and in the district of which are many of the finest ostrich farms in South Africa. After exploring the neighbourhood and if he cares visiting these farms, he may go by an easy railway journey to Cradock (about 90 miles), which has been already spoken of as one of the finest climates in South Africa, and where he will do well to make a long stay of perhaps a month. As the winter will now be approaching, he should make up his mind either to stay at Cradock, or go on by rail to Kimberley, and thence by an easy journey by cart to Boshof (five hours) or Bloemfontein (two days), and at



one of these places take up his winter quarters. Should he wish to stay for a week or so in Kimberley to inspect the diamond diggings, and see one of the most remarkable towns in South Africa, he cannot do better than so arrange his plans as to arrive towards the end of March, when the summer heat, which in this town is very great, is quite over, and when the winter has not yet set in. It is better for him to do little or no travelling during the winter in the Free State, as the climate, though dry, is cold. As the summer months approach again he may make another move—if in the Free State, organising shooting trips, or if he choose, paying a visit to the Transvaal. He will do well to wait before starting on any long journey until the rains are over, which generally set in about September; but he may as a rule safely begin to travel in October.

After spending as much time as he can spare in the Free State, he may again join the rail at Kimberley, and go by easy stages from thence to Cape Town, breaking the journey, which is rather a long and tedious one, at Beaufort West, and afterwards spending a few weeks at Ceres.

If, however, he should care to extend his trip a little, and see some of the most beautiful parts of the Eastern Province, he may travel slowly by private cart from Bloemfontein down to Aliwal North (120 miles). After staying here as long as seemed desirable, he would take rail to Queenstown. Here he should



make a few weeks' stay if he wishes to go through some of the grandest mountain passes in South Africa, taking a journey across country to Fort Beaufort *viâ* the Catberg, &c., or visiting the various portions of the Stormberg range of mountains. Either from Fort Beaufort by cart (one day), or from Queenstown by rail, he may proceed to King William's Town, where a stay may be made, or else go on by rail to East London, in both of which places he is in very attractive neighbourhoods. All the places mentioned have excellent climates, including East London, if he prefer the sea air. From East London he may take the steamer round to Cape Town. Cape Town after the middle of March cannot be relied on, and the traveller had better, after that time, go to some neighbouring place, such as Ceres, and await his time for returning home. This he should do not before the end of April or beginning of May, so as not to spoil the effects of his trip by arriving in the midst of the spring east winds. Or, if the tourist should prefer it, he can commence his journey through the country by taking the railway at once from Cape Town, tarrying, if he pleases, at Worcester and Beaufort *en route* for Kimberley, the Free State, and other towns named in the preceding paragraph, but with the order reversed. In this case he would return by sea from one of the eastern ports to Cape Town. This plan would have the advantage of at once enabling the patient to test the effect of the up-country air.



This is a long trip, involving some expense and lasting a considerable time. It can, of course, be made in a much shorter time, but it cannot be too strongly urged on those travelling for health's sake, how important it is to travel slowly, and always, where the railway is not to be had, by private cart, which can be hired at very reasonable rates for long distance travelling, probably at the rate of about £2 per diem in most parts of the country. If the means of anyone do not allow him to do this, it is better to travel as little as possible, and not attempt to go a tour of the Colony in post carts.

It will be well for him to confine his visits to one or two places. He may spend, on arrival, a few months at Ceres, and as the summer advances, proceed by rail to Kimberley, from whence he is within easy access of Boshof and Bloemfontein, at one of which places he will find it best to winter. Returning during the following summer, he may take the rail from Kimberley to Cradock and spend his time there to the end of April, when he could go on to Port Elizabeth by rail and take ship home.

Owing to the hurry which such a tour would involve if attempted in six months, and bearing in mind the injurious rather than beneficial effects on anyone in a weak state of health, I strongly advise those who are not prepared to spend a winter in South Africa to simply visit one or two places, such as Ceres or Cradock, and get all the benefit from the climate



they can by taking as much outdoor exercise in the way of riding, shooting, walking, and climbing as they feel strong enough for. It must be added, however, that too much benefit must not be anticipated from so short a trip.

It cannot, however, be expected that for persons in whom the predisposition is strong to phthisis, a visit even of eighteen months' duration to South Africa is sufficient to avert for more than a year or two at most his tendencies to the disease, and such persons are therefore strongly advised to make the Colony their home for some years. Those with a little money and any inclination to farming will find in this occupation the most certain means of getting rid of their consumptive tendencies. Further, even where actual lung disease has developed itself, a period of residence on some good farm is important, as, without doing much work, and keeping out of doors on horseback, if possible, the greater part of the day, he may obtain an insight into South African farming, which may be useful if he desires to settle in the country, and greatly increase his chances of a permanent cure.

With respect to those invalids who are dependent on obtaining some occupation in the country for a livelihood, it is necessary, in the present depressed state of the country, to speak of their chances with a good deal of caution. Four or five years ago it might be said with certainty that any industrious and painstaking man would certainly fall on his feet sooner or



later, and make a comfortable income. Many a one indeed, who has been quite unable to earn a livelihood in England from feeble health, has gained sufficient in the Colony to earn a comfortable income and support a family; and although even in the present depressed state of things some who seek the Colony for health find employment, it would not be right to urge upon persons so situated to emigrate to South Africa, unless they have previously made the necessary arrangements with an employer of labour. The same caution must be exercised in speaking of the chances of professional men, which are very different from what they were a few years ago. It is to be hoped that this state of things will soon pass away in Africa as in other countries, and then the invalid who has to earn his bread may be recommended to emigrate with greater confidence.\*

With reference to the localities which those going in for farming should choose, for those simply with a predisposition to disease one might almost say any part of the Colony. Still, amongst the best parts are certainly the Cradock district, Orange Free State, portions of the Transvaal, or the plateau in the neighbourhood of Ceres already spoken of. Those whose lungs are already affected should certainly choose one of these localities if possible. The health-seeker is, however, cautioned, that if possible he should avoid

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\*Since the above was written the opening of the Gold Fields in the Transvaal has caused a revival in trade throughout the Colony and the outlook is now most encouraging.



at first the necessity of earning his own living, and devote himself to improving his own health, at any rate for some months. When he has sufficiently regained this, it will be time enough for him to look out for something to do, and he should, if possible, avoid any employment closely confining him within doors. So far I have been speaking of patients either simply with consumptive tendencies or in whom the disease has only just commenced. To those, however, in whom it is completely developed, a few additional hints may be given. These cannot of course expect anything like a cure without years of residence in the country, and will even be fortunate in attaining it then. It is especially necessary that for the first year or two, at any rate, they should live entirely for health's sake, avoiding business pursuits, until they feel so thoroughly re-established in strength as to be enabled to engage in them with safety. It is difficult to draw a line in more advanced cases between those who should or should not come out to the Colony, and patients must of course here follow the advice of their medical advisers at home. It is certainly true, however, that cases apparently very hopeless do improve wonderfully with the change, and if they cannot expect to entirely get rid of the disease, they may reasonably look forward to a very vast improvement and a considerable lengthening of life. Where there is no hope of even partial recovery, and this can only be judged by a medical man, it is absurd and cruel to advise patients



to leave home surroundings, and go away to die abroad deprived of all these comforts.

The best time for leaving England, and the one most likely to ensure a pleasant voyage, is, as has been stated before, September and October; the passage, however, is not at any time of the year a rough one as a rule. The ships being excellently found in every respect, and the table good and varied, no apprehension need be felt as to the comforts of the voyage. It will therefore be a great mistake, in cases where time is of value, to wait for these months.

Should invalids arrive in the early summer months at Cape Town, October and November, feeling wearied and fatigued with the voyage, they cannot do better than proceed at once to Ceres, which will be reached a few hours after leaving Cape Town. Having tried Ceres for some months, they will be able to form an opinion as to whether the climate is doing them good, and should this seem not to be the case, they are advised to proceed at once to the Orange Free State. To do this they have only to take train to Kimberley from Ceres Road; but as the journey is a long one, about thirty hours, it will be better to break it for a night, or even a day or two, at Beaufort West, which lies about half way between Cape Town and Kimberley. From Kimberley they will easily get a private cart to the Free State, and a five hours' drive will bring them to Boshof, where it will be well for them to remain some time. In the author's opinion there is, from a



health point of view, little to choose between this town and Bloemfontein, or in fact any other of the Free State towns. The easy access of Boshof, however, is a point in its favour to those first coming up. Further, it is on the road from Kimberley to Bloemfontein, and the latter, which is of course larger and has more social attractions, may be visited when the patient sufficiently recovers from the fatigues of his journey and is in better health.

But there is another course which the invalid may take which has in many ways as much to recommend it. Cradock, which has already been spoken of as one of the pleasantest and best health resorts in South Africa, lies on the main line of rail from Port Elizabeth to Kimberley, and can be easily reached by a journey of ten or twelve hours from the former place. The climate already spoken of is probably as good as, though rather hotter during the summer months than, Ceres; it has, however, the great additional advantage of a very dry winter, somewhat resembling that of the Orange Free State, and invalids who find they do well may stay there for both seasons of the year. For invalids arriving in the Colony during or just previous to the winter months, it is certainly preferable to Ceres, and its easy access from Port Elizabeth also commends it. If found not suitable it can be changed for the Orange Free State without difficulty, being as has been mentioned on the main line between Port Elizabeth and Kimberley.



To bring this portion of the pamphlet to a close, it may be said that the author has felt obliged to name some practical course to be taken, but finds a difficulty in making choice amongst so many places that are good.

The Orange Free State stands out prominently as one of the finest climates probably for the treatment of phthisis in the world, and for the most part this may be said of all its towns, Boshof and Bloemfontein having been specially mentioned as the easiest of access.

The Cradock district, with its elevation of 3,000 feet, is scarcely second to it as an all-the-year-round climate. The more mountainous elevations in the neighbourhood of Cape Town, Ceres, &c., as far as their summer climate goes, can hardly be surpassed, and the greater number of Eastern Province towns are all localities undoubtedly of great value in diseases of the chest, though they cannot rank as highly as some of the parts before mentioned.

Many invalids will tell you that they have tried one place unsuccessfully; and while one invalid will vaunt one place as having proved a godsend to him at a critical period of his disease, another will be equally enthusiastic about some other. The choice of a climate is something like the choice of a wife, no categorical enumeration of characteristics without actual contact and experience can bring about a happy match in either case, and the invalid must be



content if he finds one climate is not agreeing with him to try another.

With reference to clothing, it cannot be too strongly urged that flannel should be worn next the skin; that night and day, in fact, the patient should be clothed in flannel. For a Cape winter all the ordinary clothing used for an English winter should be provided.

A good heavy great coat, a macintosh, and plenty of rugs are indispensable for travelling; light clothing for the summer, and especially three or four suits of cricketing flannels, than which there is no pleasanter or more healthy dress for this period of the year.

With reference to the medical necessities, I am not one of those who think an invalid should furnish himself with a medicine chest. There is no town in the Colony without its doctor who can be consulted if required. It is better, however, for the invalid, should he be troubled with cough at nights, to arm himself with some cough syrup prescribed by his medical man.

If he be troubled with hæmorrhage, he will do well to bring a bottle of the liquid extract of ergot (of which about a teaspoonful is the dose), and any further prescription in the way of tonic or antisudorific which his medical man may prescribe for him. He will also do well to provide himself with some saline aperient, such as Pyretic Saline or Eno's Fruit Salt, for the voyage.

A last word may be added as to the class of cases



suitable for emigration, and it need hardly be said that such patients should be principally guided by the advice of their home medical advisers. Those persons of a nervous temperament, likely to feel acutely the separation from home influences, are least likely to be benefited by any distant change; also cases of rapid or so-called galloping consumption, as they are too frequently unaffected by any change of climate. But with these exceptions, any cases not in the last stages of the disease are likely to be benefited or cured by the change according to circumstances.

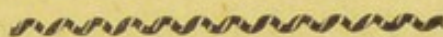
The sea voyage, which lasts a little less than three weeks, is often itself beneficial and need not be regarded as in any way deterrent. Let the invalid start with as good a heart as he can summon, not forgetting to provide himself with as many letters of introduction as possible, and be prepared to find a new home in a new country, which he will soon find is as homely and cheerful as the one he has left behind him.







## APPENDIX.



### CASES.

THE following cases are not especially selected or quoted for their scientific value, nor are they accompanied by any minute diagnosis of each case. They are ordinary instances of the remedial effects of the climate, in some cases supplied by medical practitioners, in others by the patients themselves, but in all cases coming to the writer on professional medical authority. They might be multiplied indefinitely, but sufficient are given particularly to throw light on the effect of the climate of the special localities indicated, on consumptive invalids.

DR. BROCK, of Rouxville, Orange Free State, who has been some four or five years in this country, writes in general terms of a few cases that have come under his notice, but of which he does not send me full particulars :—

“ One hears constantly of benefit obtained by invalids by a residence in this country, and I am sorry I cannot give you more definite in-



formation of them. I may, however, refer to one case, H., a lawyer, who, although his one lung is practically useless, continues to drive a thriving business at Aliwal North. He came there some few years ago from Graham's Town, as he found that the down-country climate was unsuitable.

"I know also of a gentleman who had at home incipient signs of phthisis. He came out to the Free State last July, and has ever since been perfectly well. It is hardly possible to find any weakness whatever.

"I might also mention that a brother of mine, Dr. W. Brock, of Rouxville, who, while at home, was a martyr to bronchitis and asthma, has since coming here, two and a-half years ago, experienced complete relief from both. The only occasion on which he felt any return of the asthma was at East London, which he visited for a day or two last October. He could not stand it, and had to come up country without delay.

"Similarly a friend of mine, Dr. —, of Dordrecht, who was forced by sufferings from asthma to relinquish a good practice at home, came out here little more than two years ago at my instigation, and has had equal reason to be satisfied with the result. He, too, found that residence on the coast brought back his malady. After some time spent here with me in perfect health, he went to a coast town to take over a practice, but immediately became as ill as ever he had been at home."

DR. WATKINS, Kimberley, writes me also of some cases that have come under his notice :—

"Mr. S. became consumptive in one of the coast towns, but remained in the neighbourhood of the coast owing to business engagements, for several years, during which time he steadily lost ground, till his medical advisers told him that his only hope was a change to the Orange Free State, but at the same time warned his friends that it was doubtful if he would live to reach the Free State. He improved steadily at Bloemfontein, and was enabled to resume teaching, which was his vocation, and latterly held a travelling Government



appointment. It is now ten years since he moved up country, and he is still in good average health, but still finds his chest trouble him when he visits any of the damper portions of the Colony.

"Another gentleman, who came out from England, and had hæmoptysis and other signs of chest disease, which continued during his residence in one of the coast towns, was advised to go up country. He spent two years in the Free State, and during this time enjoyed good health, without any return of the symptoms. He subsequently went a trip to England, returned, and got married, and has enjoyed for the last four years excellent health.

"Mr. M., an accountant, had severe hæmoptysis while living in one of the coast towns, and was told his lungs were extensively diseased. He was advised to come up country, but reached the Free State in an extremely weak state. Since then, however, he steadily recovered health and strength, and during his five years' residence there, had no further hæmorrhage, no cough, and feels now well and strong. Able to do any ordinary amount of work.

"Mrs. —, the wife of a medical man, whose mother and uncle both died of phthisis, had an attack of whooping cough in London, and never lost the cough. Came out to the Colony, and living in one of the damper Eastern Province towns, had repeated attacks of bronchitis and was apparently drifting into consumption. She moved up to the Free State eight years ago, and is now completely free from any organic disease of the lungs, though she suffers occasionally from spasmodic asthma."

DR. BECK, of Cape Town, writes me:—

"I have only been able to hurriedly jot down a few cases from my note-book.

"Mr. A. has had severe hæmorrhage from the lungs several times in England. Was so seriously and anxiously weak that his physician in London recommended him to remain at home. He however preferred to come out to the Cape. He was carried on board at Plymouth, and received warning that he would never see home again. In Cape Town after arrival he rallied somewhat, and after a month



went up to a farm in the Nieuwveldt, near Beaufort West. Here he lived for two years constantly. His improvement was steady and continuous, and at present he is on a pleasure trip round the world, apparently restored to perfect health. His lungs have improved greatly, and the disease is arrested.

“ Mr. E. had suffered from severe chest symptoms with hæmorrhage before leaving England ; was ordered to the Cape, and on arrival went to Beaufort West, where after some months he rallied sufficiently to take up business. He remained well for three years, when, through great carelessness, he caught a very severe cold. This brought back the disease, and he died six months afterwards. For three years there had been an absolute arrest, and when I made his acquaintance a year after his arrival, he assured me he had never enjoyed better health in his life. He then regarded himself as completely cured, suffering from absolutely no symptoms.

“ Mr. J. V., a gentleman suffering from well-marked phthisis pulmonalis, with several intercurrent hæmorrhages from the lungs, was unable to remain for any time without a return of hæmorrhage. Was ordered to go to Bloemfontein ; with difficulty this place was reached. He however soon rallied, gained weight, and threw off his cough. He soon recovered sufficiently to undertake active work, and for many years occupied an official position there. Recently he died after leaving Bloemfontein. For eight or nine years he lived there in a condition of great comfort and absolute health.”

ILLUSTRATIVE CASES OF BENEFIT FROM THE CAPE TOWN  
CLIMATE FROM C. LAWRENCE HERMAN, CAPE TOWN.

In mentioning the following two cases I do not give the initials for obvious reasons, as both patients are still here among us ; they are particularly instructive, as both the patients have resided only in Cape Town.

The first case I shall mention is that of a lady—I shall call her Mrs. X.—who arrived here from England early in the autumn of 1883. She had been ill with a cough for the last



twelve months, expectorating a large quantity of yellow mucus, occasionally blood tinged. She has had four fine sturdy children, all living. A sister of hers died young, at sixteen, of a chest affection. I saw her first a short time after her arrival here in 1883, when she was complaining of shortness of breathing, distressing cough, and very great weakness. There was dulness on percussion over the apex of both lungs, particularly on the left side; bronchial breathing both above and below the clavicles, with numerous coarse and fine râles. Respiration was hurried, and now and then attended with much difficulty in breathing. The expectoration was very profuse, and occasionally blood-streaked; there was evening fever and profuse night sweats.

During the first winter (1883) the patient was in a most precarious state, and had to remain in bed nearly the whole winter; however, on the approach of summer all her symptoms improved, and she made considerable progress. At my recommendation she removed to a more sheltered part of the town, and the second and third winters were passed in comparative comfort, the improvement in the third winter being most marked; and now (1886) the patient has quite got rid of her cough, there is no night-sweating or fever, and there has been great improvement in strength, nutrition is much improved, and the patient has become plump and well-nourished.

Mr. A. was sent out here early in 1882 from England, where he had suffered very much from asthma and bronchitis. His chest is slightly barrel-shaped, and there are signs of emphysema; but during the last four years he has had only one slight attack of asthma, which rapidly passed off.

#### PATIENTS SPEAKING FOR THEMSELVES.

The following are all taken from accounts given by the patients themselves:—



Case I.—G. B., age about 30, came out to the Colony about five years ago, with the usual signs of chest weakness, which—during a residence in various parts of the Colony, including Cape Town, King William's Town, and other places—continued to develop themselves into definite symptoms of lung disease. In writing to me this patient says that he found little benefit from any of the Colonial towns of lower elevation, having visited at various periods Cape Town and neighbourhood, King William's Town and Queenstown. He speaks, however, favourably of a farm at which he resided in the latter neighbourhood. Aliwal North he speaks highly of as having done him a great deal of good. He goes on to say:—

“Of course, in my opinion, there is no place like the Free State. I never really began to go ahead until I settled in Boshof; and here, to my uninitiated mind, it was wonderful how I pulled up. I was often seedy there, but I don't remember after the first month or two ever continuously suffering from pain and discomfort, as I am sorry to say I am again doing since I left the country.”

The author cannot get at the precise details of the amount of improvement this patient underwent during his residence of about three years in Boshof. From what he says his is evidently a case in which there was a considerable amount of lung disease, and in which there was a liability to slight attacks of pleurisy. He is an example of an invalid who, whilst showing marked signs of improvement and able to live in comfort in a climate which he has found to suit him, is yet unable after some years' residence to leave it with any safety to himself. That he derived very great benefit from the climate, and that his having to leave it is a great misfortune to himself, is undoubted.

Case II is appended in the words of the patient, C. F., age about 30.



"About seven years ago, while resident in Dorsetshire, England, I contracted a bad cough, and became wretchedly weak and miserable. I consulted Dr. Bacot, who informed me that I was developing consumption, and that the apex of my right lung contained a deposit of tubercle. He advised me strongly to leave England and go to the Cape. I did so, and having little idea as to what part of South Africa to go to, I decided on Port Elizabeth. My parents have since informed me that from what Dr. Bacot said they were scarcely able to hope that I should live very long. I arrived in Port Elizabeth in the beginning of winter, and stayed there ten months, earning my own living by doing some light office work which I was fortunately able to obtain. During the winter months I gained strength, and felt much better than previously. The cough, however, continued; and as the summer months came on I felt I was not improving. I consulted Dr. Ross, of that town, who gave it as his opinion that if I stayed in Port Elizabeth the disease would advance and eventually prove fatal. He advised me strongly to try the Free State, and having obtained a good offer from a business house in Bloemfontein, I proceeded there at once. I lost my cough after a residence of some months in Bloemfontein, but did not seem to gain strength very rapidly. My office work was rather trying, and I consulted one or two doctors occasionally, who informed me that there was still a considerable amount of disease of the lungs present. Thinking my work was too trying for me, I succeeded in getting another business offer from Winburg, a town lying north of Bloemfontein; and here, my duties being lighter, I made considerable improvement, gaining flesh and strength. After nearly two years' residence here I left Winburg, and lived for a similar period on a farm in the Bethlehem district of the Orange Free State. I continued to feel better and stronger, "but at the end of my stay here the doctors informed me that there was still lung mischief present, though very slight. I now obtained a travelling business appointment, going from one town to another of the Free State, with occasional visits to Natal and the Transvaal. This suited me admirably and I improved directly in health, becoming really a strong man for the first time since my illness commenced, and feeling equal to any exertion. After about a year of this work, I again consulted



my doctor, who informed me that he could detect no traces of disease in the lungs. I have continued in this travelling occupation up to the present date, and always enjoy excellent health. Dr. Fuller, of Boshof, has recently examined my lungs, and confirmed the opinion of previous doctors as to the absence of any detectable signs of disease. I am firmly convinced that the Free State climate saved my life, and I found the travelling existence which business induced me to adopt of the greatest possible benefit. I do not consider Natal, from my experience of it, equally beneficial, more especially during the summer months, when the heat is moister and more oppressive. The winter, however, I have always found very agreeable and suit me well. I may add that only recently I have been able to insure my life for £1,000, without any advance being placed upon it."

The above case is a very remarkable one, but from the fullness of the description needs little comment. I think it may fairly be classed amongst the perfect cures, and is all the more satisfactory in that the gentleman, while his cure was being brought about, was able the whole time to continue to earn his own living—a course, however, not devoid of risk, and not to be recommended where any other is possible, until considerable progress towards recovery has been attained.

Case III.—F. L., age about 35, married, with several children. The history is taken verbatim from a letter, and runs as follows —

"In January, 1874, I caught a severe cold, which resulted in my having to give up office work (I was then articled to a solicitor, Newport, in Monmouthshire) and in being more or less laid up for some time. I had a nasty cough, but no hæmorrhage or spitting of blood. I did not seem able to get rid of my cough, or recover my usual strength, and my local doctor advised me to see Sir W. Jenner in London. This I did, and he said that there was a deposit of tubercle on the right lung, and I ought to go abroad, and he strongly recommended the Cape. I was then in the middle of my articles, and going abroad permanently meant as I thought, and as was the case, for some years giving up all



professional prospects altogether, and I urged that I should be allowed to take a voyage to Australia and back, say for twelve months, so as to resume work at Newport. However, neither Sir W. Jenner nor my local doctor would hear of this, and they said if I went to the Cape at once I might arrest the disease, and be able to live there, but must not think of returning to England. On May 5, 1874, I left England. I was naturally of a poor constitution, and at this time looked particularly bad, and had a constant cough. I was spoken of on board as the poor young man hardly likely to live the voyage. I landed at Cape Town already considerably better, and remained there. After about six months the cough ceased to be constant, and only came on at intervals. After twelve months I was much better, having only the cough when damp weather came on, or I caught a little cold. I was engaged to be married, and consulted Dr. Herman, of Cape Town, as to whether I ought to get married. He examined me, said there had been chest disease, but it was stopped, and all I wanted was to be careful. I did not catch cold and renew it, and he recommended me to get married as the best thing I could do. Accordingly in June, 1875, I sailed from Cape Town for England, got married there in August, and returned at once. During the few weeks in England I felt the damp and had a slight return of my cough, and was quite satisfied I could not live in England. On arrival at Cape Town, I proceeded at once to Graham's Town, and lived there a year. I think there I continued to gain strength, but not to any great extent. The cough came on occasionally and I had to be very careful. On the whole I did not think Graham's Town suited me as well as Cape Town had done, and I have since been sure that it was not as good for me as East London has been. From 1876 to the present time I have lived in East London, and have steadily gained strength. For years past I have had no cough at all, and a year ago got the 'Mutual' to insure my life, adding five years only to my actual age. Two years ago I went home to England and stayed there for some months, until November, but found no inconvenience."

The writer then goes on to say how highly he regards the East London climate; but, as I have already pointed out, these



conclusions as to the speciality of their own particular climate, though natural on the part of the patient, must be accepted guardedly as applied to the general run of consumptives. The case seems to be one of those in which sea air has acted most beneficially, for he speaks of improvement already occurring from the effects of the voyage—a result by no means constantly realised even in patients who afterwards do well. I think the case, like the last, may be regarded as a “perfect cure,” the disease not merely having remained stationary, but the consolidated portion of lung having become absorbed. Otherwise, I can hardly believe that an insurance company would have accepted him on such favourable terms.

Case IV.—M. A., living in Mayfields, near Rouxville, Orange Free State, writes as follows :—

“I came to South Africa in February, 1878, for my health, my left lung being slightly affected. The first three months were spent in Graham's Town, but the climate at that place did not advance my health. I then came to Mayfields, near Rouxville, Orange Free State, in midwinter, and at once a decided improvement commenced. In six months more I was in capital health, the cough and all other bad symptoms having disappeared.

“Unfortunately about this time I was laid up with a smart attack of scarlet fever, and succeeding this illness came a bad cold, which lasting a long time did much harm to the affected lung. There is little doubt in my own mind that without these serious drawbacks in a few months my lung would have been perfectly healed. From that time, however, until the present date, in spite of a sedentary life, I have on the whole enjoyed good health.”

The above account is, of course, fragmentary; and the writer does not add that he is perfectly strong and well, so that we cannot conclude without further evidence that this case has been cured. The fact, however, that he is able to say, eight years after the commencement of the disease, that he, on the



whole, enjoys very good health is sufficient evidence that he has, to a marked degree, benefited by the change, and probably to a large extent, if not entirely, arrested his disease, in spite of the unfortunate attack of scarlet fever at a very critical stage of his career, and has a very fair prospect of life.

Case V.—Dr. —, in Rouxville, Orange Free State, describes the commencement of his disease with attacks of pleurisy and hæmorrhage, in Scotland. He continued to be attacked in this way for fifteen months, although he gave up work and tried changes in his own country. Finding no improvement, in 1881, he goes on to say that he accepted a post of medical attendant to an invalid gentleman at Cannes, where he says :—

“ But instead of gaining I lost ground during my residence here of six months. Attack succeeded attack of pleurisy, and hæmorrhage followed hæmorrhage, until it became evident that only one issue could be expected if I remained.”

After detailing the extent of disease then present at both apex and base of the left lung, the writer relates how he came to South Africa, and from Graham's Town went to the Free State, having found the journey rather beneficial than otherwise. He goes on to say :—

“ My intention was, when I first settled here three years and a-half ago, to have given all my thoughts for some time to the regaining of my health. But I had hardly been here three months before I was carrying on an extensive medical practice among the Boers, with long journeys on the roughest roads, extending on the aggregate often to as much as two or even three hundred miles in the course of a week, with the consequent exposure to fatigue and changes of temperature.”

Dr. — goes on to say that under this strain it is no wonder that for some little time he continued to suffer from occasional hæmorrhages and slight attacks of pleurisy.

Following his remarks, he says :—

“ In spite of it all I gradually improved in health, the moisture by



degrees disappearing from the affected parts of the lung, and the consolidated portions clearing up, and the whole system growing slowly stronger and hardier, until about a year ago almost every symptom had vanished. A medical friend who examined my chest about that time was puzzled to know on what side the mischief had been, so trifling were the evidences it had left behind."

Dr. — makes, later on, some remarks which, though not particularly bearing on his case, are sufficiently instructive to be quoted:—

"For every interruption in the progress of recovery since I came to the Free State I have myself to blame. One is so apt to forget small but necessary precautions in the distractions of a busy practice. In such cases as I have heard of, where the disease progressed to a fatal termination, the result was clearly enough attributable not to any defects in the climate but to some gross imprudence on the patient's part, or to the case being of a hopeless nature from the first. Properly regarded, the climate is after all but one factor in the cure of the disease, and no matter how good it may be, we cannot afford to dispense with due attention to all the other factors which are known to assist in the progress towards recovery. Good food, warm clothing, congenial surroundings, and every available adjunct to bodily and mental comfort, together with careful attention to the treatment of symptoms of the disease as they arise, are just as necessary in the climate of the Free State as they are in any other. That all these comforts are procurable in the Free State I can myself testify from a three years' residence in it."

The doctor who wrote this account has sufficiently commented on the case himself, and further remark is unnecessary. The author quite agrees with a further opinion expressed in the writer's letter, that if he cannot at present feel quite certain of it, he hopes at no very distant date to furnish in himself another example of a "perfect cure."

#### FURTHER MEDICAL TESTIMONY.

Dr. MEARNS, of Prince Albert, reports that during a residence



of more than seven years he has remarked a special immunity from pulmonary consumption and asthma. The place is not much resorted to by invalids, because the virtues of the climate have never been made known, and perhaps also because there is no first-class accommodation for invalids.

Dr. M. reports the following cases among others:—

1.—C. R., aged 19, came in 1879 with marked dulness at apices; on left, breaking down of tissue, muco-purulent, frequently sanguineous expectoration, night sweats, emaciation, bad appetite. After four months he left with marked improvement in all symptoms, the disease of apex stationary.

2.—W. C., aged 42, came in January, 1882, advised by his medical men that he had not six months to live. Cavities in both lungs, great emaciation, night sweats, purulent expectoration, with frequent hæmorrhages, loss of appetite, and in short he appeared to be sinking rapidly. Improvement was steady and marked, he gained weight, appetite returned, night sweats almost ceased, and one cavity appeared to have almost closed; he continued to improve until 1883, when he got chilled in returning from Cape Town, pleurisy supervened, and it was long ere he regained strength. He continued moderately well, taking a good amount of exercise, till 1884, when he again visited Cape Town, and contracted pneumonia, from which he died a few days after his return.

3.—L. A., aged 24, has spent three winters here. He came with catarrh at both apices, which disappeared after a time, but reappeared after returning home (in a neighbouring district) on two occasions; the last time he stayed some months, and his medical adviser told me that he remains, fifteen months later, strong and well.

4.—H. N., aged 18, with bad family history, had dulness at left apex, and harsh breathing at the right, troublesome cough, night sweats and loss of flesh. He remained here six months, during which time above symptoms quite disappeared, and two years later when seen again he was well and chest quite healthy.

5.—P. T., aged 35, bad family history, was given up about ten years ago as an incurable consumptive. There is no reliable account of the



state of his lungs then, but now they show no evidence of old pleuritic adhesions and consolidation. He is now robust enough to follow the avocation of a sheep farmer, and his is a case which the climate of the Karoo has very much benefited.

#### CASES HAVING DERIVED BENEFIT FROM THE NATAL CLIMATE.

Dr. BREWITT, writes :—

S. B. came to Natal, in 1883, the subject of Phthisis. I found both lungs markedly affected, a cavity existing in the apex of each. Besides this, he had frequent attacks of hæmorrhage and, on leaving England, was not expected to live many months. He was placed under my care on a farm 10 miles to the south of Estcourt, and on leaving the district 4 years later he had gained flesh, the cavities in the lungs had consolidated, and all traces of blood spitting had for months been absent. He is now farming near Pietermaritzburg.

J. H. came here (Estcourt) from England, in 1882, with fever, mucous râles and hæmorrhage from the lungs. Just before leaving England he had lost two brothers and a sister from consumption, and was sent away by his parents in the hope that he might escape the same fate. He made slow yet sure recovery, and in 1887 was well. He is still living in this neighbourhood, farming, and no amount of exertion and exposure seems to tell on him.

J. R. left England for Natal in 1885, suffering from diarrhœa, abdominal pains and hæmorrhage from the bowels. His mother, brother and sister had died from phthisis in England, and he had wasted from a powerful muscular young fellow to a mere skeleton, and although his lungs were sound, he was evidently suffering from intestinal tuberculosis. Being thoroughly depressed in spirits he had made up his mind to die. He lived near Estcourt for 18 months, and is now in a store in Pietermaritzburg, doing regular work.

Dr. C. BREVISS, of Pinetown, near Durban writes :—

In 1871 after very hard work in London my health gave way. I had hæmoptysis at intervals and became too weak to actively pursue my duties. In two years more I had to give up work entirely, and I believe Dr. Dickinson, of St. George's Hospi-



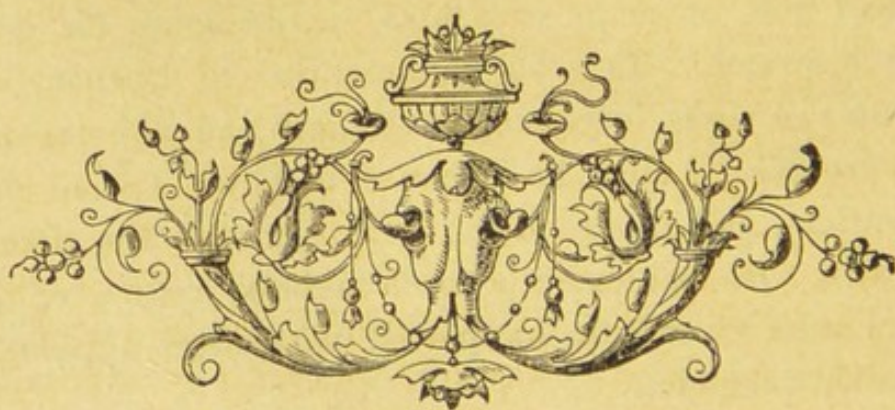
tal, thought very badly of my case. At this time some dulness was found at the apex of the left lung and my physician told me he thought I should never be able to work again in London. I arrived at the Cape in May, just as a wet winter was setting in and here I had the most severe attack or rather attacks of blood spitting that I have ever had. Arriving in Durban later, however, I at once experienced the benefits of a warm and comparatively dry winter climate. I settled at Pinetown close by and in a few months was equal to the duties of a large practice which soon sprung up to engage my attention. For years I could ride hard and do as much work as most men, but not wishing to live away from England permanently, I returned to my native country on two occasions, seeking health resorts there and on the continent. I could find nothing to equal Natal and returned, forcibly warned by an increase in my bad symptoms. After my last visit to England I tried residence in the upland district of Ixopo, Natal where, from over-work in a variable, and to me, unsuitable climate, I nearly lost my life from hæmoptysis. Last year I returned again to Pinetown and my health has gradually so much improved, that I am convinced that it has a climate peculiarly suited to my case.

Dr. B. from Scotland, was a martyr to chronic bronchitis, which had confined him, on many occasions, to the house for weeks and months at a stretch. In 1870 he emigrated to Durban, where he remained for two years, increasing in strength and with entire absence of his old trouble. Later, he removed to Grey Town, one of the upland districts, and though doing hard work all the time, kept in perfect health. He has recently been able to return to England, where, with ordinary care, he has passed two winters, apparently proof against his old complaint.

From Dr. BONNAR—K., æt. 36. Formerly a lover of athletics, contracted, in the winter of 1880, a severe cold, resulting in typically marked phthisis, with, on one occasion, severe hæmorrhage. Consulting Dr. Walshe, he was told to leave England at once, a large apical cavity having already formed in the right lung. The voyage to and residence in Natal in a measure restored his



physical condition, so that he was soon enabled to undertake a responsible business appointment in Durban. He, on the whole, slowly gained ground, and when I first saw him in 1885, I was enabled to place the case under close observation. Though the cavity extended from the right apex to the lower margin of the second rib, night sweats, which had formerly been somewhat severe, were little marked. The appetite continued variable, with occasional digestive troubles. Two years ago the patient began to improve wonderfully, the cavity slowly lessening from below upwards, till a few months ago it had reached the upper border of the clavicle. Night sweats were entirely gone and the appetite was good. The weight gradually increasing 18 lbs. He had on one occasion a slight relapse, with fresh lighting-up of disease, but these unfavourable symptoms have again quite disappeared, and while observing extreme care, he is now able to perform the duties of his calling.





# SOUTH AFRICA

AS

## A HEALTH RESORT.

By E. SYMES-THOMPSON, M.D., F.R.C.P.

[Read before the Royal Colonial Institute, and reprinted by permission from the Proceedings of the Institute.]

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*That South Africa is a Health Resort of no mean value is a fact that should be more generally realised.*

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FIFTEEN years ago, when my first contribution on the subject was published,\* I was able to record, as the basis of my work, the details of some twenty cases of disease treated for the most part in Natal and the Orange Free State.

Experience since gained, supplemented as it has been by information acquired during a recent visit, is my justification for venturing to address you on the subject.

On comparing the Southern with the Northern Hemisphere, the first point to which our attention is called, is this, that Sydney, Melbourne, Adelaide, and Cape Town, only distant about 34 degs. from the Equator, have a corresponding mean annual temperature—namely, about 63 degs.—with Naples, Nice, and the Riviera in from 41 degs. to 43 degs. north. At this latitude in the Northern Hemisphere we are accustomed to regard an elevation of from 5,000 to 6,000 feet as necessary to secure immunity from consumption. But the elevation above the sea at which such immunity is obtained in South Africa is remarkably low.

In the district of the "Karoo" we find a region characterised by excessive dryness of air and soil, where, at a level of less than 3,000 feet above the sea, remarkable purity and coolness of air are secured,

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\* On the Elevated Health Resorts of the Southern Hemisphere, with special reference to South Africa.—Transactions of Royal Medical and Chirurgical Society Vol. lvi, 1873.



with an almost complete absence of floating matter ; together with great intensity of light and solar influence ; great stillness in winter ; a large amount of ozone, and a degree of rarefaction of proved value in cases of phthisis.

In winter these conditions prevail in greater or less perfection in various places ; in summer, however, the heat is apt to prove excessive, the winds hot and dust-laden, and it becomes difficult to take the amount of out-door exercise necessary for recovery.

A physician who is brought into daily contact with those who are seeking relief by means of climate treatment, is accustomed to arrange his patients into various classes.

First, those who require "change of air" to complete their convalescence from acute illness.

Second, those who need to be sheltered from the vicissitudes of our English winter.

And third, those for whom health can alone be anticipated if they are content to be separated for years, or perhaps for life, from the conditions under which their disease originated.

Our European health resorts supply us with varied means by which we may successfully meet the requirements of the first and second group ; but our Colonies must be searched to supply what is wanted for the third.

As regards the first, however, a sea voyage with a short sojourn in a summer clime may accomplish more completely what is often sought in a too hurried rush across Europe.

As to the second, shelter from the dangers of a northern winter may be sought and found in the Southern Hemisphere as readily as in the South of Europe, and with less risk of renewed illness during early spring.

The public mind is slowly awakening to the knowledge that the British Empire has climates adapted for every form of constitutional defect. Let me emphasise and impress the fact that health and life may be secured and maintained at a higher level, and for a longer time, if we select with care and forethought the home for which we are fitted.

It is not enough to decide what occupation or profession should be chosen for our youth—we must also determine in which part of the Empire it may best be carried out. We must look at life from a large and broad platform, and regard our Colonies with gratitude, as



affording health stations for our children and breathing space for our teeming home population.

At home, trained talent and strong health are alike essential.

But there are many whose strength and vitality are not sufficient for success in the high competition of this country. These, if transplanted to a colony where life is more restful and competition less keen, would rise to eminence.

It may be true that the Colonies, like the mother country, are overstocked; but men of exceptional ability will push their way in every community, and South Africa can boast of many in positions of high trust who could never have attained such eminence in a trying climate.

It would be out of place and inappropriate were I to venture here on any detailed description of the cases suited for the climates of South Africa. This could only be attempted before a medical audience, and it was only yesterday I read a paper on the subject before the Medical Society of London.

In deciding where to send our patients, we need to be not doctors only, but students of character as well. We must not forget that the power of adaptation to new conditions is needful for the healthseeker in a new country.

It is useless to send to South Africa a man or woman whose comfort depends on the luxurious surroundings of home life, and who will never cease to grumble when difficulties arise. We must not expect success if we send to our Colonies those who have always drifted and have never exercised volition, have always been moulded by circumstances, and have never learned to overcome. The dyspeptic, who cannot digest hard, dry, or greasy meat, will be in perpetual difficulties, and those whose main occupation at home is to criticise their food must not be expected to change their habit when there is ample scope for its exercise. What is really more important than the nature or stage of disease is the character of the patient, and his readiness to enter into and enjoy his new life. Those so often met with in South Africa, who have regained health there, are, for the most part, men of resource, ready to accept any post, and to undertake any work which may offer in the new country.

I would now say a few words in favour of a short pleasure trip to the Cape, not for invalids only, but for those who are seeking a new playground wherein to spend a summer holiday.



There are very many people who, tired of the London season and disinclined for the bustle of a scamper to the Swiss mountains or Scotch moors, may well seek pastures new. For such I would suggest a trip such as I have lately taken. Leaving the East India Docks at the end of July, after three weeks of perfect rest in a Mail steamer having all the regularity and dependency of an express train on a well appointed line, you find yourself refreshed and renewed by a time of quiescence unattainable on land.

The voyage to the Cape and back may be readily accomplished in two months, during the customary summer holiday, very little discomfort need be anticipated from sea-sickness, and none from excessive heat in the tropics or from the "dangers of the deep."

The voyage to Madeira or New York is sufficient for discomfort, but is hardly long enough to do good, as a voyage, in cases requiring rest and the renovating influence of the ocean; whereas the voyage to Australia or New Zealand may prove tedious, and during the latter part—between Africa and Australia—the combined influence of strong winds and low temperature is sometimes injurious to invalids.

To those who need rest and quiet, and to spend the whole day in the open air, the voyage is often beneficial, especially in cases with chest disease for whom a warm, moist, tonic air is desired.

A vast change has come over the habits of men as regards holidays. In the time of John Gilpin, we have it on the authority of the devoted spouse herself, that they

"For twice ten tedious years  
No holiday had seen."

But this century has marked an amazing development; the recognition of the necessity for a summer holiday has spread from prince to peasant, and even the poorest of the East-Enders count upon an outing in the hop-picking season.

The development of the railway system has brought within reach places inaccessible before, and the application of steam to ocean transit has done much in bringing near lands previously beyond our reach.

Our schemes of benevolence enable those who add the sorrow of sickness to that of poverty to gain the benefit of the seaside or the country. My own hospital at Brompton has lately adopted a systematic plan of drafting off such patients as may need it to convalescent homes on the South Coast; and I have helped to establish a scheme



by which the health-restoring luxury of a winter in the Engadine may be brought within the reach of those who cannot afford to pay for it.

May we not hope that our South African friends, aided by the great Steam Boat Companies, will devise a plan for making the Health Resorts of the Karoo available for English men and women who are not able to bear unaided the expenses of the trip?

Our American, African, and Australasian Colonies hold out attractions to those needing a holiday which cannot be surpassed. All members of the Royal Colonial Institute will support me in the opinion that if the idea of our responsibilities as citizens of the Greater Britain has any reality, we should endeavour from time to time to make the money we annually spend on the luxuries of foreign travel of benefit to those of our own Empire.

Medical men, and especially those whose work takes them in the direction of "climate treatment," may do much to promote this truly national aim, if, before commending a patient to a foreign health resort, they think first, "Is there any haven of our own of equal value?"

I have recently published a paper\* on Water Treatment, pointing out that the baths of England have equal virtue with those of many Continental spas; and it might be readily shown that England and her Colonies possess all, or nearly all, that can be needed by the health-seeker.

Every day brings us in contact with those who have "run down" from overwork, under-rest, or faulty adaptation of the human machine to its environment.

A sea voyage is well suited for those who are unequal to active exertion, and to the bustle of a crowded lodging in the country, or at the seaside, where a bevy of children or relations are always *en évidence* and preventing rest.

We are too prone to think that people with "nervous disorders" are not really ill, and to despise their ailments; and truly the physic they require is not an "alterative" to be purchased at the chemist's, but a change of scene and surrounding such as can best be found at sea. The melancholy patient is sure to find on board a mixed party of fellow travellers, with bright animal spirits and exuberant vitality. The fact that he cannot shut himself in his room away from society keeps him from *ennui*. He will soon be drawn out of himself, and on

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\* In *The Practitioner*, July, 1888.



arrival in South Africa, or when he reaches home, his friends will hardly recognise him as the same. The short stay at the Cape will have added to the value of the change and consolidated the benefit, and two months thus spent will do far more than could have been accomplished in the same time on the shores of England, or even among the Norwegian Fiords.

Remember, there are some to whom new life comes with active exercise on the moors or among the peaks, passes, and glaciers; and others who need rest and quiescence, and for whom the sea voyage or lying on the beach throwing pebbles into the sea is the desideratum. Those who need the first and choose the second, return from their holiday more oppressed than ever; and those who need rest and take violent exertion, return with a strained heart or over-distended lung. Change of work is good for some, cessation for others.

I cannot speak too highly of the comforts, conveniences, and courtesy experienced on board the "Castle" Steamers; and I hear that those of the "Union" Company are equally satisfactory.

On arriving at Cape Town, the splendid Table Mountain rises in front of us, with the town spread out at its base.

Not lingering, in the first instance, more than two days at Cape Town, I went on in the same steamer round the Cape to Mossel Bay, past the Knysna to Port Elizabeth. The proverbial roughness of the sea at the Cape of Good Hope, of which I had full experience, makes it desirable to go on in the larger boats rather than in the small Mail steamers which ply along the coast.

The Knysna district is perhaps the most beautiful part of South Africa. Its mountains and valleys, covered with varied vegetation, and peopled with large and small game, afford great attraction to the sportsman. Although the rainfall is greater than in the neighbouring parts, it is not excessive. The coast lands partake of the rather unhealthy character prevailing all round South Africa, but at an elevation of a few hundred feet and at a distance of twenty or fifty miles from the shore, these evil influences are lessened.

A plan is in contemplation for the development of this part of the Colony, and it is proposed to build an hotel and provide greater attractions for visitors than exist at present. The beautiful land-locked harbour is open to small Mail steamers, and the large vessels call at Mossel Bay, not many miles off.



Port Elizabeth lies in a deep bay, sheltered from all except S.E. winds, which, unfortunately, are at times severe and destructive, as was the case two months ago, when nine vessels were blown ashore. Thanks in a great measure to the energy of the Mayor, it has many evidences of prosperity, and has been called the "Liverpool of South Africa." Water has been laid on from a distance of thirty miles, there is a magnificent sea-wall and promenade, and the greater number of European inhabitants make it more enlightened, more cleanly and better paved than the other towns of South Africa. Not a tree will grow till the top of the hill is reached, where, protected from the sea breezes, vegetation is luxuriant around the villa residences of the wealthier inhabitants. In summer the climate is cool, and exposed iron rusts, as it does not in the interior.

From October to March the prevailing winds are S.E., blowing right into Algoa Bay, laden with saline moisture and accompanied by high solar heat, thus producing a "local climate" incompatible with the health and comfort of an invalid with bronchial or lung mischief. From April to August N.W. winds prevail, and the sense of oppression in breathing is relieved.

East London has a similar climate: landing is no longer a difficulty, and hence Queen's Town, King William's Town, Cathcart and Aliwal may be readily reached by railway. It is resorted to in summer by the King William's Town residents.

The temperature of the coast on the south and east is influenced by the Mozambique current, the effect of which is to make all the coast to the eastward of Simon's Bay warmer than that of Cape Town, just as the Equatorial current that impinges on the east coast of Australia helps to make Sydney warmer than Adelaide.

Grahamstown (1,800 feet) is beautifully situated within thirty miles of the sea, although more than one hundred miles distant from Port Elizabeth, from which it is reached by railway. The rainfall is fairly and equally distributed throughout the year, and is not limited, as in so many other places in Africa, to a few thunderstorms in summer. The temperature is remarkably equable.

It is sheltered from the strong winds which render Port Elizabeth undesirable for invalids, and has a delightful climate both in summer and winter. With the exception of the suburbs of Cape Town, it is unquestionably the most pleasant place to live at in the Colony. During my stay there, at the end of winter, the nights were cold—mean



42 degs. F.—but during the day the shade temperature rose to 75 degs. The atmosphere is distinctly less dry than that of Bloemfontein.

Grahamstown has been described as the “Winchester” of South Africa. Its ecclesiastical and educational advantages are great; the intellectual and social activities of the place are much like those of an English Cathedral town, and any person of culture would find in its public buildings, gardens and surroundings, much to interest and divert. It is situated in the most productive plateau of the Colony, close to the watershed of three river systems; its genial climate, fruitful soil, cheap living and easy access by rail to the coast, to the bracing mountain air, or to the dry inland plains, make it a desirable sojourning-place for the invalid.

The air is bright and exhilarating. The mean temperature is 60 degs.; in summer 63 degs.; and winter 53 degs.; mean range, 15 degs. (17·7 degs. in summer, and 12·8 degs. in winter); an annual rainfall of 26 inches, distributed over about 84 days. The rainfall occurs chiefly in summer, and so keeps down the temperature, and secures remarkable equability.

The Eastern Province, of which Grahamstown was formerly the capital, may be thus divided: (1) The coast plateau, warm, genial, and equable; (2) a midland terrace, from 1,000 to 2,500 feet elevation, cooler, drier, and more genial; (3) a mountain climate, from 2,500 to 5,000 feet, still drier and more bracing, with greater extremes—hot days, cold nights—the range of temperature being double that of the coast lands. Cradock and Aliwal North may illustrate the high plateau, Grahamstown and King William's Town the intermediate one, and Port Elizabeth and Cowie the coast.

King William's Town (1,273 feet) is decidedly hotter than Grahamstown, but otherwise the climate is similar; the social interests are less; and the elevation, geographical and ecclesiastical, is less also.

Port Alfred, at the mouth of the Cowie River, 44 miles by railway (again in use) from Grahamstown, is a pleasant place of seaside sojourn during June and July, but is unsuited for cases of phthisis.

Graaff Reinet (elevation 2,463 feet) is an exceptionally hot place in summer, but may be recommended in winter, as being accessible by railway, and having a competent medical man.

The climate of Queenstown (3,500 feet elevation), on the line between East London and Aliwal North, is thus described:—“The



mean temperature of the four hottest months (November to February) is 69 degs. ; of the four coldest (May to August), 52 degs. The night temperature is seldom high ; 10 degs. of frost may be looked for on two or three mornings every winter. The frosty mornings are followed by glorious days. Only on quiet and cloudless nights does dew fall, and the peace and clearness abide, while the brilliant but no longer scorching sun does his daily journey. The rainfall during the five months from May to September is only three inches. Heavy thunder-storm rains fall in summer, leaving the sky serene, followed by calm nights. This is an admirable place for consumptive cases."

Aliwal North (4,348 feet), the northern terminus of the Eastern Railway, is 280 miles distant, and may be reached in 24 hours from East London ; or the Eastern Railway may be reached from Grahams-town or Cradock in a day's drive. It has a Sanatorium and hotels. Houses are to be had and rents are low. It is a large village on the Orange River, which runs rapidly after rain, and is never dry ; for nine months in the year, it is but a stream running in a deep bed. The air is dry and cool, like that of Cradock, but the extra elevation makes it more bracing. A patient, whose disease was arrested at Grahamstown, has been able to carry on his work assiduously and without break since living at Aliwal. In October last he wrote :—" The winter has been splendid : at night sharp frosts, the days bright, dry, and crisp. The spring rains come down in two or three days, the weather has been perfectly dry since." The Doctor observes that dark-complexioned people do badly, but that the climate of Aliwal suits blondes !

Aliwal is beyond doubt one of the most valuable health resorts of South Africa for phthisical patients. Until the railway is completed which is to connect the East and West provinces, the greater accessibility of Cradock is likely to make it more popular. Aliwal, however, as being on the line of railway from East London, is more easily reached than Bloemfontein, which is likely to remain for years beyond the reach of the " iron horse." The Boers of the Orange Free State or of the Transvaal prefer to make money by transport, and are slow to allow the access of the rail.

Tarkastad (4,280 feet), midway between Cradock and Queen's Town, is superior to many other health stations, inasmuch as it is not shut in by hills, and has constant breezes to cool the air. It is in the midst of a fertile region, surrounded by large farms mainly occupied by Englishmen, the Golden Valley Farm being among the most



beautiful in the Colony. It has, moreover, an exceedingly comfortable hotel—Passmore's—managed by an English lady. There are two capable medical men, and it is much resorted to by invalids who find Cradock, Queen's Town, or King William's Town too hot. There is no time in the year in which it is unpleasant; the summer thunderstorms freshen the air when tending to sultriness. The baths in the hotel are well arranged, and very refreshing after a day's shooting or a long drive. Tarkastad is reached by a five hours' drive from Cradock (180 miles by rail from Port Elizabeth), over beautiful country, which on leaving Cradock becomes more grassy, the Karoo bush being superseded by a richer vegetation; yet the air and soil are so dry that a knife left on the veldt for a year or two does not become rusty. If approached from East London the distance to Queen's Town is 154 miles, whence it is a five hours' drive to Tarkastad. The fact that it is off the line of railway makes it superior to more accessible places, where the temptation is great to be flitting constantly from place to place, and thus losing the benefit which in chronic cases can alone be secured by patient continuance for many months in health-giving air.

Dordrecht (5,200 feet), nearly 1,000 feet higher, may be resorted to for a few weeks in midsummer, but it is less attractive than Tarkastad, and patients do not so willingly remain there long enough to gain permanent benefit.

Burghersdorp (4,650 feet), the chief town of the eastern division of the Karoo, has been recommended by Dr. Kannemeyer specially on the ground that it is within easy access of places 1,000 feet higher, and 1,000 feet lower elevation, thus affording the opportunity of readily changing the climate at different times of year. To quote Dr. Kannemeyer's description of the climate of Burghersdorp, "The summer months are hot and relaxing during the day; the midwinter nights are cold. During the rest of the year the weather is temperate and delightful; the sun is rarely obscured, never for a whole day, mostly and gratefully by thunderclouds during the hot summer afternoons. We live practically under a cloudless sky. Our principal rainfall is in summer—sharp, short, and refreshing thunderstorms. The range of temperature in summer is high on the plains. In the Stormbergen Mountains it is more equable, the heat never oppressive during the day, nor are the nights cold; and there is more verdure and humidity. In winter the days are cloudless, rainless, sunny, and very



dry on the plains. Between sunset and sunrise the air is very cold and frosty. Snow is rare. The mountainous parts are cold and comparatively damp, frosts heavy, and snow falls occasionally. Mists or fogs are unknown on the plains; in the mountains they occur frequently."

Before returning to Cape Town, a few words must be said of Cradock and Beaufort West, Fraserburg, Hanover, and Ceres.

Cradock (2,850 feet) is accessible by rail (180 miles) from Port Elizabeth, and is regarded in the Colony as one of its principal health resorts. Although apt to be dusty during droughts, it has a good all-year-round climate. It is more accessible than Aliwal or Bloemfontein. Its rainfall is small occurring only in the form of summer thunderstorms. The humidity is 62 per cent.; the average summer maximum temperature is 91 degs. Although the days are hot the evenings are cold. The dryness of the atmosphere makes it easy to bear the heat. Asthma is unknown there.

The elevation of Beaufort West—readily reached from Cape Town or Port Elizabeth—is the same as that of Cradock. It is half-way between Cape Town and Kimberley. Trees grow along the streets, and the appearance of the town is more attractive than that of Cradock; but those compelled to stay there for months are apt to mope in either. It is, however, a very good stopping-place on the way north.

Hanover, 9 miles from Hanover Road Station, 300 miles from Port Elizabeth, and 539 miles from Cape Town (elevation 4,600 feet), is dry and bracing; the winter climate is compared to that of the South of France; the summer is hot, evenings cool; rainfall 10 inches. The scenery is described as pretty, but it partakes of the arid Karoo character. Cases of phthisis and bronchitis in the young and middle-aged do well. Pneumonia, however, is common.

The district around Hanover is available for those preferring to lead an agricultural life or for sheep farming.

Fraserburg, 360 miles from Cape Town (4,500 feet elevation), is barren. "Periodical rains" relieve monotony. The winds are strong, the air dusty. Both summer and winter are severe—summer, 100 to 110 degs. in the shade; winter 24 degs. Rainfall, 2 to 4 inches. Railway station 10 miles off,

Ceres (1,700 feet), 10 miles from Ceres Road Station, which is 85 miles from Cape Town, occupies a beautiful position, and is a very



suitable place in which to spend a few weeks before deciding on a more settled home. In elevation it is similar to Grahamstown, but the climate is much more humid, especially in winter. Ceres possesses the great advantage of a comfortably-arranged sanatorium, or hospital, available for invalids, under the highly-competent supervision of Dr. Kahn. The streets are well laid out with boulevards of oak trees. A river runs through the town, with well-protected bathing places. The soil is sandy; the air is dry in summer. Ceres is sheltered by mountains from the S.E. winds, which often render Cape Town and its vicinity trying. An elevated plateau, 2,700 feet high, is reached in a two-hours' drive, having a beautifully cool, dry summer climate, but from May to August strong N. and N.W. winds prevail, and thunderstorms are frequent. The highest recorded temperature was only 84 deg., and the lowest night temperature 50 degs.

It was my hope, when visiting South Africa, that I might be able to hold it out as a country in which many Englishmen with damaged tissues or hereditary taint might hope to settle, with a prospect of health and affluence. So far as climate is concerned, I am not disappointed. I regret, however, to have to confess that in the present state of financial depression, when men and money have poured into the Transvaal, this is not the case. As regards the highest class of patients, who live with every comfort and luxury in town, we could not venture to send them to a country where the hotel accommodation is so deficient.

The hotels in South Africa are, for the most part, unsatisfactory. The attendance is bad, and the conveniences few. The number of patients going to South Africa is comparatively small, and quite inadequate to fill the various competing health resorts. It would be well if the patients could be all concentrated in one or two, and an enterprising hotel manager, willing to lay out capital in order to provide the necessary comforts, could be found.

At Grahamstown and King William's Town (called "King") the comforts and luxuries of life are as fully attainable as in any other part of the Colony, except the suburbs of Cape Town (which are too humid in winter), or in Kimberley.

As regards the class of clerks, warehousemen, journeyman tailors, &c., it is difficult to promise employment. As to professional men—whether architects, engineers, lawyers, doctors, or clergymen—there is always scope everywhere for really able men. Those who have held



their own in the midst of the competition of the Old Country are sure to make a position for themselves in a community where the number of really eminent men is necessarily limited.

Open-air occupations are at present few, but as the unhealthy mania for gambling in gold and diamond shares, which is the curse of South Africa, is replaced by patient plodding work on the land, the country will speedily change its aspect. A friend and patient of mine—Mr. Irvine, of King William's Town—showed what care and wise outlay could do in converting a desert into a model farm—full of flourishing fields, plantations, gardens—and thus setting an example which might be advantageously followed throughout a great extent of barren country.

Such efforts as these increase the value of South Africa as a health resort by reducing the excessive dryness of the air and soil, and by giving something for the eye gratefully to rest upon, and thus rendering those contented who, without anything of beauty to look at, would soon escape to more attractive lands.

Cape Town, notwithstanding the fact that it is the capital, the seat of government and the largest town in South Africa, is, from a sanitary point of view, in a truly disgraceful condition. The European population has deserted the town in favour of the suburbs. The Governor and the General, who are obliged to be in residence for part of the year, escape to Wynberg whenever it is possible. The efforts at drainage hitherto made have turned the bay into a sewage outfall: the breakwater having prevented the "scour" of the tide, the matters brought down by the drains undergo decomposition, poison the air and develop endemic disease. Until this state of things is remedied it is our duty to see that invalids are not tempted to remain in the city.

When at Cape Town, an opportunity was kindly afforded me of meeting the members of the "South African Medical Association," to discuss questions connected with the climate.

More than twenty members of the Society were present, representing various parts of the Colony, and, in the discussion that ensued, very interesting statements were made and important generalisations arrived at.

A series of papers (33 in number) were placed in my hands, prepared by the medical men of the various districts of the Colony, containing a mass of information, from which I was allowed to make extracts. These papers were drawn up in answer to a series of



carefully-prepared inquiries with a view to obtain definite information on climate, elevation, water supply, &c., together with references to cases of disease treated in the several districts.

Time and space make it impossible to do full justice to these communications here, but I have endeavoured to classify them according to the different areas, some of which are of great elevation, some low-lying, some humid, and others exceedingly dry. I have already described, in as few words as possible, some of the typical places mentioned in these reports, and will now pass to a comparative survey.

Dryness and clearness are the chief characteristics of the air, due to the fact that rain falls at long intervals, and the greater part of the country is glazed with baked clay, from which the water runs off as fast as it falls; there is nothing to retain the moisture, or allow it slowly to filter into the earth; this, though bad for agriculture, is good for those for whom a dry, rarified air is essential.

The rainy season occurs in winter in the West and in summer in the Eastern Province, so that the wet season may be easily avoided by travelling from one part of the Colony to the other.

The three winter months are exceedingly trying in the high, exposed parts, for the houses are built without fireplaces, and coal and wood for fuel are almost unobtainable, dried cowdung doing duty for peat, as well as for cement for flooring and stucco for the walls.

The mean temperature of the Cape Colony is 63 degs. On the coast lands the mean summer heat is 68 degs., and in winter 56 degs.

That the climate is favourable to the growth and development of "genus homo" is shown by the fact that the descendants of the early Dutch settlers, who have been in the Colony for 200 years, are amongst the largest and most robust of men. It is not unusual to see men from 6 feet 4 inches to 6 feet 6 inches—not lanky, weedy, or ill-grown, but with bone and muscle more than proportionate to their height.

Army statistics show that the Cape and Australia are the most salubrious stations in which the British Army has been stationed. Before the Suez Canal was opened, the Cape was recognised, and justly, as being the sanatorium for broken-down Indians.

The climate of the coast lands—that, for instance, of the suburbs of Cape Town—has been compared to that of Madeira. At Wynberg, Rondebosch, and Kalk Bay the air is clear, bright and sunny in summer, but in winter overcharged with moisture. It proves ener-



vating to residents, who in a few years are apt to lose physical and intellectual energy unless occasional changes are made.

At Kimberley the mean temperature is 70 degs. in summer and 50 degs. in winter, whilst in London it is 64 degs. and 37 degs.

The winter is short and mild, the heat of midsummer is more intense than that of July and August in England, but so dry, rarefied, and buoyant is the atmosphere that the men work all the day with ceaseless energy and activity notwithstanding the high temperature, which in December, January, and February rises frequently to 104 degs. or 105 degs.

Much consideration is needed for the selection of the district suited for each case, and it may be wise to obtain advice, after arriving in the Colony, as to the best places at which to stay at different times of the year. Happily, there are highly competent men at Cape Town and in the Eastern Province ready to give the needful counsel. Some general principles, however, should be recognised before leaving home if our patients are to gain the fullest benefit, although each individual case requires, of course, special consideration and guidance.

The Eastern Province supplies to non-tubercular cases very many advantages, especially in Grahamstown and King William's Town.

The Karoo district, in which Aliwal, Beaufort West, Colesberg, Cradock, &c., are situated, may be reached from Cape Town or Port Elizabeth in a few hours, and will prove a haven to an ever-increasing number of health-seekers, whilst the Upper Karoo and more elevated plateaux of the interior give scope for the energies of those who, having regained health in the Karoo, desire to secure wealth in the gold fields or diamond mines of the Transvaal or Kimberley.

This extensive district, which occupies some 18,000 square miles, owes its name to the presence of the Karoo bush, which dots the whole area and affords food for millions of sheep, who find in its young shoots a highly fattening food.

Spring and summer hardly exist in the Upper Karoo plateau. Summer begins suddenly about September, increases in intensity till January, decreases till the end of April. Dry, warm winds, sometimes dust-laden, prevail during the day, with cool, invigorating breezes at night. Thunderstorms are common in midsummer (Christmas time), accompanied by rain or hail. These summer thunderstorms infuse



new life into every living thing ; before these refreshing storms occur, the heat is often oppressive, and the thermometer ranges as high as 110 degs. F. in the shade ; but owing to the dryness of the atmosphere, the gentle currents of air, and the cool evenings, it is not very oppressive. In winter the air is dry, clear, sharp, and delightful, but very cold, often frosty, at night.

The inaccessibility of this region has made it less known than it deserves to be. Now that the diamond fields have opened up the country, comfortably appointed express trains on the American system, having sleeping cars and dining cars, and every convenience, rapidly convey the traveller to places where he can spend the summer and winter months respectively under conditions calculated to secure benefit with the least possible risk. The towns and villages on the Karoo become tree-clad and attractive if the water supply is adequate for irrigation ; without this they have a dry, desolate aspect.

The great heat of the sun in the shadeless regions of the Cape Colony can be borne without injury : the air being pure, dry, and generally in motion, sunstroke never occurs. A lower shade temperature where the movement of the air is less, and evaporation, with its cooling tendency, is checked, cannot be so easily borne. A shade heat of 90 degs. F. is overpowering to those who can sustain prolonged hard work in a sun heat of 120 degs.

The general conclusion to which the evidence points is that for phthisical cases the Karoo climate supplies all the desiderata, but that the comforts and conveniences of home are here still deficient, and that even where they are to be found there is a want of that incident and variety so important to every case.

Those to whom the delicacies of home life are so essential may find the monotony trying, and the coarse conditions of life intolerably irksome. A continuous residence is needed for cure in chronic cases, and no one should attempt such a life who is not content to put up with many inconveniences, and to renounce most of the refinements and avocations of English town life. To many persons, however, the free and easy mode of existence becomes so pleasant that a return to city life is viewed with regret. There is variety for sportsmen, and those who enjoy riding and hunting the four kinds of buck found in the district.

Experience shows that tubercular phthisis is almost unknown in many parts of the Karoo.



Strong and healthy people notice a diminution of appetite and activity at an equable high temperature; whereas weak persons live and flourish in warmth and sunshine, and manifest greater energy of mind and body, and less liability to disease, than in cooler and more variable regions suited to the strong and healthy. Conversely, cold climates are well borne by the sturdy, though trying and perhaps destructive to the delicate or ailing.

If the invalid determines to spend the summer in the lower Karoo, or, indeed, in the central or higher Karoo, he must be content to pass the day under the verandah of the house, or in a hammock slung under the trees. The houses are kept cool by closing doors and windows in the early morning; such a close, fusty air is of course quite unsuited to those with chest disease,

As might be expected, the general consensus of opinion points to the conclusion that continuous residence for a series of years is necessary to establish cure in cases of extensive or advanced disease, but that in incipient cases and those of threatened disease a short residence often secures speedy improvement. But suitable hotel accommodation must be provided.

During thirty years of practice I have had ample means of judging the results of climate treatment in New South Wales, Victoria, New Zealand, and Canada. I have found these Colonies prove of essential service to many. I feel satisfied, however, that South Africa, from its accessibility, its dryness, elevation, and other peculiarities, is specially adapted to others. At present it is better fitted for those who are prepared to be pioneers.

It must be remembered, in making a comparison between the Australian and South African climates, that whilst the latitude of Sydney corresponds with that of Port Elizabeth and Cape Town, there is no part of South Africa in so low a latitude as Melbourne or even Adelaide.

The mean temperature of Cape Town is 61.3 degs. F., of Melbourne 57.2 degs., the same as Bathurst, which is 2,150 feet above the sea; Washington is 56.9 degs., Bordeaux 57.0 degs., Marseilles 58.3 degs., Sydney 62.5 degs., Adelaide 64.6 degs., and Perth (W. Australia) 64 degs.

Whereas the rainfall of Cape Town is 24 inches, that of Sydney is 50 inches, of Perth 28.9, of Melbourne 25.46, Ventnor 25.5, London 24, Paris 22, and Adelaide 20.



It should not be forgotten, however, that statistics of mean annual temperature and rainfall may be misleading, places very dissimilar being thus grouped together, viz., Lisbon and St. Helena, in which case the winter temperature of the former is 12 degs. colder and the summer 11 degs. hotter than at St. Helena. Whilst a place may have a dry climate and a heavy rainfall as the Karnatic and vice versa.

The elevation of Cradock and of Beaufort West is only 2,800 feet, yet this has proved sufficient in many cases of phthisis. It is difficult to understand that this should be the case without personal experience of the remarkably dry, clear and healing atmosphere.

In cases of contracted lung after pleuro-pneumonia, collapse after whooping cough, or in cases in which the expanding effect of rarefied air is required, a higher altitude, like that of Aliwal, Tarkastad, or Johannesburg is requisite.

Experience is required also to determine in each case whether (a) it is best to accustom the patient to the dry air of the Karoo at a moderate elevation before making trial of the higher altitudes, or (b) whether the higher elevation should be first sought, and then a settled home be found at a moderate elevation, *e.g.*, 1,700 feet above the sea.

I have known good results follow from a sojourn in the Eastern Province of the Cape Colony during the winter, and then, taking ship for Sydney, settle in the Riverina, between the Murray and Murrumbidgee Rivers, at an elevation of some 1,200 or 1,500 feet.

In a communication of this kind it is not possible even to indicate the conditions which guide the physician in formulating a plan for a given case. For instance, I have just advised a patient to seek, first, the humid atmosphere of the tropics; then, an exceedingly dry and elevated climate; and afterwards, a life-long sojourn in a variable climate, like that of New Zealand; for a very long sea voyage would certainly have been harmful, and a long stay in the Karoo will probably not be required.

This is not the occasion for details as regards rainfall, thermometric observations, wet and dry bulb readings, force, prevalence, and direction of winds, &c. These facts are recorded in the annual reports of the Meteorological Commission. I have prepared from these reports a table giving the annual rainfall in inches and the number of days on which rain fell—for the value of the first without the second is greatly lessened. From these it will be seen how much places near together vary in this respect, though no diversity is so marked as that in the



immediate vicinity of Cape Town, where it will be seen that the rainfall at Cape Town Castle is 21.74, at Wynberg 43.40 (ten miles off), and at Bishop's Court, 56.65. The last is situated half-way between the other two, but the position of Table Mountain determines the rainfall in either case.

The table shown in Appendix, which gives the altitude and rainfall of certain selected resorts, with column stating the number of days on which rain falls, is an important point for consideration in judging of climate.

I am saying but little about Natal, having written much about it elsewhere. The climate is good for persons with complaints of the throat and chest, those liable to bronchial affections in England being surprisingly free from them at Maritzburg; it is somewhat too relaxing, and the sudden changes in summer, as the moist sea-breezes or dry land-winds prevail, are apt to try those with irritable nerves. Natal (lat.  $28^{\circ}$  to  $32^{\circ}$  S) has been called the Garden of South Africa; many owe their lives to its healing influence.

Maritzburg, the capital, 50 miles from the coast, has an elevation of 2,000 feet, and the lands rise immediately behind to a height of 3,800 feet. The prevailing moisture-laden S.E. winds, make the rainfall on this ridge considerable, but a few miles inland, wind, cloud and rain lessen. The high table lands extend beyond the Drakensburg Mountains, which form the backbone of this part of South Africa, and rise here and there to a height of 9,500 feet. The climate is specially useful in cases of laryngeal, or bronchial irritation, although sometimes too hot and relaxing in ordinary cases of early phthisis.

Delicate children, especially asthmatic ones, flourish at Maritzburg. Educational advantages are provided for English children of both sexes at Maritzburg, as well as at Grahamstown, and at Cape Town.

The leading peculiarity of the climate is that in winter it has almost constant sunshine and little rain, but in summer abundant rain and cloud.

In this respect, Queensland resembles Natal; the summer is the rainy season in both, but the former has no table lands above 1,000 feet, an insufficient elevation for this latitude.

The Darling Downs, behind Sydney, rise to nearly 3,000 feet. The South African winter climate is more healthy for most invalids than the Australian.



Durban has greatly improved of late. The country rises gradually until the elevated plateaux of the Orange Free State and the Transvaal are reached. These are very dry and salubrious, and will, doubtless, come into favour again.

The excessive native population of Natal will necessitate firm and wise government. In Natal, however, and indeed throughout South Africa, there is no need for the invalid, or even for the Colonist, to do any hard manual work, for the native population is large, and the Kaffirs are ready and able to work.

On leaving Natal for the open, dreary, desolate Orange Free State, great changes take place in the climate and vegetation; many parts of this now deserted region bear evidence of having been at a distant time densely populous; remains of stone-built villages, with pottery, are found in the gold-bearing districts of the Transvaal and Matabeleland.

Bloemfontein (4,500 feet), since attention was drawn to it (see paper, R.M.C.S. Trans., vol. lvi), has proved of essential service to many. Still more favourable health resorts are now opened up, which were inaccessible for invalids before the discovery of gold and diamonds rendered means of transit comparatively easy. Speaking generally, the Orange Free State is dry and cold in winter; its average elevation is nearly 4,500 feet. It is less rich in vegetation and in mineral wealth than the Transvaal. Well-appointed coaches now leave the railway terminus at Kimberley on the arrival of the mail train (32 hours from Cape Town, and 27½ hours from Port Elizabeth), those carrying the mails accomplishing the distance to Johannesburg in 57 hours. It will not be long before the railway will be pushed on, and this weary journey be materially shortened.

The sanitation of Bloemfontein is bad; fever, dysentery, and diphtheria prevail. Ladybrand is free from these defects; has an elevation of 5,000 feet, and comfortable inn. A patient writes from thence that, although small, the place is cheerful and wonderfully health-giving.

The natural seaport for the Gold Fields, which is only 115 miles from Barberton and 346 from Pretoria, is Delagoa Bay. The railway thence into the interior is now completed for 55 miles, and may possibly be extended. Delagoa Bay is unhealthy in summer, and is at present marked by that stagnation which may be expected under Portuguese rule.



When the line is worked by an English or Transvaal Company, obstructive influences will be removed, and there is no reason why Pretoria should not be reached in a day from Delagoa Bay—the best port in South-East Africa.

Johannesburg (5,000 feet), 285 miles from Kimberley, the present railway terminus, can be reached by coach in 57 hours. To an invalid this drive is so exhausting that it should not be undertaken. The slow coach, which stops for a few hours each night, is not so well appointed, and is likely to prove even more fatiguing than the fast one. The mud is often more than knee-deep, and even 36 oxen may prove insufficient to get the vehicle out of the mire. The crowding is always great, and the discomfort hence arising excessive.

The climate is beautiful, and the soil is only dusty in the town, or where the traffic is great. During the summer months, however, the air is saturated with moisture and very trying, and during the winter the nights are bitterly cold.

Quarters are so dear that the visitor must be satisfied with a room which would not content him elsewhere, and club life is naturally expensive where the distance and cost of transit are so great.

One day, when railway communication is completed, and when quarters are good and reasonable, and when the "gold mania" is in a less acute phase, this may perhaps prove a more valuable health resort, but at present it is unsuited for health seekers, and must be left to those who are searching for wealth.

The proverbial unhealthiness of Delagoa Bay, and the whole seaboard north of St. Lucia Bay, is dependent on rank grass and humidity of the air and soil. Ten years ago Barberton had the reputation of being at least as fatal to the settlers as Delagoa Bay. Now, thanks to the march of civilisation, to the cutting down of trees, and especially to the burning of rank grass, it has become healthy.

Pretoria, the capital of the Transvaal (elevation 4,000 feet), is said to be an exceedingly attractive place. It is well sheltered, and in summer decidedly hotter than Johannesburg; but scarcely hotter than the hot days of our English summer, and less hot than Paris.

In the summer months the hills, which rise to a height of 8,000 feet, are covered with mist, yet the whole region is healthy.

In Bechuanaland the elevation varies from 4,000 to 6,000 feet. More rain falls than in Cape Colony. Wheat, barley, oats, &c., grow readily in the beautiful valleys, but it is found that irrigation is apt to



breed fevers; the gardens are therefore kept at a distance from the houses. Above the level of 5,000 feet the immunity level is reached, and the risk of fever and phthisis is greatly diminished. Should the proposed Bechuanaland Railway be pushed forward, it will open up a country having a fine climate and great possibilities of expansion.

Experience now being gained in Tropical Africa confirms that acquired in India in regard to the immunity level.

The fever is not limited to the oozy, jungly, saline marshes north of Delagoa Bay, but is found too in dry arid tracts where the rainfall is slight, where there are no swamps or signs of superficial moisture; there may, however, be, as in India, areas of damp subsoil without drainage in which solar heat leads to the development of malarial poison; the turning up of such ground produces an outbreak of fever, but when the drainage and cultivation are completed the unhealthiness is removed.

Anyone settling in the sub-tropical or tropical regions of Africa should master and act upon the rules found needful in other malarious lands, or he will lay his bones beside those of many pioneers of civilisation who would not have died had they followed out wise precautions.

For instance, the rainy season and the still more sickly drying-up season should not be spent in malarious districts. The first clearance and digging-up of virgin soil should be performed by those already acclimatised. Malaria being most potent near the ground, and specially when the sun has just disappeared below the horizon, it is important to sleep well above the ground. Houses should be constructed with sleeping-rooms in an upper story, the windows being closed at night. The diet should be nutritious. Drink very temperately used, if at all. Exercise, taken early, should be preceded by a cup of chocolate, tea or coffee. Protection of the head and neck from the sun should be adequate, drinking water boiled and filtered, and two grains of quinine taken night and morning.

Directions such as these, which are based on Sir Joseph Fayrer's experience, will do much to lessen the dangers of ague and fever.

In the first two or three years after breaking up and cultivating virgin land it is important not to live in the midst of the land; and if it is proposed to irrigate the garden, the house should not abut upon it, but should be placed to the windward of it, or a belt of Eucalyptus should be planted between the house and the irrigated fields. Such a belt acts as an effective screen, just as a gauze mosquito curtain may keep the malaria from one sleeping in the jungle.



The Eucalyptus grows readily after the first year or two, during which it needs attention if the season is unfavourable,

The coast lands are occupied by tea and sugar plantations. Sugar, as is well known, will only flourish in tropical or sub-tropical regions, too relaxing for most health-seekers.

The Forestry experiences of South Africa are such as to encourage great development. A wise outlay would change the face of the country, as it has done in the neighbourhood of many of the towns. In this respect Grahamstown is a model. The annual "tree planting," when every child plants a tree (the *Pinus insignis*), is an institution which might be copied in many a neighbourhood with great advantage to the climate, as well as to the beauty and attractiveness of the place.

Stinkwood—the "teak of South Africa"—is a most valuable wood.

Ironwood has been found by Sir John Coode of great value for piles driven under water-mark.

Bechuanaland and the protected districts extend to the Zambesi. The greater part of the district is suited for pasture; many of the natives wear European clothing, and show a talent for carpentering and mechanics, and the climate is said to be almost perfect. No frost in winter; rain is rare between April and October. Children may be reared as high as the Zambesi latitude (18 degs. S.).

It is curious to note that, under the influence of alcoholics, some of the native races of a low type are dying out. But the Zulus are a powerful race, and resist the access of disease.

Leprosy is said to be spreading among the coloured population in various places.

A peculiarity has been noted in the climate on the Limpopo at an altitude of 2,880 feet, where the road from Pretoria to Khama's country crosses the river. Whilst the sun is hot—99 degs. in the shade—cold blasts of wind, having a temperature of 70 degs., occur every four or five minutes. Rheumatism is very apt to be thus caused, the moist skin being dangerously chilled by the cold blast.

In the neighbourhood of Lake N'gami, at an altitude of 2,813 feet, lat. 21 degs. S., the sickly season prevails from September to May, when it is wise to avoid this region.

At the Victoria Falls, on the Zambesi, the river is about a mile in breadth; although the elevation is 2,580 feet above the sea, it is unhealthy during the summer.

Considering the great importance of this region as a valuable



field for emigration and for trade with the interior, it is important that further information should be obtained as to the climate, the means of maintaining health, the time of year at which it should be avoided, &c.

Mission and other stations now extend from the River Congo on the west to the stations of the East African Company on the Great Lakes, and so on to Zanzibar.

The interval between the Victoria Falls and the sources of the Zambesi and of the Congo, which lie side by side, is being rapidly bridged, especially by the marvellous energy of Mr. F. T. Arnot. A railway, as proposed, to Stanley Pool would make the 1,200-mile waterway of the Congo accessible. Another short railway will eventually connect the Congo near the Stanley Falls with the Lake system of the interior, thus linking the east with the west; whilst much will be done to connect the north and the south when the Cape Railway is extended to the Zambesi.

Passing northward of the Zambesi, only the lower parts of whose course are known to be very unhealthy, and to the north of the Island of Zanzibar, we come to the region recently acquired by the Imperial British East African Company, which has rights extending over a section of Eastern Equatorial Africa, between the coast and the Victoria Nyanza Lake, a territory of 67,000 square miles—three times as large as Natal. It is bounded by mountains Kenia and Kilima-njaro, upwards of 19,000 feet in height, with high, cool plateaux forming a large proportion of the country, and affording districts endowed with a temperate climate and temperate flora, well watered, richly wooded, and offering most suitable localities for European settlers. This country is described by Mr. H. H. Johnston in the October number of *The Fortnightly Review* in a way to attract all who read it. It is the finest botanical and zoological garden in the world, and might become the granary of the East.

Large areas in these districts have a European climate, superior in salubrity to many parts of the Continent—the average night temperature in the hilly districts being 60 degs., and in the plains 68 degs., and the greatest heat registered 81 degs.

The seasons are regular; from June to October no rain, from November to May an abundant rainfall.

At an altitude from 4,000 to 8,000 feet, the climate is described by Mr. Johnston as like a Devonshire summer, becoming cooler the higher you go.



Again, Bishop Hannington, when crossing the Equator at an elevation of about 5,000 feet, remarked: "The valleys and grassy or heathy downs are very like Devonshire. Above 6,000 feet the tangled forest begins, with dense—almost impenetrable—undergrowth, which clings to the mountain to the height of 9,000 feet; Kilimanjaro, rising to a height of 19,000 feet, looks lovely in the evening light."

The population around the Victoria Nyanza is very dense, and is estimated at from 10,000,000 to 12,000,000.

Dr. Livingstone, speaking of the high, dry country of the interior of Africa, says:—"It is the complete antipodes to our cold, damp English winter. Not a drop of rain ever falls between May and August. Damp and cold are never combined; the atmosphere never has that steamy, debilitating effect so well known in India and in parts of the coast region of South Africa. You may sleep out of doors with the most perfect impunity."

There is, however, a dark side to this picture. Central Africa is dotted with the graves of missionaries—devoted men, who have striven to take the Gospel into the heart of the great Dark Continent, and have perished in the attempt. Let us not regard them as a failure but as the leaders of a "forlorn hope," beckoning us onward and upward to victory and to triumph.

Professor Drummond, in his recent work on *Tropical Africa*, writes: "The physical features of the great continent are easily grasped. From the coast a low, scorched plain, reeking with malaria, extends inland in unbroken monotony for 200 or 300 miles. This is succeeded by mountains slowly rising into plateaux some 2,000 feet or 3,000 feet higher, and these, at some hundreds of miles distance, form the pedestal for a second plateaux as high again.

"This last plateau, 4,000 feet or 5,000 feet high, may be said to occupy the whole of Central Africa. These plateaux are but mountains and plains, covered for the most part with forest.

"The Zambesi drains an area of more than half a million square miles, and like the Nile and other African rivers, its reaches are broken by cascades and cataracts, marking the margin of the several table lands.

"Africa rises from its three environing oceans in three great tiers: first a coast-line, low and deadly; further in a plateau the height of the Grampians; further still the higher plateau, extending for thousands of miles, with mountains and valleys. Cover the coast belt with rank,



yellow grass, dot here and there a palm ; clothe the next plateau with endless forests, with low trees with half-grown trunks and scanty leaves, offering no shade.

"As you approach the Equator, Central Africa becomes cooler, because the continent is more elevated in the interior, and there is more aqueous vapour and cloud than in the more southern lowlands.

"The climate of the Equatorial zone, is here as elsewhere, superior to that on the borders ; at night it is cold, two blankets being needed. The shade thermometer rarely reaches 95 degrees."

The foliage in the tropical regions is luxuriant ; in the southern parts of the continent the flora is remarkably distinctive. Trees are specially deficient. Each species is as a rule limited to a small area. Foreign plants are very slow to become acclimatised, many plants remaining for five, seven, to ten years in a dormant state, and only flower when rain and temperature coincide with their requirements. A region generally devoid of vegetation may after rains spring into wonderful luxuriance.

At least one-third of the flowering plants are succulent, and there is a marked prevalence of thorny plants.

The mention of flowering plants reminds me that I am digressing from my subject, which is Southern, rather than Central Africa—a digression which I hope my hearers will forgive, considering the special interest at this moment attaching to tropical Africa, not alone from its political, but from the human interest attaching to the loss of Colonel Barttelot, and we may fear also to that of Stanley himself.

In Cape Colony there are millions of acres of land lying waste and barren for lack of irrigation and improved methods of farming. An infusion of European energy and capital will do wonders, and there is good reason to hope that in Bechuanaland a fresh plantation of European settlers will soon take place, and that in a few years this fertile country may have undergone such development as to make it a haven of refuge for health-seekers as well as agriculturists.

The time has not yet come for a consolidation of the various Colonies, but the solidarity of South Africa is worthy of the consideration of our statesmen, and will one day—let us trust by pacific means—be accomplished. Cape Colony comprises 240,000 square miles. If Bechuanaland is added to this, a territory is



formed 420,000 square miles in extent—twice the size of France—having a population of 1,800,000, and a capacity for future development impossible to estimate,

The arid, almost rainless region now belonging to Germany need not be envied; the fever-stricken region north of Delagoa Bay need not be grudged to Portugal, seeing that we now have within the sphere of British influence the high central tableland, which forms a healthy line of access to the mountains and lakes, whence arise the Zambesi, the Congo, and the Nile,

The future development of "Congo Free State," and the East African Lakes Company, will be stimulated by the approach of a railway to the Victoria Falls of the Zambesi. The country, 800 miles in length, between Kimberley and the Falls, has an average elevation of 4,000 feet, and for the most part is not unhealthy. Those who are willing to follow Stanley's clearly laid down laws as regards place of bivouac, conditions of exposure to wind, &c., may, without great risk, explore and settle in the upper reaches of the Congo and the Nile. The terrible fatality that has fallen upon our pioneers, who have approached the tablelands of the interior from the mouth of the Congo or of the Zambesi, is due to the pestilential nature of the swamps and low sea-coast levels. When Equatorial Africa is reached without passing through these fever-stricken regions, it will be robbed of half its dangers.

Had time permitted, I might have enumerated some of the classes of disease for which the South African climate may prove of special benefit. In hay fever, for instance, the voyage to and fro, and a few weeks spent in the Eastern Province, may be regarded as almost a specific, for the malady is practically unknown in Cape Colony, and considering the general absence of grass, this is not, perhaps, to be wondered at.

It only remains for me to apologise for having taken you over so much arid ground. If you have found the subject a dry one, I may remind you that this dryness is in harmony with the nature of the Great Karoo district, which determines the character of "South Africa as a Health Resort."

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TABLE

SHOWING ELEVATION AND RAINFALL IN SOUTH AFRICA.

|                                 | Elevation<br>in<br>feet. | Annual<br>Rainfall in<br>inches. | Annual Num-<br>ber of Days<br>of Rain. |
|---------------------------------|--------------------------|----------------------------------|----------------------------------------|
| Aliwal North . . . . .          | 4,348                    | 18.36                            | 61                                     |
| Beaufort West . . . . .         | 2,792                    | 7.91                             | 25                                     |
| Bishop's Court (near Cape Town) | 250                      | 56.65                            | 102                                    |
| Bloenifontein . . . . .         | 4,540                    | 16.97                            | 70                                     |
| Burghersdorp . . . . .          | 4,552                    | 11.39                            | 41                                     |
| Calvinia . . . . .              | 3,100                    | 4.28                             | 28                                     |
| Cape Town . . . . .             | 15                       | 23.72                            | 70                                     |
| Ceres . . . . .                 | 1,493                    | 28.18                            | 67                                     |
| Colesberg . . . . .             | 4,407                    | 12.59                            | 33                                     |
| Cradock . . . . .               | 2,855                    | 9.18                             | 45                                     |
| De Aar . . . . .                | 4,180                    | 19.06                            | 60                                     |
| Dordrecht . . . . .             | 5,200                    | 18.36                            | 61                                     |
| Fraserberg . . . . .            | 4,200                    | 2.92                             | 18                                     |
| Graaf-Reinet . . . . .          | 2,463                    | 9.60                             | 39                                     |
| Grahamstown . . . . .           | 1,800                    | 26.33                            | 84                                     |
| Johannesburg . . . . .          | 5,000                    | ..                               | ..                                     |
| Kimberley . . . . .             | 4,012                    | 20.52                            | 64                                     |
| King William's Town . . . . .   | 1,273                    | 16.48                            | 81                                     |
| Knysna . . . . .                | 30                       | 31.84                            | 93                                     |
| Kokstad . . . . .               | 4,153                    | 22.39                            | 67                                     |
| Ladybrand . . . . .             | 5,000                    | 27.10                            | 87                                     |
| Maritzburg . . . . .            | 2,197                    | 31.87                            | 141                                    |
| Middleburg . . . . .            | 4,197                    | 11.38                            | 39                                     |
| Pella . . . . .                 | 1,800                    | 0.85                             | 3                                      |
| Port Elizabeth . . . . .        | 181                      | 19.71                            | 84                                     |
| Pretoria . . . . .              | 4,007                    | 30.74                            | 64                                     |
| Queenstown . . . . .            | 3,548                    | 16.70                            | 76                                     |
| Richmond . . . . .              | 4,736                    | 10.53                            | 33                                     |
| Simon's Town . . . . .          | 20                       | 36.02                            | 110                                    |
| Table Mountain . . . . .        | 3,349                    | 55.66                            | ..                                     |
| Tarkastad . . . . .             | 4,280                    | 8.85                             | 55                                     |
| Worcester . . . . .             | 794                      | 7.51                             | 39                                     |
| Wynberg . . . . .               | 164                      | 43.40                            | 94                                     |





