Observations on the topography, climate, and prevalent diseases of the island of Jersey : the result of meteorological observations, and general practice, during thirteen years.

Wr. Broadbent

with

Major General Fergusson's best

Compliments ——

D'Hautree

30th april 1841 ——

OBSERVATIONS

ON THE

TOPOGRAPHY, CLIMATE, AND PREVALENT DISEASES

OF THE

ISLAND OF JERSEY.

JERSEY:

PRINTED BY P. PAYN, ROYAL SALOON.

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ISLAND OF JERSEY,

THE RESULT OF

METEOROLOGICAL OBSERVATIONS, AND GENERAL PRACTICE, DURING THIRTEEN YEARS.

By GEORGE S. HOOPER, M.D.

LONDON:

PUBLISHED BY WHITTAKER & CO.,
AVE-MARIA LANE.

1837.

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Preface.

THE political history of Jersey may now be considered an exhausted subject, having been amply illustrated in every point of view by many writers, ancient and modern. Of its institutions, privileges and customs little could be said that had not already been told oftentimes, whether by historians, economists, or the gentlemen of our local press. Its beauties too have been ably portrayed by that popular writer, the late Henry D. Inglis, the general merits of whose work on the Channel Islands have rendered any fresh attempt in a similar purpose wholly unnecessary

for the present. Neither would it be easy to add any thing important to what the same author has laid before the British public, relative to the extraordinary resources of the island as a commercial country, its produce, and the inducements it may offer as an eligible residence to persons of limited incomes, &c. &c. Upon all these matters, therefore, there is little room left for originality; and for any thing I may repeat on the same questions in these pages, my only apology is the desire of placing under one point of view, all that may contribute to the illustration of my particular subject. The same might be said of whatever relates to the state of agriculture in Jersey, which was most fully treated of by Mr. Quayles, in his clever report to the Board of Agriculture, made in the year 1812, and printed by order of that body. Some improvements have, it is true, taken place since that period, and many of the excellent views of this experienced writer, whether knowingly, or otherwise, have been put into practice; but the spirited exertions of our lately established Agricultural

Society, in which are happily united all the wealth and talent of the island, have contributed more than any other cause to promote further ameliorations. If always conducted with the ability and honor that have hitherto marked its operations, that Society cannot fail to place this fertile spot, in regard to cultivation, excellence and quantity of produce, on a footing of superiority far exceeding what might be expected from its situation and extent. By means of contributions, due to the kindness and liberality of my friend Colouel Le Couteur, and Mr. B. Saunders, the well informed nurseryman and gardener, I shall be enabled to lay before the reader more than is generally known, concerning the present state of the island, in respect to fertility, and the capability of its natural qualities for further development. And, upon these interesting topics I may be allowed to debate the more freely, as they have a close and obvious connection with the question of climate, and supply more familiar illustrations of the latter to most readers, than mere meteorological data.

The labours of former inquirers, however, have not been extended to the climate of Jersey; and the want of correct information upon that point has long been felt, as well by the medical profession, as by travellers in search of situations congenial to their state of health. That this desideratum should not have been supplied, long ere this, appears somewhat unaccountable, when it is considered how much the knowledge of the general attractions of the island has been diffused of late years, and by how much, as a consequence, the influx of visiters, and settlers has increased during the same period. The fact is, that many men would cheerfully undertake a task requiring a much greater effort of intellect, but less time, who would shrink before one of slow progress, and requiring a very protracted exercise of industry, and perseverance. To remedy this absence of scientific information on the nature of our climate forms the chief object of this work, and whatever else I may comment upon in the course of my remarks will, I think, be found, on examination, to

be subservient more or less, to the same purpose.

Mr. Inglis, whilst prosecuting his researches on this Island, became sensible of the disadvantage under which he laboured, from the want of trustworthy information, touching the nature of its climate, and the prevailing diseases ; a circumstance which has rendered his, otherwise interes ting, book imperfect in a very essential particular. Indeed, so convinced was he of the value of such information, that he condescended to propose, that I should make his work the vehicle of what I had, up to that time, ascertained by means of philosophical observations, and several years of general practice. Circumstances, which it is here unnecessary to mention, prevented my availing myself of his offer, which, I confess, seemed highly advantageous, inasmuch as a very extensive circulation was rendered almost certain, by the already established character of that gentleman, in the literary world.

Of the great number of persons who visit this island in the summer months, there are not a few, who undertake that journey upon some notions

concerning its climate, formed upon hearsay information ; and, as this must often be incorrect, it is easy to account for the disappointment which is frequently experienced. On the other hand, many invalids, from a prudent distrust of such information, hesitate to make a trial of our climate ; and the candid medical adviser is governed by the same feeling, when consulted on the probable effect of a continued residence in this island, on health or disease. It is evident, therefore, that, so long as the question remains in its present state, false expectations may be raised, or doubts created, either of which must be prejudicial to the fair claims the island possesses to preference, as an eligible residence, in particular cases.

It is not enough for practical application, that the climate of a locality be designated in general terms ; it is desirable, also that its several qualities be examined in detail, in order that, should any peculiarity belong to it, it may be possible to judge, whether, in that respect, it differs much from the climate of other similar

situations. For, when an invalid resolves on leaving his home, for a climate better suited to his state of health, he is naturally desirous of rendering such a step as effectual as possible, by the best selection, which his means of information can enable him to make. In most cases, therefore, it would be of no small importance to him, not only to know beforehand which places were most likely to secure him the looked-for advantages; but also, whether one spot in particular, more adapted to his means, convenience, or inclination, might not, in respect to climate, be equally entitled to preference.

Like that of all small islands, the climate of Jersey is pretty generally known to be comparatively mild and humid; but beyond these broad features, writers do not seem to have deemed it worth while to carry their descriptions. The subject, therefore, may still be considered quite unexplored. Another very important point, viz. the diseases of the Island, viewed in regard to comparative prevalence, and pathological distinctions from local causes, has, hitherto, re-

ceived but little elucidation from actual experience. For, the ability with which Dr. Scholefield has handled it, in his contribution to Mr. Inglis' work, may be deemed independent of any knowledge acquired by his own personal observations. That he may have taken his information from very respectable sources, and that his inferences, from facts thus collected, may be very logical, I do not mean to dispute; but the difficulty under which he laboured, from his own limited acquaintance with his subject, is rendered very apparent by a perusal of his essay. By those who know something of the circumstances under which that gentleman then wrote, the general merit of his performance cannot fail to be favorably appreciated; but, at the same time, it must be granted, that ample room is still left for further investigation.

For the above reasons I have especially concentrated my inquiry upon the climate and pathology of Jersey: and whatever degree of success may have attended my labours, (of which it only belongs to competent readers to decide,)

I can safely assert that every essential fact has been carefully examined by myself, and no inference drawn without regard to its tendency, or a due sense of the importance of avoiding every source of fallacy, in questions of this nature.

These subjects not having been as yet properly investigated, very false notions have gone abroad upon the one, as a remedial agent, and upon the other, as the index of certain local influences,—and, as the evils of such errors cannot fail to be experienced in various ways by many persons, a series of observations made with a view to more accurate information, will, it is hoped, be found deserving of attention. To medical men, especially, the questions arising out of such an inquiry are both interesting and important; and it would, indeed, be a cause of no small satisfaction to me to learn, that the manner in which they have been treated, in the following pages, was found sufficiently clear, and comprehensive to lead to useful application in practice.

CHAP. I.

GENERAL DESCRIPTION OF THE ISLAND OF JERSEY.

EXTENT, FIGURE, AND EXPOSITION.

JERSEY is the most considerable and most populous of the Channel Islands; it also lies further south than its neighbours. Quadrilateral in its form, it stretches from East to West in a direction nearly parallel with the equator, averaging about nine miles in length, and five in breadth. Its superficies has been estimated at between *thirty-nine* and *forty thousand* acres. To the north its coast is steep and craggy, rising in some places to an abrupt elevation of forty, or fifty fathoms: to the south, on the contrary, the

ascent to the main land is more or less gradual, and displays a very rich landscape. On the latter side, there are, here and there, tracts of flat land between the shore and the points where the island begins to rise; and these tracts are, in some places, under the level of high-water mark. As will be shown hereafter, the site of St. Helier's, the principal town, is very little above this level. It has been pretty generally stated, that, between its northern and southern boundaries, the surface of the island follows a regular inclination, so as to give it a wedge-like form; but that description is certainly incorrect. The high grounds between the numerous vallies, by which the surface of the island is, everywhere, sunk and extended, are all nearly horizontal, except close to the east, west, and south coasts; but as the vallies, with few exceptions, run from north to south, they of necessity exhibit the declivity in question, and the streams which they supply follow a similar direction. To this configuration is chiefly owing the remarkable fertility of the island.

GEOLOGY.

The geological researches of Dr. McCulloch, which included most of the rocks in St. Michæl's bay, would warrant the supposition that Jersey, like the other islands in the same quarter, rests on a basis of real granite. Be that as it may, the much admired *Mont Mado* stone, which, from its extreme hardness, has been confounded with the latter rock, is Sienite, in which Felspar predominates. It is, nevertheless, a beautiful and valuable rock, being very dense and homogeneous, of a pleasing flesh colour, and separating in larger masses than any other mineral in the island. The sienitic rocks of Jersey, however, run into several varieties, by reason of differences in the proportion of their constituents. In some parts, says, Mr. Konig, they pass into porphyry; in others, into a kind of green-stone, in a state of partial, or entire decomposition. To this belongs the rock which forms the *Town Hill.* Specimens of sienite are to be met with in almost every point of the coast of the island; but the situations in which it is most abundant, and

beautiful, and, by reason of its extreme density, makes the nearest approach to the mechanical construction of real granite, are Fremont, Plemont, St. Brelade's bay, Noirmont, and the eastern side of St. Helier.

Incumbent on the sienitic masses are schistose formations, the higher strata of which are much fractured, green porphyry, amygdalaid, and pudding-stone. The stratified schistus is particularly observed on the declivities of the southern coast; while, on the contrary, the large naked masses of sienite exhibit themselves chiefly on the northern side, forming in some parts high, and almost perpendicular cliffs, which rise to an elevation of from 200 to 300 feet above high-water mark. In the neighbourhood of *Bonne-Nuit*, the land rises 329 feet above the latter level.

As a geological curiosity, there is no object more deserving of attention in this island than a mass of pudding-stone, extending from Boulay Bay to St. Catherine's, on the northern boundary, and reaching to a distance of about two miles

inland. It is stated that no such formation is to be found in any of the neighbouring islands. Mr. Quayle, in his excellent report to the Board of Agriculture, describes it as follows :—" The " basis of the breccia is schistose, containing in- " fixed stones and pebbles of various descriptions " and sizes, generally bearing marks of former " attrition, and few attaining the size of the hu- " man head. They consist, principally, of mica- " cious schistus, but some are porphyry ; others " granite, and granitel. On detaching from their " position some of these pebbles, they disclosed " on fracture the curious fact, that they owe their " formation to a former process of nature, of a " description precisely similar to that by which " the present bed of breccia has been formed. " In these pebbles are contained still smaller " pebbles, which wear the appearance of having " been rounded by previous attrition, previous " to being agglutinated in a body of stone, which " has been afterwards broken into irregular frag- " ments : in their turn, these fragments had been " rounded, when they were again embedded in

" the rock of which they now constitute a part." These pebbles of the first formation, adds Mr. Quayle, carry us to a remote period in the history of the revolutions of our planet.

There are only very slight traces of metals in Jersey, and any attempt to separate any for the purposes of art has, long ago, and, indeed, justly, been held as chimerical. The existence of iron ore is chiefly proved by a few chalybeate springs to be met with here, and there ; but no strong indications appear of the presence of other metallic substances. The hopes once entertained of discovering manganese have never been realized. The island is equally destitute of lime.

I hope I shall not be thought to detract from the just claims of the island to the attention of men of science, when I say that, with the above exceptions, it is rather sterile in those objects, which might induce a practical geologist to tarry long on its shores. This circumstance, indeed, may partly explain, why such competent observers as have surveyed the island, have apparently confined their researches to a few general facts,

without entering into minuter details. To me it would have been a work of higher interest to have supplied the deficiency ; but, wanting ability and leisure for such an inquiry, I have been necessarily obliged to limit my remarks on the geology of the island, to a mere summary of the observations of others better qualified than myself. Mr. Konig's inquiry* might assuredly have been extended to some interesting particulars ; and that it was not is the more to be regretted, as this country is seldom visited by men so competent to throw light on its natural history. I am not aware, however, of the existence of any observations, on the same subject, more copious, or deserving of confidence, than those of that accomplished gentleman.

CHARACTER OF THE SOIL.—FERTILITY ILLUSTRATED.

The general character of the soil of Jersey is a deep sandy loam, with a subsoil of red loam, or

* Vide Plees' Account of the Island of Jersey, 1817.

clay, based on granitic rocks, or schistose formations. The depth of this soil runs from one to four feet, or more, in some cases. But this general character is, of course, subject to many variations: some parts containing much iron ore, and others a greater quantity of sand, and sandy peat. It is, I believe, generally admitted, that all lands incumbent on granitic bases are the fittest for the purposes of agriculture, and the growth of timber; and the same may be said of red clay, which is an excellent subsoil. Hence, then, it is not difficult to account for the remarkable fertility of the island, which, moreover, has for a long series of years, been continually improved by natural, and artificial means. It is only in the neighbourhood of cities and towns, that, in other larger countries, land can be found so well manured, and so rich, as is generally observed in Jersey. Much stress is laid by our farmers on the advantages they derive from the saline particles deposited on the soil by the prevailing breezes. The old adage, 'it is an ill wind that blows nobody good,' is, therefore, fully ve-

rified in this island; since even the boisterous, and stormy westerly gales are not without their advantages, in this point of view. This is owing to the spray borne along by those winds; for rain, being the produce of previous evaporation, cannot contain any salt in solution. Certain it is, however, that after the continuance of these high winds, plants and grasses acquire a saline flavour, several miles from the coast; which circumstance renders the herbage peculiarly agreeable to cattle and sheep, and may account for the former being generally healthy along the coast, and the latter rarely, if ever, affected with the rot. May not the same cause affect man in a similar manner?

In proof of the great fertility of the island, I hope I may be pardoned for introducing here the following interesting facts, for which I am indebted to my friend Colonel Le Couteur. The superiority of produce in Jersey is chiefly exhibited in the Potato and Wheat crops; but the produce of orchards, in some years, is equally great, and the quantity of pears and stone fruit

of a delicious kind is also very unusual. The average of the potato crops is much above the same in Great Britain, 10 *cabots* a perch, being an ordinary produce in the best lands, though not more than 6 can be obtained from inferior soils. But even this last quantity would be esteemed a good crop in England. Now, the above produce, converted into English measure, will be 400 *cabots* of 40lbs. each the *vergée*, which multiplied by $2\frac{1}{4}$, the exact number of vergées to the English acre, is $400 \times 40 \times 2\frac{1}{4}$; when, to bring the Jersey weight into avoirdupois, is $13 : 14 :: 400 \times 40 \times 2\frac{1}{4} = 38.769\frac{3}{13}$ lbs. per acre,—a produce far exceeding that of East Lothian and Essex, which, according to Sir John Sinclair, is from eight to ten tons, under good culture and a proper soil.* The superiority of our wheat crops is equally manifest, 40 bushels of 60lbs. each, equal to 2,400lbs. being reckoned an excellent crop anywhere in Great Britain; whereas, in Jersey, many farmers reckon on having a *cabot* per perch in favorable seasons, which is

* Vide '*Code of Agriculture*,' pages 392 and 575.

3,110lbs. avoirdupois per acre, or an excess of 700lbs. in favor of the island. But Colonel Le Couteur knows of two instances, in which seventy-seven bushels per acre were grown in Jersey; and he himself, in the year 1835, raised the former quantity, on only whipping out of the wheat, previous to the thrashing, which of course, added something more to the return. The quantity of parsnips raised by some farmers is also very considerable; and Lucerne, when cultivated with skill, thrives so prodigiously, that it is frequently cut four times, and fed-off a fifth!

From the foregoing statement may be conceived how great a field of utility is open to the Jersey Agricultural and Horticultural Society; an institution which, though quite in its infancy, has already made great progress in the accomplishment of its laudable objects. Many farmers, who, previously to the establishment of this society, betrayed a timid aversion to any change in their obsolete habits, may now be considered as converts to modern improvements, and exhibit crops, which would do honor to the best agricul-

turists in any country. In a word, to use the language of my patriotic, and accomplished contributor, "a powerful impulse is given by this Society to an intelligent, and inquiring people, not, indeed, sufficiently wealthy to attempt extensive experiments, but sufficiently independent, and enterprising, to carry on with success those more minute researches, which eventually lead to the benefit of mankind in general, and, which, even when unsuccessful, never fail to leave consoling emotions in a well-constituted mind."

GENERAL ASPECT OF THE ISLAND.

What has been already stated will have, doubtless, prepared the reader to hear, that the general aspect of the island displays a degree of prosperity, which an observer might in vain look for in countries, where wealth, restricted to a few favored spots, only serves to render the gloom of a sad contrast more striking in adjoining districts. Of this more than sufficient proof may be had in

a view of our harbour, our commercial streets, and the purlieus of our town, where every thing indicates active industry, increasing prosperity, and acquired wealth:—and, no less, in the contemplation of the spacious and solid habitations of our farmers, with the rich pasturages and exuberant vegetation of the land that surrounds them. And as in our contracted limits these things may be seen, as it were, in one *coup d'œil*, their effect on the mind of a stranger must be no less unexpected than pleasing. Upon a small scale, nowhere is to be found a greater richness of inland scenery; and although the latter seldom rises above what might be called pretty, on account of the absence of the grander, and more imposing spectacles of nature, still this mediocrity is amply compensated by the varying aspect of the ocean, studded everywhere with rocky projections, islands, vessels going to and fro, and bounded by an horizon, which, in clear weather, discovers the yellow sands, and picturesque cliffs of the neighbouring coast of France. Neither can the more placid enjoyments of the field be

wanting in a country, which consists almost entirely of hill and dale, and abounds in wood, and verdure. From an elevated spot, the island looks like a grove; so great is the number of trees in the orchards, and on the massive embankments which separate the different small pieces of ground. For, here, the subdivision of property is not only excessive; but each landowner is fond of separating his fields, by means of stout hedges, on which to grow timber, and the sides of our countless roads and lanes are similarly raised, and furnished with trees. This gives a very novel character to our rural districts in the eyes of Englishmen, accustomed to a more open country: and, though the idea might almost seem ridiculous, when the small size of the island is considered, yet it may be said with truth, that, to a stranger, Jersey presents a natural labyrinth of no common intricacy,—and that, out of the main roads, he would be very likely to lose his way.

The woody appearance of the island is, however, relieved from that of solitude by unequivocal marks everywhere of the highest degree of

cultivation ; and also by the vast number of excellent houses, and gay villas, by which the face of the country is dotted on all sides. The country parishes alone possess at least 3,000 inhabited houses ; and, there being only two of those parishes, viz., St. Brelade, and Grouville, in which anything like a town or village is to be found, the above number of habitations, must be allowed to be prodigious, and apparently incompatible with the size of the island. The remaining parish, St. Helier, including our principal town, in 1831, contained upwards of 2,000 houses, with an *increasing* population, *then* amounting to 16,027 ! To those who are unacquainted with the political resources, and commercial privileges of this, and the other Channel Islands, these facts will naturally seem irreconciliable with cheap living, and other advantages, which might be enumerated along with them. But, as it does not belong to my present plan to enter into such matters, I am under the necessity of referring those of my readers, who might

wish to be satisfied on those points, to other more popular works.*

BOTANY OF THE ISLAND.

There is no doubt, that to the botanist Jersey presents a wide, and interesting field of observation, compared with its narrow limits. Many hundred wild plants have been collected, two of which are indigenous, viz., the Centaurea Isnardi, and the Gnaphalium luteo album. My friend, W. C. Trevelyan, esq., during a short visit he made to the island, informed me that he had also found two plants, which, as far as he knew, did not grow in any other part of the kingdom,—Armeria cephalotes, which is abundant in the sandy districts of St. Ouen, and St. Brelade,—and Echium violaceum, first noticed here by the celebrated English botanist Ray, but confounded by subsequent authors with Echium Italicum, not to be found here at all. The following list of plants, given me by the same gentleman, is interesting, inasmuch as, occurring only in the

* Vide Plees' Account, &c., and Inglis' Channel Islands.

western and south-western parts of England, their existence here would seem to indicate a similarity of climate.

Sibthorpia Europœa.
Matthiola sinuata.
Scilla autumnalis.
Campanula hederacea.
Scrophularia scorodonia.
Asparagus officinalis.
Briza minor.
Bartsia viscosa.
Helianthemum guttatum.
Lavateria arborea.

And among the plants which are considered rare in England, may be instanced

Cyperus longus.
Mespilus germanica.
Statice spathulata.
Diotis maritima.
Hypericum elodes.
Asplenicum lanceolatum.
———— marinum.
Cotyledon umbilicus.

It may be observed that the latter plant, which is very abundant in this island, is strongly indicative of a damp climate. The best Flora of the Channel Islands as yet published, is that, which Mr. Quayles published in the appendix to the work already quoted, and which had been communicated to him by Dr. McCulloch. But as my object will be fully answered by the preceding brief remarks, I will abstain from any further details in this place; reserving the facts I have collected on the success which attends the naturalization of exotics in this island, for the chapter devoted more particularly to the consideration of our climate. I may, however, observe in conclusion, that in addition to the native produce of the island, the botanist will also enjoy here the advantage of examining, in a perfectly sound state, a vast number of tender tropical plants, which seldom, if ever, live in health in any part of Great Britain.

WATER.

The qualities of spring-water in this island vary, of course, with the spots from which it is taken; but generally speaking, and in relation to the two qualities of *hardness* and *softness*, it may be said that the latter belongs to the higher, and the former to the lower situations. In the elevated spots, which form the body of the island, spring-water makes a near approach to perfect purity; being clear as crystal, and tasting peculiarly delicious, from a slight flavour of muriate of soda, the only mineral substance to be found in it, in any appreciable quantities. Free from earthy salts, it is found fit for all domestic purposes, and yields nothing in value to rain water, in that respect. Most of the farms, therefore, are supplied with this essential requisite by a well, a neighbouring fountain or stream; and cisterns for the reception of rain water are scarcely ever seen, except in low flat situations, such as the alluvial tracts of St. Helier, St. Clement, and Grouville. It so happens, however, that the latter spots contain more than

half the population of the island;—a circumstance which, doubtless, more than counterbalances their comparatively small extent, and renders the qualities of their waters a question of the highest importance. With few exceptions, in these districts, spring-water is *hard;* as is sufficiently proved by that most familiar, but best of all tests, its action upon common soap, and dried vegetables, such as beans and peas. This, as chemists know, is owing to the presence of earthy salts, (most commonly the *sulphate of lime,*) which, however much they may limit the domestic uses of such springs, can only render them insalubrious as drink, when the impregnation passes its ordinary limits. In this island, the hardest water is never sufficiently so to produce pretrifactions; at least, though I have made repeated inquiries on the subject, I have never heard of an instance of such productions having been found in any of our fountains, or running streams. A graver objection to the spring-water of these low situations rests on the more deleterious impurities, which it derives from the

nature of the soil, in which the wells are sunk. Except where clay exists to a considerable depth,—and this is not the case in most parts,—or where the modern plan has been adopted, of boring down to the spring, and conveying the water by means of a pipe into a cemented reservoir above, the water in use is seldom clear. It is, also, very turbid after heavy rains, and undergoes rapid decomposition, if kept confined in a vessel, from the quantity of vegetable matter which it holds in solution. Hence its vapid taste, and disagreeable odour, particularly striking to persons accustomed to the excellent water of more favorable situations. That these bad qualities do not belong to the springs themselves, but, on the contrary, proceed entirely from land drainage, is clearly proved by the exceptions I have here stated; the clay offering an obstacle to such contamination in the one case, and the construction of the reservoir opposing it still more effectually in the other. The advantages belonging to this latter plan, have, of late years, been very generally recognised; and, by its having been

adopted, much of the evil I have just pointed out has been remedied.

POPULATION.—NATIONAL CHARACTER.

The last census which was made in 1831, established the population of the Island at 36,582 souls, an increase of nearly 8,000 having taken place during the preceding ten years; of which augmentation three-fourths was referrible to the extension of the town of St. Helier only. Supposing the further increase of the population since that period to have progressed in a similar ratio, it would now reach 40,000 ; but I am inclined to think that such a computation would go somewhat beyond the real number. It need scarcely be added, that the census included all classes of inhabitants, whether temporary or native. Passing from these numerical considerations, to the more important subject of physical and moral characters, I believe the following delineation will be found to apply to the Jersey people, as nearly as possible. At all events,

it was made some years back, was then the subject of free discussion in a literary assembly, and was not found more open to particular exceptions, than all similar descriptions must of necessity be.

The difficulty of coming to a general conclusion on the physical characters of a race of men, is much lessened in Jersey, by reason of its male population being embodied into militia corps, which, when assembled, offer an excellent opportunity of viewing them critically. But, to avoid misapprehension, it is necessary to turn one's attention chiefly to the country regiments, that of the town being by far less exclusively native. By using this means of arriving at correct information on this subject, even a casual observer will be enabled to form a pretty just opinion of the leading features of the population of the island. The men are generally of the middle size, and retain much of the physical characters of their two originals, the Celts, and the Scandinavians, especially in the northern districts, where the race has suffered the least admixture.

The hair is mostly dark brown, or light chesnut, the features sharp and intelligent, the complexion tawny, the expression rather harsh and phlegmatic. Hence a certain reserve and roughness of manner, anything but prepossessing to a stranger, and which, having been mistaken for intentional rudeness by some travellers, has drawn much unmeritde obloquy upon our people. Their limbs are muscular, but not bulky ; they are active and laborious ; and the whole of their figure is remarkable for more ease and flexibility, under ordinary exertion, than is to be observed in the parallel orders of most communities. There is, undoubtedly, less outward rusticity to be seen in the peasantry of this island, than that of England or France; and a perfect clown is a being rarely to be met with, even in our remotest districts,—a peculiarity, in all likelihood, mainly owing to the early military exercises, to which every native is by law subject. This explanation is the more probable, as, under the age at which this drilling commences, the children of the peasantry are as wild, and as easily scared at the

sight of a stranger, as in any other country. Besides, this peculiarity is not so apparent in the female sex. As seamen, shipwrights, and masons, in which trades bodily strength, and moral intrepidity are in request, the labouring classes are justly valued; and, in the late war, when impressment forced many from the merchant service into the British navy, they were generally allowed to rank among the best hands of a ship's crew. Were I to apply the ancient doctrine of temperaments to the elucidation of this subject, I would say, that the most conspicuous temperament here, was a compound of the bilious and the nervous. The latter remark applies to both the sexes. The women though comely and well built, are, however, more remarkable for neatness of figure, than elegance of stature, or regular beauty; but they yield nothing to the opposite sex, either in physical or moral excellence. Industry is here at its highest pitch. Whoever has had much insight into the general character of our country people, will have witnessed many proofs of mutual good-will, and warm-hearted-

ness; and though they are generally saving and penurious, they are, nevertheless, ready to assist each other, honest, and jealous of reputation. The best qualities of our nature are apt to degenerate into their corresponding vices: thus selfishness, and avarice, seem often to take their origin from economy; and it is a fact no less certain, than it is to be lamented, that from this cause, the latter defects are too often exemplified among our industrious classes. The error of taking the means for the end is particularly observable in the habits of some of our wealthiest farmers, who, in the midst of plenty, seem only bent on increasing their store, and appear wholly indifferent to the most ordinary comforts of life. The same might be said of industry, which when carried to excess, frequently defeats its own object, by over-exertion, and consequent disease.

I need scarcely add, that the above prototype of national character, distinguishable, more or less, in all classes of the native community, is not so readily recognised in the upper and lower, as in the middling orders of society. And, in-

deed, some of the traits I have alluded to belong exclusively to the inhabitants of the country, among whom insular characteristics have yielded less to improved education, or increased intercourse with the mother country. By the latter causes the population of the town has, undoubtedly, lost much of its resemblance to that of the island at large; a more easy, and almost daily communication with England, having in a great measure neutralized the effects of insular situation, and modified public character accordingly. Our thorough townsman, therefore, differs but little from any English provincialist. In most concerns, he makes English taste his rule; and although the still prevalent use of a Norman *patois*, might at first incline a stranger to the opposite conclusion, a residence of some months will, I believe, convince him, that the use of French *words*, does not necessarily imply French *ideas*.

The habits of our country population are industrious almost to a fault: in the town, also, our people are a hardworking race. I wish it could be said, with truth, that sobriety was equally general among our labouring classes! But, on the contrary, it must be confessed that intemperance is the bane of this little island; and, in its present degree, it may be considered as a public calamity, well deserving the serious attention of the legislature. *Temperance Societies*, though promoted with zeal, and ability in most of the parishes, have, as yet, been of little, if any, avail towards checking the alarming growth of this evil. Might not the slow progress of these benevolent societies, be partly accounted for by their rules requiring an entire abstinence, and consequent surrender of free agency, which few moderate drinkers of liquor will be made to believe necessary to keep them from the snare, which they have hitherto avoided, without the aid of any such moral sacrifice? Be that as it may, the abuse of ardent spirits is chiefly ob-

servable among the portion of our working classes, usually called 'strangers,' in contradistinction of the native population: and by that cause, the labour of many an excellent artizan is rendered entirely useless to his family. In this prosperous country, there is scarcely any apparent pauperism, which might not, with reason, be referred to the evil in question, the effects of which, no benevolence can obviate. Distress from want of employment is, indeed, of rare occurrence to the sober man, to whose legitimate wants, the wages of labour, compared with the prices of the necessaries of life, are fully adequate. Little of the misery which meets the eye, really belongs to the island: for the poor, who have a birth-right to parochial relief, or who, not thus entitled, owe their poverty to age, infirmity, or unavoidable misfortune, are so liberally provided for by public charity, that their wants are scarcely known to any but the persons engaged in proffering them the succour they stand in need of.

The means of obtaining a comfortable liveli-

hood being within the reach of our labouring classes; and that domestic happiness, which depends on a sufficiency, being more extensively spread in this favoured spot than in most places, it might be expected that no lack of wholesome food should exist in any order of this community. Nevertheless, as far as regards our rural population, the strictures of some writers on the Jersey diet are not altogether unmerited; for although much of what has been said on that matter betrays prejudice, and superficial observation, still it cannot be denied that, in the country, our people do not often partake of a fare sufficiently substantial. Their regimen is too vegetable; the bit of pork, with which the standing dish of soup is made, being but sparingly dealt out on most tables. This habit of feeding on abundance of warm innutritious soup is, I believe, adhered to from the idea that hunger is thus appeased at the least expense; and it is so general that it has become a sort of second nature. A departure from it would be accounted an act of extravagance by the thrifty housewife. Hence the

preference given to a French over an English labourer, the latter of whom will not accommodate himself to a diet so different from that, which he has been accustomed to. Even medical advice, in sickness, cannot always prevail in inducing a change in the customary diet. I am far from advocating animal food as essential to the vigour of a hardworking man : there are too many proofs to the contrary ; but I entertain a strong objection to meals so liquid as they are generally made in the rural districts of this Island. And, therefore, the quantity of meat consumed by our farmers, and their labourers, is here animadverted upon, not so much because it is small, as because the manner in which it is applied to the sustenance of the body is not the most judicious. Perhaps this view of the present question may address itself more forcibly to the good sense of those it concerns, than the ridicule by which some writers have attempted to arrive at the same end.

The diet of the inhahitants of St. Helier is more substantial ; and, therefore, not open to the foregoing animadversions.

Strange as it may appear, there is not much fish consumed in this Island, unless we except mackerel, and oysters, in their seasons. From causes which it is not necessary to comment upon in a work of this nature, the price of that article of food, in the market, prohibits it from the table of the poor man. The conger-eel, and the dog-fish, it is true, are more abundantly supplied; and the former serves for a favourite soup. Both are, also, very commonly salted and dried; but they are not eaten in such quantities as to deserve any particular notice.

CHAP. II.

CLIMATE OF JERSEY.

The island of Jersey, from its situation and small extent, enjoys a remarkably mild climate: so mild indeed, that, in regard to temperature simply, it will be found superior to most neighbouring places, and equal to many in more southern latitudes. But by the same causes, also, the air is rendered habitually damp, independently of the nature of the surface, and the quantity of rain that falls; and it is, doubtless, from the combination of those two qualities, mildness and humidity, that the climate borrows its most obvious peculiarities. Beyond this general description, scarcely anything has hither-

to been written on the present subject : therefore, the facts I will have to offer in corroboration of what has already been established by other testimony, will also be made use of on this occasion, to illustrate particular points, as yet unnoticed, though not the less interesting, in a practical point of view. The object of this chapter, then, will be twofold, viz., 1st. to place what has been correctly stated concerning the climate of the island, on a better basis than mere assertion :— 2dly, to supply facts, by means of which the minuter qualities of the same climate may be appreciated, and its properties as a remedial agent better understood.

TEMPERATURE.

From observations continued during five successive years, (for the details of which I must refer the reader to the Synoptical Tables at the end of this volume,) it has appeared, that the mean temperature at St. Helier's, averages 53°,06. In the same lapse of time, the entire

range of the mercury in the thermometer was 62°,—the two extremes being 88°, and 26°. Having made this statement, I need scarcely add, that my diary was kept with a *registering thermometer*. Atmospheric heat, averaged on the whole month, arrives at its maximum in August, and is at the lowest level in January ; from which extremes the ascent and descent are rather irregular, viewed in successive months, the greatest variation occurring between the two last of Autumn, when the fall averages 7°,23, and the two last of Spring, when the rise is 7°. The mean variation between successive months is only 3°,67. On the whole, however, heat, in its range throughout the year, is subject to some sudden movements towards either extreme ; as may be seen by the following table, which shows, moreover, that the rise is progressive during the seven first months of the year ; after which the fall is more or less gradual, during the remaining five months. The variations in the fall, are, generally, greater than in the rise of temperature.

VARIATIONS OF THE "MEAN TEMPERATURE" OF SUCCESSIVE MONTHS.

From	January	to	February...	3°,04 rise.
	Feb.	"	March.....1,11	"
	March	"	April.....4,34	"
	April	"	May.....6,99	"
	May	"	June.....4,25	"
	June	"	July.....2,19	"
	July	"	August.....0,12	"
	August	"	September....3,90	fall.
	Sept.	"	October.....4,17	"
	October	"	November....7,23	"
	Nov.	"	December....3,15	"
	Dec.	"	January.....3,69	"

The three summer months differ very little from one another in their mean temperature, the greatest variation, which occurs between the two first, being little more than two degrees. Considered in a similar point of view, Winter comes next; then Autumn; and last of all Spring. Arranged according to their mean temperature, the months stand thus:—1 August; 2 July;

3 June; 4 September; 5 May; 6 October; 7 April; 8 November; 9 March; 10 December; 11 February; 12 January. The above general results are very nearly in accordance with the phenomena of each year in particular.

The mean variation of temperature in two successive days is nearly the same in all the months and seasons,—a circumstance, which, on account of its apparent contradiction with what has just been stated in regard to the variations of successive months, shows, that before coming to general inferences touching the peculiarities of a climate, we should consider its several elements in every possible point of view. For example, it needs only a little reflection to perceive that although the mean degree of heat may be equal in successive days, these may yet differ widely one from the other, with respect to the manner in which heat has been distributed to each separately: for the data, whose mean ratios are thus compared, may, in fact, be very dissimilar; excess on the one hand, compensating deficiency on the other, or the reverse. The same remark will

apply to the months. It is evident, therefore, that conclusions drawn from one order of facts only might be very fallacious in practice. The mean variation of successive days at St. Helier is 2°,41. Between Spring, and Summer, the average difference of temperature is 11°,87 ; between Summer and Autumn 8°,21 ; between Autumn and Winter, 10°,81 ; between Winter and Spring 7°,15. The difference between the mean temperature of the warmest month, and that of the coldest, averaged on five years, was only 22°,14.

In considering the phenomena of atmospheric heat with reference to its influence on the body, there is, I think, no point more deserving of attention than its ranges ; nor does a difference in the mean temperature, or variation, constitute so good a ground of distinction between two climates. The ranges, I need scarcely observe, comprehend the variations, between the two extremes of temperature, in twenty-four hours, or in the months, the seasons, or the year. Whether the constitution may adapt itself better to

great and frequent alternations of heat and cold in successive days, months, or seasons, than to similar changes in the shorter periods which compose the day;—or whether the means we possess of controuling either be more effectual in the one case than in the other,—are questions upon which I am not at present prepared to offer an opinion. But it needs only a moderate acquaintance with this subject to see clearly, that the mean variation of temperature, as commonly stated in meteorological reports, can lead to no safe inference, unless it be viewed in conjunction with equally careful observations on the ranges and distribution of heat, during the same periods. Hence the comparative worthlessness of observations confined to the day.

The mean *daily* range at St. Helier's, on five years of observations by the register thermometer, was 11°,70; a result which proves of itself, that whatever excess may exist in the temperature of the air in this island, compared with other climates, such excess is principally referrible to the lower extreme, or, in other words, to

the *night*. For, were it owing to a higher degree of heat during the day only, the extent of range must obviously be increased in the same proportion. Now, in this particular, the seasons differ very materially, Winter and Summer occupying the two extremes, as may be seen by the following statement.

Winter :—7,56.
Autumn :—10,60.
Spring :—12,60.
Summer :—15,93.

With respect to the *monthly* range of temperature, which, according to the same observations, averages 28,34, the same order is preserved by the seasons.

Winter :—22,13.
Autumn :—27,37.
Spring :—30,13.
Summer :—33,73.

We may here notice a degree of accordance between the data relative to the days, and those relative to the months, which is not observable in the variation of temperature.

In the more elevated parts of the island, particularly near the northern, and eastern coasts, atmospheric heat averages from one to two degrees less than at St. Helier's; and, in some cases, the difference is much greater yet. This observation holds good in both extremes; but especially in the lower, a sharp frost being no uncommon event in exposed situations, when no such thing has been experienced in the lower, and more sheltered places. For the same reason, heaps of unthawed snow may frequently be seen, in the country, on the road-side, many days after all traces of it have vanished from the town, and its vicinity.

Dr. Thomas Young, in his learned Essays,* observes, that "it would be desirable that some "journal should be kept at one of the Scilly "islands, or at Guernsey or Jersey, as a situation "fully exposed to the influence of the sea air; "for there can be little doubt, that for equa-"bility of temperature, a very small island must "have great advantages above every other situ-

* Vide Medical Literature and Practical Nosology—Page 582.

"ation on shore." So far as a journal kept, during five successive years, with great attention and scarcely any interruption, may be deemed as furnishing that desideratum, the suggestion of this scientific writer has now been attended to; and it has become possible to ascertain whether the results he anticipated are in reality borne out by direct observation. Among the milder situations of the south and south-west coast of England, there is not one, to which the south coast of Jersey (including, of course, the town of St. Helier,) approximates so nearly, as Penzance. This is advanced in regard to all the elements of climate, but, more especially, to temperature.* In mean annual temperature, however, there is an excess in favour of the island, amounting to very nearly one degree: which excess is referrible to the seasons of summer and autumn, the other seasons compensating each other almost exactly in the two situations. The Spring is warmer in Jersey by 1°,31; and the Winter colder by 0°,84; whilst in the

* Vide Dr. James Clark's Meteorological Tables, appended to his elaborate work on the Influence of Climate, &c. &c.

Summer and Autumn, together, the island surpasses Penzance, in regard to heat, by 3°,14. It is, however, in Summer that the excess on the side of Jersey is the most remarkable, being as much as 2°,34. The progression of temperature through the months, from one extreme to the other, appears more gradual in Jersey than at the Land's End :—the variations being decidedly less in the Spring and the Autumn.* These differences, however, are of trifling importance, compared with those which exist between the two localities, with regard to equability of temperature. In this point of view, Jersey lays claim to a superiority, which, undoubtedly, more than counterbalances its disadvantages in other respects. Its climate, in Winter, is, indeed, singularly favoured, and fully proves the correctness of Dr. Young's conclusion, quoted above. The mean of the daily variations, in that season, at St. Helier's, averages only 2°,30, whilst at Penzance, it amounts to 3°,80 : and a similar superiority is maintained throughout the other

* Vide Page 54 of this Essay.

seasons, though in minor degrees.* Now, as the Winter and Spring seasons are, of all others, the most deserving of attention, when we consider a climate, with reference to its influence on disease, it must, I think, be admitted, that the peculiarity last adverted to, gives to the south coast of Jersey a no small degree of excellence over the situation, with which it has, here, been compared, on the question of temperature. Concerning the monthly and daily ranges of temperature, I cannot speak so positively; as some computations have been made with common thermometers, and relate to the day only; whereas the data I have collected, relative to this climate, are all from observations made with the registering thermometer. Nevertheless, I am inclined to think, that, in that quality also, Jersey possesses decided advantages over the Land's End, as a winter climate.

WINDS.

On an average of five years, it appears that the N. E. wind is the most prevalent of any in

* Vide Tables 1 & 4, at the end of this volume, and Dr. Clark's, op. cit.

Jersey; and, also, that the mouth of April is the most obnoxious to its rigorous effects, which are the more felt in that season, on account of its blowing with superior force. In May, and in July, it is likewise frequent, with this essential difference, however, that in the former it is oftentimes high and cutting, while in the latter it is, for the most part, gentle, and accompanies fine clear weather. In November, its chilling qualities turn one's thoughts to the approaching winter; and it then alternates much with the no less disagreeable wind, the north-west. From the same series of observations, it may be concluded, that nearly two-thirds of the year in this island are occupied by western breezes; and, after north-east, as which no single wind is so common, the south-west and west are, doubtless, the most conspicuous. Next in degree of frequency stands the north-west. In some years, the wind will blow from either of these three points for several weeks together, without passing once on the other side of the northern and southern points. In such cases the weather

is a succession of heavy continuous showers, violent gales with small drizzly rain, or big dark clouds with fierce squalls of rain and hail, according as the wind moves in one or other of these directions. A great deal has been said of the pernicious qualities of the north-east; but I apprehend north-west is no less to be objected to in this island: for, if when the first sets in the sky be generally overcast, and the air very chill, the presence of the latter gives a wild and boisterous character to the weather, from the effects of which it is at least as difficult to protect the invalid. To this may be added a very important consideration; which is, that the north-west is a very unsteady wind, liable to constant alternations with the west, and, consequently, seldom prevailing without occasioning very sensible and sudden variations of temperature. This especially happens when it is attended by occasional showers of hail, as is frequently the case, in the latter part of the Autumn. Even in the warmest months this wind is never entirely free from some of the bad qualities here mentioned; and

it is rarely, if ever, consistent with an agreeable state of the weather. Its favorite months seem to be August, October, September and March, in the order here given to them. With the exception I have just noticed, the western breezes are warm, and genial; and to the remarkable prevalence of the south-west in particular may be chiefly attributed the mild character of the winter in this island. The west wind, is, generally less favourable, because of its occasional violence; constituting almost exclusively the severe gales to which we are every now and then exposed, in certain seasons of the year. It should be observed, however, that although, from its situation, Jersey be necessarily exposed to very strong currents of air, yet these are more innocent in their effects, than if the surface of the island were less woody, or less uniform. There are but few prominences whose position and elevation can, in any degree, increase the fury of the agitated element by obstructing it in its regular course : hence the comparatively small amount of injury occasioned by hurricanes, which,

higher-up in the English Channel, and on the neighbouring coast of France, are so often attended by serious and extensive accidents.

The above statement, touching the comparative prevalence of certain winds, requires some explanation : for it should not be forgotten, that in average calculations, such as Table 8, consists of, it would hardly be possible to show the special habits of each wind. Now, the latter consideration is one of extreme importance in this inquiry, inasmuch as without it the real effect of any comparative prevalence on climate, cannot be correctly estimated. In my meteorological diary, whenever a day was divided between different breezes, these were all set down without any reference to their respective durations. Perhaps a better plan might have been adopted ; but the one I adopted was, at least, kept free from the obscuring intricacy of very minute, and numerous observations. However, I am ready to confess, that the general results of my calculation of the average number of days, on which each wind prevailed throughout

the years, where somewhat unexpected, as regarded the North-East. Little was I prepared, by my general observations on this climate, to assign to that wind the first rank in respect to prevalence ; and I therefore took some pains to discover the source of what I doubted not was a fallacy. And such, in truth, it was: for, on closer examination, it became easy to perceive, that the numbers under each head in the table, being composed of whole days, and parts of days, the total amount might be more the product of the latter than of the former periods, and *vice versa*. In this view of the subject, the West and South-West winds differ widely from the North-East, their prevalence being chiefly based on the time during which they continue, whenever they set in ; whilst, on the contrary, the North-East, though it sometimes reigns continuously for many days, is rather characterized by the frequency than the length of its visits. Hence it is, that in opposition to what would appear from a gross calculation only, the climate of this island derives more of its peculiarities from the western

than the eastern breezes ; the former bestowing mildness on our winter, whilst the latter, in assimilating our spring with that of other situations, do not, however, exercise their influence in a degree, sufficient to constitute a distinguishing character.

RAIN.

I have to regret my inability to supply any positive information touching the quantity of rain which falls in this island ; but I believe it to be at least equal to what has been observed in any part of the southern and western coasts of England. Such an estimate must, of course, depend on the nature of the showers, as well as on their repetition ; and here they are, for the most part copious, and would, therefore, give a high result, if measured with a rain-gauge. The average number of days on which rain fell in *any* quantity, in five years, was only 129 annually, which proportion is inferior to those stated in the authentic tables appended to Dr. James Clark's excellent work on climate, in regard to

London, Sidmouth, and Penzance. Nevertheless, that Jersey offers a very rainy climate is a very prevalent opinion among its residents; and although such an opinion is not exactly borne out by strict observation, a reason may be found for its general adoption. Surrounded as our small island is by a large expanse of water, the evaporation of the moisture retained by its surface after heavy showers, must of necessity be much slower than in high inland situations, or even on the coasts of more extensive countries; and, consequently, it requires a longer interval of dry weather to dispel the *tædium* of a succession of gloomy days. And, should clouds again gather, before this has been effected, the respite enjoyed fails to be appreciated. This is especially the case in the town, owing to its low level, and yet deficient drainage; while, in the country, the advantages of a more airy situation are almost entirely lost in the shelter, which most roads receive from their woody embankments.

The months of April, May, June, July and August, are certainly more free from rain, in this island, than in England.

ATMOSPHERIC PRESSURE.

Of barometric observations little could be said, that would throw additional light on the subject of the present chapter. However, I am inclined to think, from a consideration of my register under that head, that, in this island, the oscillations of the mercurial column are remarkably frequent. Nor are these always faithful indications of the sort of weather, high atmospheric pressure not being found incompatible with the longest and heaviest showers of rain, during a north-easterly wind. I was once much amused with the effects of a great depression of the mercury in *dial barometers*, many of which underwent a complete revolution, the point of the index having of a sudden wheeled round, contrary-wise, from *stormy* to *set-fair!* The owners had never observed such a *phenomenon* before, and were, of course, somewhat puzzled at the time. Here, there is a barometer in almost every house, and it is frequently consulted.

A few general observations may be necessary to complete this description of the climate of Jersey.

The island certainly enjoys an early Spring, and a lengthened Autumn, vegetation being usually active and forward in March, and the landscape far from naked so late as the end of December. The dreary aspect of Winter, then, is comparatively short-lived. But the season of Spring is marked by the same unsteadiness of temperature, and harsh variable weather, as in most spots under a similar latitude: and this disadvantage is particularly felt in May, which often fails to bring with it the expected enjoyments. Generally speaking, our March is mild, compared with what it is in neighbouring places; giving a mean temperature nearly three degrees above that of Gosport, and also superior, by about one degree, to Newport, Sidmouth and Helston. October possesses a still greater superiority, in the same respect: consequently, the genial qualities of this climate may be made available to the invalid, to whose case they are applicable, during a period of six months. In diseases which require the avoidance of great

ranges and variations of temperature, the objectionable qualities of the months of April, and May, though in a certain degree tempered by the causes which mitigate the severity of our Winter, are, nevertheless, such as to call for great care in the use of exercise in the open air. To those who quit warm clothing, or in any other way relax in their precautions against the effects of cold, by anticipation, these months too often prove very dangerous. Bating this circumstance, a securer spot could scarce be found by a numerous class of English invalids, within a much greater distance from their homes. The Summer is generally, and always comparatively, dry and cool, restricting, of course, the meaning of the words to the quantity of rain, and the mitigating influence of the surrounding ocean upon the power of the sun's rays. Calm sultry weather is not common; and when it does occur, is usually of short duration. Nor is the island visited by thunder storms so often as more extensive tracts of land. The winter, however, is the season which of all others contributes the

most to the peculiarities of this climate. With rare exceptions, it passes off in soft, rainy, or windy weather, with intervals of astonishingly mild days, and with scarcely any frost or snow. Even in the most rigorous years, the latter meteors are far more transitory than in the southern districts of England; and it is, indeed, quite a memorable event to see snow a foot deep; still more to see it remain on the ground upwards of a week. Although a Jersey winter may appear depressing, and wearisome to some persons, from the absence of those sports, by which, in colder countries, the rigour of the season becomes a source of pleasurable excitement to the healthy; still, it must be acknowledged that, as respects disease, it cannot but offer many advantages. By reason of the mildness, trifling range and variations of temperature, chronic disorders proceed slowly towards their terminations; a circumstance of no mean import, since, by allowing more time for the operations of nature and art, it adds to the chances of recovery, in cases not absolutely hopeless. The qualities of this cli-

mate, in that particular, must have, often, been rendered obvious to the practitioner in the treatment of incipient pulmonary affections. I am, however, inclined to think these qualities are not sufficiently appreciated; and invalids too often, and unnecessarily, suffer from a protracted confinement to the house, although, with a little energy on their parts, and proper directions from the medicalman, many an hour might have been profitably spent in the open air. It need scarcely be observed, that the act of venturing out of doors ought not to be made chargeable with the injurious consequences of a neglect of proper precautions. During the dull and monotonous prevalence of wet weather, which characterises most of our winters, much languor and discouragement is often observable in convalescent patients. The real cause of this, viz. adherence to the fireside, and want of exercise of the open air, is too frequently the last to be thought of. In this climate, there is scarcely a season, during which a moderate enjoyment of the open air may not be permitted to the delicate. To illustrate

this point, I, of late, noted down the days, in which a drive or a walk might have been taken with safety by such individuals, during two hours about noon, in the coldest months; and the number of such days has proved far greater than might have been imagined at first, being, on an average, 7 for December, 5 for January, and 9 for February. In this island, the invalid who is sensible of the importance of out-of-door exercise, need not despair of having his desires in this respect gratified, because of a stormy night, or a rainy morning: for such weather is oftentimes followed by a calm state of the air, with a genial degree of heat; and such intervals, though short, may yet be turned by him to very good account, if he be prepared to seize the fleeting opportunity.

Were we to confine ourselves to thermometric data, in judging of the climate of Jersey, there is no doubt we might be drawn into very erroneous inferences. In regard to mere temperature, mildness, and equability give it a degree of superiority over others, which, if considered

alone, and independently of countervailing disadvantages, would, certainly, invest it with a character, which does not belong to it in other respects. For example, separate from the variations of heat, the air, in this island, suffers frequent and extensive changes as to moisture; and the latter vicissitudes are perhaps more sensibly felt by the body, than any other modification of the physical state of the atmosphere. Vapour, it is well known, though at the same temperature as the air, will appear much below it, if tested by our sensations; and, owing to this cause, in certain conditions of the atmosphere, the weather is characterised by a *rawness*, not denoted by any proportionate depression of the mercury in the thermometer. This often occurs just as the sky is lowering for rain, the wind having shifted from the north-east to the south-west, and the thermometer indicating a rise in the temperature of the air; and it shows how cautious we ought to be in drawing inferences from facts supplied by physical instruments only. The sensations of heat and cold, though less certain guides, be-

cause of the want of uniformity in the sensibilities of different individuals, are, nevertheless, entitled to the most serious attention. I have, more than once, heard persons, who had experienced both, declare themselves less able to bear the sort of weather here alluded to, than the more rigorous, and less searching cold of northern latitudes; the same persons assuring me, likewise, that under the latter, a reaction to the surface of the body was much more readily brought about, and catarrhal affections proportionally less prevalent. This observation is in perfect accordance with the fact, that humidity greatly increases the effects of a low temperature on the body.

Besides mildness and humidity, a third quality has generally been ascribed to the climate of Jersey, viz. a relaxing action on the constitution. But, regarding this point, opinion enjoys a much greater latitude, since such a property is far less susceptible of being demonstrated than the two others. *Relaxing* is the opposite of *Bracing*; but the absence of the one character does not

necessitate the presence of the other. On the contrary, they constitute extremes, separated by many intermediate degrees; and this climate may be considered as occupying a place equally distant from both. It ought to be recollected, that mildness of temperature is not, here, derived from a sheltered situation, but from the neighbourhood of a wide expanse of water, which absorbs or radiates caloric, according as it is in excess, or otherwise, in the superincumbent air. On the other hand, the humid state of our atmosphere is principally due to insular situation; not to the nature of the ground. For, the greater part of the meadows and marshes are shallow, and possess a reclination, which prevents any great accumulation of water. Moreover, as has already been shown, in regard to the *frequency* of rain, the island is far from being chargeable with a degree of dampness, greater than that of the neighbouring parts of England; since, in truth, the number of rainy days appears somewhat less than in those situations. In its conformation, Jersey offers a moderately elevated,

and dry country, where the table land greatly predominates over the low grounds. With few exceptions, the numerous small vallies, by which the surface is undulated, are kept dry by a sufficient inclination towards the coast, near which only is found any considerable extent of marshy ground. The humidity of this climate, therefore, is very similar to that of the open sea, the air of which, though saturated with moisture, is not usually thought relaxing. In fact, the physical condition of our population, as described in the preceding chapter, is strongly opposed to the supposition, that the general qualities of the air tend here to relax and debilitate the habit of body. A bloated lymphatic individual forms the rarest exception to the temperament, which I have stated as the most prevalent among the native population of the island. From careful observations, I have been led to believe that the persons, who have represented this climate as being of a relaxing nature, have done so without due reflection. Such an opinion may have been advanced on the authority of others; or, mayhap,

it was conceived from personal experience ; but, whichever may have been the case, it is probable, that individual instances engrossed more of the attention, than the general facts upon which the judgment ought to rest in questions of that nature. Residents soon perceive that this climate possesses certain peculiarities ; these form frequent topics of conversation, are often misunderderstood, or exaggerated : and hence, perhaps, has arisen a disposition to refer every variation of health to atmospheric agencies. But in regard to the opinion here alluded to, it ought to be borne in mind, that an alteration of the usual habits,—a change from an active to a sedentary mode of life, for example,—will tend as much to induce languor, or relax the constitution, as any property that may belong to the climate. Now, I here mention one only, out of a multitude of causes, productive of a similar effect on the body, though not so generally the objects of suspicion as climate with individuals, whose sojourn in the island has not been advantageous to them in regard to health. It is remarkable, however, that

the pretended relaxing nature of the climate is not, anywise, exhibited in the labouring classes, and that it is in the higher orders only, that instances occur, of a kind to give support of such a supposition. This observation would, alone, render the grounds of the opinion I have here examined extremely questionable.

The neutral character here assigned to the climate of Jersey, in respect to the two opposite qualities under consideration, is that, I believe, which strictly belongs to it. But, notwithstanding the conclusion I have come to, I am still free to admit the relaxing influence of this climate on persons, who have exchanged a high inland situation for that which our island affords. This effect is particularly remarked in young females, during the first months of their residence in this country ; after which, under proper management, it quickly disappears. The manner in which the action of a milder, and less bracing climate displays itself, in such cases, cannot be particularized in a popular work. It is, therefore, only as regards the generalization of the fact, and the

consequent inference, that I have deemed it necessary to offer the above remarks.

As a more familiar, though not the less important, illustration of the nature of this climate, I will now lay before the reader some interesting facts, touching the acclimatization of tropical plants:—from which facts it will be seen, that, seconded by art, the mildness and equability of atmospheric temperature, in Jersey, might be as, in fact, it has already been, advantageously applied to the extension of the vegetable tribes, which resist the inclemencies of the northern parts of the temperate latitudes. Not a few of the more rare shrubs, plants, and seeds, which require stove heat in England, may be raised here, first in greenhouses, and afterwards transferred to the open ground. My accomplished friend, Colonel Le Couteur, of whose shrewdness, and enlightened spirit of observation, the British public has had sufficient proof, by his work on the *Varieties, Properties, and Classification of Wheat*, lately published, has informed me of his having succeeded, many years back, in raising a

Mesphilus Japonica from seed, which has, ever since, stood out in the open ground, with the single protection of a bundle of straw, during part of the winter. He has, likewise, an *Acacia*, the seed of which was brought him from Ceylon. The *Canna Indica* ripens its seed constantly under this sky, as do equally the *Ixias*, many *Antholizæ*, and *Amarylli*. Mr. Bernard Saunders' answer to the query I addressed to him on the same subject is still more interesting. A long and extensive experience has convinced this talented gardener of the propitious qualities of this climate for the naturalization of delicate exotics; and he mentions several natives of the East Indies, Cape of Good Hope, Brazils, Mexico, New Holland, New Zealand, and China, which, under his own care, have here flowered, and perfected their seeds in the open air, without even the assistance of a wall, or other protection. He doubts not, that many others, if fairly treated, might be added to his list.

The following are those, which, from their superior delicacy, have furnished the most striking

results :—*Lablab purpureus ; Erythrina cristi galli ; Melianthus major ; Vestia Lycioides ; Edwardsia mycrophylla ; Cobœa scandens.* The higher, and more airy situations on the south side of the island are, undoubtedly, those, where such experiments are conducted with the best chance of success. In the lower situations, and particularly near St. Helier's, the air is less favourable, being damper, and impregnated with extraneous substances, such as smoke, detrimental to the health of tender plants ; besides which a greater exposure to sea fogs, and greater humidity of soil, by rendering plants more lymphatic, render them more liable to suffer from frost. The months most inimical to exotics in this region are February, March, and April, on account of white frost, and north-east wind ; and October and November, by reason of the prevalence of strong westerly gales. From the foregoing facts it may, I think, be concluded, that Jersey presents extraordinary advantages, as a medium climate, for the acclimatization of tro-

pical plants, preparatory to similar trials in more northern, and less favoured countries.

I have had several opportunities of noticing a fact, which is strikingly in accordance with the latter inference. Persons, who, from a long residence in tropical climates, the East Indies, for example, have been rendered incapable of resisting the cold of their native land, generally experience decided benefit from one or two winters spent in this island. Several cases have come under my observation of individuals of either sex, from England and Scotland, who, with natural and unreflecting predilection, had, on their return from India, hastened to their native places, but from which, soon after, they were obliged to fly, as from almost certain death; and who, having resorted to this milder climate, as a preparatory step, had afterwards returned home, with perfect impunity to health.

CHAP. III.

DESCRIPTION OF THE TOWN OF ST. HELIER.

SITUATION AND TOPOGRAPHY.—GEOLOGICAL OBSERVATIONS.

St. Helier, the capital town of Jersey, is situated on its south side, in the bay of St. Aubin, which is the most beautiful and capacious of all those presented by the sinuous coast of the Island. Lodged in a recess at the eastern extremity of the curve, described by the main land in forming the bay, it borrows a degree of shelter from the surrounding heights, and, likewise, from the detached hill now occupied by Fort Regent. In most parts, however, the elevation of these heights is too trifling, and the angle at

which they meet the flat ground below too open, to enable them to afford much shelter beyond a short distance from their bases ; and the central parts of the town, therefore, feel little, if any portion, of it. The figure of this tract is that of a horse-shoe open to the south. There, the point of the detached hill already mentioned enters it, spreading its base rather nearer to the centre than the other heights, and leaving, on each side, between the termination of the latter and itself, a free opening by means of which a thorough ventilation is secured to the town. Was it not for this exposure to the sea breeze, the disadvantages of a low and flat situation could not fail to be much more seriously felt, than they actually are at St. Helier's.

Viewed geologically, the above plain represents a bason inclining west, and, consequently, having one half of its circumference raised nearer to the surface than the other half. Its margin may be described as running along the bases of the several elevations which skirt the plain in three-fourths of its circumference, on the side of

the main land, and then taking a direct course from the two ends of the curve to the town-hill, the point of which intersects that line obliquely, a little to the eastward. A bed of red clay, of variable thickness,—but generally increasing as it recedes from the centre,—forms the superstratum and continuous lining of this concave tract reaching higher at the foot of each hill, and buried near the beach under a considerable mass of sand. In the intermediate points, the horizontal direction of the surface is owing to the accumulation of alluvial soil, forming in most parts a thick spongy turf, in which an immense body of water is retained. Interposed between the red clay, and the solid rock, are other strata, varying with the spots, but, most commonly, observing the following order, and composition :—1. a grey plastic clay, of uncertain thickness, and frequently containing loose stones; 2. shingle, sometimes furnishing a spring of water; 3. rubbish, or decomposed rock. Next to the latter, is generally found the solid rock. Here and there, the number of strata is increased, by reason, chiefly, of

the grey clay and the shingle, succeeding each other several times; but there are none that may not be classed under one or other of the preceding divisions.

The foregoing brief description of the position, form, and geological character of the locale of the town of St. Helier, will, I think, be sufficient to prove, that, without an extensive and thorough drainage, it cannot be otherwise than extremely damp, and insalubrious. How far this condition of its salubrity has hitherto been fulfilled, it will presently be my object to shew; as also to prove, that it is far from impracticable, and might, on the contrary, be completely accomplished by an ordinary exercise of public spirit.

ASPECT OF THE TOWN.

St. Helier divides itself into two parts, namely, the centre, and the suburbs or out-skirts;—the one,—principally devoted to trade, and public business,—a compound of old and new, elegant and ugly streets,—*places*, and dark, filthy lanes:

—the other, almost a promiscuous asemblage of genteel rows of houses, and ranges of low cottages; of mansions, and modest habitations. A few years ago, the only division of the town, was that of *upper*, and *lower*, from the inclination of the line over which it was then spread; and there were no suburbs,—but gardens, and meadows occupied their place. I believe, that, within the last twenty years, the number of houses has been more than doubled. Up to the present day, a corresponding increase of population has taken place; and it would appear as if want of space would be the only check to the indefinite extension of our prosperous town. The number of inhabitants cannot now be far short of twenty thousand. With a few creditable exceptions, the streets of St. Helier's have been laid out without regularity; nor have their proportions and style of building any relation to the importance they have now acquired as the thoroughfares of a rich, and populous town. And it is much to be regretted, that opportunities of improving the older streets, when they have pre-

sented themselves, have not always been taken advantage of by the public; and that an angular projection, or a sharp corner, or an unsightly object, has too often been permitted to rise again upon its ruins, because the public purse was kept closed for matters of that description.

It is evident that St. Helier's was not founded with a view to its present importance. But some of the modern streets are well built; and, at a little distance from the centre of business, may be seen rows of buildings, which would not disgrace some of the best English country-towns. To persons unconnected with business, or to mere temporary residents, the latter districts offer very suitable accommodation. In the out-skirts, are found rows of houses, and detached dwellings, fully adapted to a respectable, nay, a fashionable style of living.

That a town, important by the extent of its commerce, should still retain marks of a low origin, is a feature, which can only serve to place the power of industry in a stronger light. But that the capital town of a wealthy island, subject

to a nation famed for its attention to whatever relates to general convenience, should leave so much to be desired in the latter respect, as is the case in St. Helier's, is a circumstance which no argument could palliate. I here allude to certain nuisances in the more populous parts of our town, such as foul deposits in the public way, stagnant waters, and ill-contrived drains, whose noxious effluvia assail the passenger at almost every step. And this, too, whilst civilization and improvement are rapidly advancing in every other respect! Is public health, then, a question of so little moment, that it should be the last to be consulted? Assuredly not. It is, therefore, high time that this matter be seriously considered, and that the interests of our town cease to be injured by evils depending solely on the absence of an efficient police, and not on the want of laws to prevent them. However, proportionate to the pain of discharging the repugnant duty of pointing out details, which might seem to detract from the merits of St. Helier's, as a residence, is the pleasure I feel

in being able to state, on the high authority of Mr. Inglis, that, viewed in comparison with towns of equal extent in England, it has no small claims to the admiration of the traveller.

I will now proceed to examine the state of St. Helier's, in regard to drainage; and I trust I may be pardoned for treating this important subject at some length.

STATE OF ST. HELIER'S IN REGARD TO DRAINAGE.

Various objections have been raised against the locality of this town, some of a political, others of a domestic nature. Among the latter, the most rational, undoubtedly, is founded on the want of natural drainage. Up to a recent period, the possibility of remedying this defect by artificial means, had been frequently discussed, but never tried to any extent. The whole burden of general drainage had continued to fall on two or three shallow streams, flowing from the neighbouring vallies, and the varying currents

of which, through a long and tortuous course, were not assisted by a fall of more than eight inches for every thousand feet! This near approach to a dead level, joined to the want of a solid bottom, and to a very uncertain supply of water, rendered the channels in question liable to become frequently choked by accumulated deposit; besides which, under heavy falls of rain, their capacity and inclination proved inadequate to the office imposed upon them. Consequently, inundations in some of the principal thoroughfares of the town, were no uncommon occurrences, attended, of course, with serious injury to private property, and immense inconvenience to the public. From such accidents, the upper parts of Halkett Place, of Don Street, and New Street, all three streets of the first order in this town, ere rendered impassable for whole days together! In fact, nothing could be worse than the state of the town, in regard to drainage, with the exception of the upper part, which, from its superior elevation, drained itself into the lower, and far more extensive and populous districts.

In the infancy of St. Helier's, when it consisted merely of a few streets of low houses, and a small population, the brooks I have just described were not, by any means, such prolific sources of nuisance and insalubrity, as they became in later times. Indeed, being open, and freely exposed to the sea-breeze in their course through the streets,—and, moreover, not being subject to the entire contamination which they of necessity suffer now-a-days,—the water which ran in them was fit for many domestic uses, and, therefore, the vicinity of those streams was considered as adding to the value of property. The law, too, prohibited the commission of nuisances in them. But although the same law is still in force, necessity has by this time rendered it a dead letter, and its application would involve, in heavy penalties and other losses, little less than half the householders of the town.

This objectionable state of things continued without amelioration till the year 1832, when the dread of the prevailing epidemic of Asiatic Cholera rendered people more alive to the necessity

of watching over the public health. A main sewer, capable of effecting the drainage of the town, was then projected; but, unfortunately, owing to causes, which it is here unnecessary to enumerate, the work was not commenced before the evils it was intended to prevent had had their full effect upon the population. And, as might, indeed, have been anticipated, by the mere consideration of the state of the town, at that time, the ravages of the pestilence were most awful in this island, both as regarded the number of cases, and the relative degree of mortality. Making every allowance for the mysterious nature of the disease, there are, nevertheless, many reasons for believing, that its extension, and fatal tendency were here greatly promoted by the local causes, which I have alluded to. In truth, so clear was the connexion between damp and filth, and the more ready development of the fearful disorder, that it became evident to all parties; and, therefore, the long talked-of plan of general drainage ceased to meet with that opposition, which had hitherto prevented its being carried into effect.

The work commenced on that occasion, was, however, not completed; but enough was accomplished to prove, that the general principles of the plan were sound and practicable; as also, that the difficulties, which stood in the way of the undertaking, though great, were, in fact, less than had been anticipated by most persons. This plan was very comprehensive, including the entire drainage of the town, by means of a channel of suitable dimensions and fall, to enable it to discharge twenty-eight tons of water per minute, the stream being twelve inches in depth. In spite of the low level, and nearly horizontal direction of the ground, on which St. Helier's is built, its elevation above the lowest part of the beach was found to be sufficient, to admit of the the laying down of a channel of this description, convertible into a main trunk, for the reception of tributaries from every street of the town. And, moreover, the lowest part of the beach was found to be so situated, that, in a course of 2,400 feet, the drain in question would have divided the town in two portions nearly equal;

by which means the advantages of the work would have been very fairly distributed to all parts. Such are the principles of our main drain, more than one half of which is nearly built, and the entire completion of which was prevented, not so much by physical obstacles, as by want of confidence, on the part of the public, in the securities offered by the contractor, for accidents, and injuries to private property. At all events, whatever other reasons may have secretly prevailed, such was the ostensible plea set up by the householders, who successfully opposed the further progress of this great and useful undertaking. It is probable, however, that this legal objection would not have had the effect of stopping the work, had not the damage already done on the line of the excavation, through unskilfulness and negligence, greatly diminished the spirit of enterprise and perseverance, which had triumphed over the first, and, certainly, most formidable difficulties. As generally happens in such matters, discouragement and apathy soon followed; the thing was aban-

doned in disgust; and, for a while, no one thought of turning to account what had been effected; but, on the contrary, most people were inclined to consider it as a lasting monument of folly, which would for ever entail inconvenience, expense, and danger on the town. Fortunately, these forebodings, far from having been realized as yet, have already been contradicted by many a beneficial result.

RECENT AMELIORATIONS.

Until very lately, the portion of the main sewer which had been constructed, though sufficient to effect the proper drainage of a very considerable part of the town, (the one, in fact, which needed it the most,) had been converted to no such purpose, and had had no general use, save the prevention of rain-floods. And, as doubts were entertained touching the solidity of the construction, it did not seem prudent to hazard any further expenditure, in attempts that could only be successful, if those doubts happened to be

unfounded. For, even the decided benefits enjoyed by the houses in its immediate vicinity were mixed up with the fear of further accidents, from the giving-in of the sides of the channel, and the consequent effect on the adjoining ground and the superincumbent edifices. These apprehensions have now vanished; and, within the last year, a fresh impulse would appear to have been received by our public, towards the desirable end of improved drainage. A very important branch was laid down last summer, subdividing itself between Brook Street, Church Street, and the south side of the Square, with due regard to the design by which further ramifications may be thrown out to the extreme limits of that side of the town. From these first steps in the detailed application of the original plan, much hope may, I think, be entertained of its entire completion, at no distant period.

A complete system of drainage is, then, still a desideratum in St. Helier's; but the foundation of improvement in that respect having now been laid, as stated, the time cannot be far distant,

when this important object shall have been fully attained. With this evil will vanish all rational objections to the site of our town: for, if its advantages of situation be fairly considered, it must appear evident, that no other spot in the island possesses equal claims to preference, in the most essential particulars. Indeed, the other bays can bear no comparison with that of St. Aubin, for dimensions, and capability of being adapted to any increase of commercial relations. The prevailing error, which consisted in supposing it impossible to drain the flat occupied by the town, may now be considered exploded for ever; therefore, the further progress of improvement can suffer no check from such a cause; and, so long as the present evils continue unremedied, so long will the inhabitants themselves be alone to blame for whatever bad consequences may fall upon them, through that cause. Neither can the non-completion of the main sewer be fairly construed into a failure of the plan; for it would not be difficult to prove, that that circumstance was entirely owing to incompetency on the part

of the engineer, who certainly obscured his merit as a man of science, by his evident want of skill as a practitioner.

A very striking illustration of the former condition of St. Helier's, in regard to drainage, was offered in the progress of the work already alluded to. The latter had already been carried through a mass of sand, as far as the middle of Broad Street, when a bank of clay was met with, running parallel with the street, and rising up to two or three feet only from the surface. No sooner had this sort of mole been cut through, than a rush of water ensued, so strong as to endanger the masonry already finished, and occasion a temporary suspension of the work. The bank thus perforated was no other than the margin of the bason described in my remarks on the geology of the land, over which St. Helier's stretches itself. Now, if we reflect on the impermeable nature of clay, it will be easy to account for the occurrence here mentioned; since, so long as it remained entire, the mass in question, up to its level, opposed a dead resistance to the escape of

the water constantly accumulating in the valley, across which it lay, as a kind of barrier. With this sudden, and, I believe, unexpected irruption of water corresponded a great depression in all the old wells of the neighbourhood, some of which were thereby rendered useless, because they owed their former supply almost entirely to land drainage. It was no longer difficult to explain the presence of water at a depth, which precluded the convenience of under-ground stories in those districts, and seemed to offer the strongest argument against the practicability of making a deep excavation in that quarter. For these reasons, the salutary action of the drain, even in its unfinished state, upon the meadows of St. Helier, cannot be questioned; and, in truth, not a few houses in the vicinity have already felt the advantages of a less humid state of the ground, by the addition of sunk stories,—a convenience of no small value to a trading town. This implies not merely a temporary, but rather a permanent removal of humidity. There is reason to think, however, that these things have

not yet been duly considered, nor appreciated as they ought to be, by the generality of the inhabitants of this town.

HINTS TOUCHING THE PROPER USES OF A MAIN DRAIN.

It should be recollected, that a sewer, of the description above-mentioned, is not of itself capable of effecting the entire drainage of the town; and, that the benefits it is capable of conferring on the latter, can only be rendered evident by secondary drains. Had this been done at once, I believe all minds would, by this time, have coincided in the views of the promoters of that bold undertaking. It is clear, also, that unless the intention of such a channel be well understood, many nuisances may arise out of it, which, however, are not fairly chargeable to the principle of the design. For example, if street and house gutters are allowed to open directly into it, by means of mere gratings, noxious effluvia will, of course, escape from its interior,

and contaminate the surrounding atmosphere. To prevent this a rigid surveillance becomes necessary ; but all enactments to that effect must prove abortive, and, I would almost say, oppressive, so long as the public do not enjoy the means of getting rid of foul waters except by ejecting them into the streets. The filthy state of the central streets of St. Helier may, therefore, be said to depend on a necessity above all law ; and it is the more to be regretted as it is widely at variance with the domestic habits of the population, the interior of whose houses is generally remarkable for cleanliness, and comfort.

I will now proceed to show that the evils pointed at in the preceding remarks might be easily remedied.

In the first place, the brooks ought to be turned into the main drain, out of the town ; and, consequently entirely abolished within its precints. During the summer months, they become either quite dry, or they have so trifling a current, that the influx of filth, the same in all sea-

sons, makes their condition not only disgusting, but highly detrimental to public health. An attempt was lately made to render them less objectionable, by paving them, and, in that manner, regularising their inclination. But with an uncertain supply of water, and a fall not exceeding two inches on a thousand feet, such an attempt can only be an unprofitable expenditure of the public money. The act of clearing them of the accumulated filth, which requires to be repeated often, constitutes of itself a nuisance hardly to be tolerated. In the second place, the brooks having been stopped up, every street should be furnished with a *close* barrel-drain, for the reception of house-drains of every description. There are in many of the streets, and alleys, gutters coarsely built, mostly very narrow, and so near the surface, that they admit only of a very imperfect covering with flat stones, laid across their straight walls. As these gutters empty themselves into the brooks, which, as I have already said many times, are too shallow to be adequate to the circulation of any thing heavier than

water, they are constantly choked, and are thus rendered pernicious to the salubrity of the town. It is somewhat provoking to hear these results, which evidently flow out of a faulty construction, instanced as *proofs* that proper barrel-drains would not be likely to answer the object contemplated ; for the futility of such a conclusion is too plain to require any comment. Nevertheless, this argument, if it merit the name, has sometimes been opposed to suggested improvements.

Under proper superintendance, the improvement here suggested would not, I believe, be attended by very extraordinary difficulties ; neither would it exceed the public resources. Certain it is, however, that the sacrifice, be it ever so great, would be soon more than repaid by consequent advantages, as regards both the salubrity, and the general attractions of the town.

From the foregoing observations, it may, I think, be inferred, that St. Helier, as the capital town of the island, is open to very few solid objections founded on locality ; and that the no-

table defects under which it yet labours, are mainly, if not entirely, ascribable to the apathy of its inhabitants, in having neglected to adapt its organisation to the exigencies of an increased population, and proportionate enlargement. I need not, I think, stop to apologise for the length of my remarks on this important subject, as my motives can hardly fail to be favorably appreciated by all persons, who feel a more than common interest in the welfare of the island.

PUBLIC WALKS.

The want of public walks, and exercising grounds, in the immediate vicinity of the town, has long been complained of; but it is not so much felt, as if a short walk, or drive, did not bring one into a picturesque and woody country, where shade and pure air may be enjoyed, without the restraint, and étiquette, inseparable from fashionable promenades. The non-existence of such places of resort, therefore, was an evil more imaginary than real. It is, indeed, true, that

the inhabitants of this town evince little disposition to profit by the facilities offered them, for healthful diversion in the open air, by the beautiful walks of the neighbourhood; and there is reason to fear the same apathy, which renders them insensible to the invitations of nature, would also make the use of public promenades very limited. We are too apt, while in the possession of ample advantages, rather to dwell discontentedly upon fancied necessities, than to avail ourselves of the resources we have at our command. Nevertheless, a plantation or two for public recreation, would not only embellish the town, but would, also, exert a purifying influence on the surrounding air. Consequently, was it only on that account, the adaptation of some spots to such a purpose, would be attended with no small advantage. But, at the present rate of building in all directions, the town will, ere long, have covered the whole of the plain in which it is situated; and the opportunity of effecting any such improvements as the above will have vanished for ever. This may be

a subject of regret hereafter. To say the least of the matter, embellishments in a town are never lost; and, in considering questions of this nature, we should not be exclusively governed by the necessity of the moment. But, to return to the present state of things, it may be said that the distaste of our higher classes for out-of-door exercise, is greatly owing to their excessive indulgence in less rational pleasures. With the exception of a few pic-nic excursions, balls and card parties form their principal means of social intercourse; and the *necessity* of reserving themselves for these their favorite pursuits, would, perhaps, serve to explain why our *beaus* and *belles* are so seldom seen out, better than the alleged absence of resources for more healthful amusements.

It will not be out of place here to notice the spirited attempts made last year to supply the deficiency here alluded to. Two *musical promenades* were set on foot, which it would seem met with a degree of encouragement, sufficient to create great expectations of ultimate success.

One of them is attached to a bathing establishment, to which I shall, presently, have occasion to refer; and both are justly entitled to the liberal support of the community. On this their permanency depends. As it cannot be doubted, that they constitute additional inducements to the visiter, to prolong his sojourn in our lovely island, their connection with a very important source of public advantage, will, it is hoped, be obvious to all minds, and secure them general patronage.

ACCOMMODATIONS FOR SEA-BATHING.

It might naturally be expected that St. Helier's, from its proximity to the shore, would present every facility for sea-bathing. *Havre-des-Pas*, on the east side of the town-hill, is a spot admirably suited to such a purpose; but, as there are in that place no artificial accommodations, it is little frequented except by men; and that, too, at an early hour, inconvenient to invalids. To practised bathers, this part of the

coast leaves nothing to be desired. A stranger, however, could not at all times safely enter this stony labyrinth, in search of a convenient retreat: for, when the tide flows-in, a certain knowledge of the currents is required, to avoid the danger of being, of a sudden, surrounded by the sea. Such accidents are the more likely to happen, as, at low water, the path appears free from any intricacy; and owing to this, many inexperienced persons have been placed in the most perilous situation.

The retreats formed by the rocks in the above spot,—rude, insecure, and monopolised by the male sex, except at very unseasonable hours,—cannot suit the delicate feelings of a genteel female. Therefore, the establishment of bathing-machines in the vicinity of our town, by that enterprising gentleman, — Rose, esq., after the repeated failures of other persons in a similar attempt, deserves to be noticed in terms of commendation. Considering such an establishment addresses itself to numerous individuals, of both sexes, who, formerly, were either excluded from

the luxury, and benefits of sea-bathing, or put to considerable inconvenience, and expense, it can hardly fail to receive adequate support. Thus, it may be ranked among the most remarkable ameliorations, which, of late, have enhanced the general merits of the island as a residence. Former attempts were made on a very limited scale, by persons of small means, unable to bear up against losses of time, and capital, in the beginning; whereas, the thing is now in the hands of an independent gentleman, bent on the success of an useful undertaking, and looking more to the merit of having triumphed over great difficulties, than to any pecuniary reward. Still, in the view here taken of such improvements, Mr. Rose's exertions ought to gain the concurrence of all influential members of this community; and to witness them with indifference, is, I think, to be blind to a desideratum of no small national importance. For, it is impossible to estimate how much the character of the island, as a summer residence, may have suffered from the want of the accommodations now offered at

Grève d'Azelle. When it is considered that many families were annually deterred by that cause from even visiting the island, and others reduced to the necessity of removing to more propitious places, on being ordered sea-bathing, as a remedy, I shall not, I trust, be thought to have attached too much consequence to the establishment in question.

CHAP. IV.

DESCRIPTION OF THE TOWN OF ST. AUBIN; &c. &c. &c.

ST. AUBIN.

NEXT to St. Helier's, the town of St. Aubin claims our particular notice. In all public records, it is, I believe, called a town, and we need not, therefore, detract from its consequence, by giving it a name of inferior acceptation; though, in point of actual importance, it is now little better than a village. But it was once the principal seat of trade: and it was, no doubt, from that circumstance, that one common name was bestowed on itself, and the bay in which it is situated. Upon the ruins of its commercial prosperity rose that of its rival St. Helier's, which soon turned

all the main channels of wealth towards its own bosom. Divers reasons have been assigned for this reverse of fortune; but, whatever may be the real one, St. Aubin's, in the view which I shall here take of it, derives most of its attractions from its present quiet state; though it is not the less to be admired, for the marks it yet retains of better times. Its principal street, also its main entrance, is built in a style greatly superior to what a distant view might lead a stranger to expect; and, altogether, it exhibits many indications of former wealth and fashion. On the quays are many eligible houses, and up to the Vaux,—a valley of which I shall presently speak,—we likewise observe much neatness in the buildings, some of which are very pretty detached cottages. In a word, and to use the lively expressions of Mr. Inglis, it is just such a place as might be chosen in a thousand by the lover of seclusion and quiet. Rising on the eastern side of the bay, half-way up a beautiful hill, from the very border of the land, it commands a splendid sea view, which reaches as far as the opposite coast

of France, in clear weather. The two towns communicate one with the other by a good carriage road, running close to the beach; and, at low water, by a fine hard sand, from one side of the bay to the other. The distance is a little better than three miles.

From what has been here stated, it will not be difficult to conceive how, in point of salubrity, St. Aubin's leaves nothing to desire. Its drainage is rendered effectual by a mill-stream proceeding from an adjoining valley, and running at the lowest level of the town, over a paved gutter, which discharges itself into the subjacent harbour. Towards this stream all the sloping streets converge. On the level ground, along the quays, ample provision is made for the same important purpose, by underground sewers, also leading into the pier, which, twice a day, is freed from all noxious matter by the sea, except in neap tides. With such natural, and artificial means, it is easy to maintain a degree of cleanliness in this little town, which greatly enhances its merits as a residence.

The valley of *Les Vaux* opens upon St. Aubin's from the north-west, thus leaving it partially exposed to the cold squally wind of that quarter. I say partially; for the streets meet this vale, almost all at a right angle, and, moreover, the wind finds here no obstacle to its blowing directly into the bay. Nevertheless, in the lower parts of the town, and, particularly, in the valley, the evening air is found more chill than in the higher situations. The cause of this is easily understood.

By reason of its position, St. Aubin's is well sheltered from the westerly gales, and equally from the south-west, both so prevalent in the island.

The line of communication between the two towns, receiving the inlets of nearly one half of the entire island, is greatly frequented, and has a knot of houses at almost every stone's throw. About midway is the hamlet of Millbrook, and further-on the village of Beaumont. Flanked as it is, on one side by a beautiful rising ground, dotted with numerous villas, and on the other by

the bay, this road is lively, interesting, and particularly admired by the stranger. It is, however, much exposed to the inclemencies of the weather, and without shade in the summer.

COMPARATIVE VIEW OF THE TOWNS OF ST. HELIER AND ST. AUBIN, IN REGARD TO CLIMATE.

Through the kind co-operation of Mr. Hocquard, who, with great assiduity, kept a meteorological register at St. Aubin's, during a period of two years, auxiliary to the one I was keeping, at the same time, at St. Helier's,—I am enabled to give a comparative view of the climates of both towns, and thus to elucidate their respective merits as residences. The comparison, however, will here be limited to the temperature, the other grounds of distinction, such as aspect, shelter, &c., &c., having been sufficiently commented upon, in the foregoing remarks. Our observations were taken in each place at the same hour, viz. 9 a. m., and 9 p. m.; and as I have no reason whatever for thinking, that any

necessary attention or punctuality was wanting on either side, I can offer the following conclusions, in full reliance on the accuracy of the data, from which they have been drawn.

During the period stated, the mean temperature at St. Helier's and St. Aubin's, at the hours stated, showed an excess of 0,36, in favor of the latter town: a difference too small to deserve being taken into account. This apparent similarity, however, is not borne out in other respects. On the contrary, a minuter consideration of the question authorizes distinctions, which, at first sight, might not have been apprehended.

At 9 a.m., St. Aubin's is *colder*, on an average, by one degree, and at 9 p.m., *warmer*, by rather more than one degree and a half. In this particular, the seasons do not appear to exercise any marked control; though, during the winter, the difference, at either hour, is somewhat less remarkable. The evenings, then, at St. Aubin's, are less cold than at St. Helier's; from which fact it may be inferred, (considering the mean temperatures are so nearly equal in the two

towns,) that the atmosphere in the one is slower in parting with the heat it has borrowed from the meridian sun; while, in the other, it rises more rapidly from the minimum to the maximum of heat. In Summer and Autumn, the mean temperatures of both localities make a still nearer approach to perfect equality, than appears by the yearly average stated above.

On applying the same analytical inquiry to the different months, the following facts have been elicited.

In *January*, the temperature at St. Aubin's is a little above that of St. Helier's.

In *February*, the difference is exceedingly trifling, not half a degree; but here also the superiority belongs to St. Aubin's.

In *March*, the case is altered, an excess of at least half a degree being shown in favor of St. Helier's; and, what more especially merits attention, this comparative depression often exceeds two degrees, during an east or north-east wind. On the other hand, the north-west is less felt at St. Aubin's; which is no small advantage, since

that wind is undoubtedly, one of the most prevalent, and has many unfavourable qualities.

In *April*, the average heat is again lower at St. Aubin's; but the difference is then of greater moment, being equal to one degree. At nine, A. M., it amounts to two degrees, generally; and, on particular days, during an easterly wind, it has been as much as six and seven degrees, at the same hour. However, when the east wind has prevailed for successive days, the above difference ceases to be so remarkable. In this month, the effects of the north-west are again less sensibly felt at St. Aubin's than at St. Helier's.

In *May*, the temperature averages one degree higher at St. Helier's, in the morning; but this excess is counterbalanced by a similar one at St. Aubin's, in the evening: so that the mean temperature of the day may be considered equal in both towns, during this month. But the greater exposure of St. Aubin's to the effects of an easterly wind is again perceptible, particularly by the morning temperature; whilst, on the other

hand, its superior shelter from the west, and south-westerly gales is as clearly shewn by converse data.

The month of *June* is one and a half degree colder at St. Aubin's than at St. Helier's.

July, on the contrary, is a little warmer, and the difference is particularly marked in the evening. Temperature certainly reaches to a higher maximum at St. Aubin's than at St. Helier's: for example, in 1831, it rose to 90° in the former, whereas it did not ascend beyond 83° in the latter town.

August does not differ from the preceding month, in the particulars noticed.

September offers a slight difference in favor of St. Helier's.

In *October*, the peculiarities of each town are almost constantly remarked in both.

In *November*, the temperature maintains itself, on an average, 1°25 higher at St. Aubin's,—a circumstance easily explained by the prevalence of the north-west wind, to which, as already stated, that town is not so much exposed as St. Helier's.

In *December*, both places very nearly resemble each other, in respect to temperature.

The range of temperature is somewhat greater at St. Aubin's than at St. Helier's, especially during the summer months; but in point of equability, I believe the two localities to be very similar.

Topographically considered the portion of St. Aubin's, which is built in '*Les Vaux*,' though attractive in some respects, is, nevertheless, the least eligible as a residence, in all cases requiring particular attention to the qualities of the air. For, the direction of this valley renders it, of necessity, obnoxious to the cold boisterous north-west wind; and, at all times, transitions of temperature at either of its extremities cause currents of air, quite incompatible with that steadiness of climate, which we most desire in selecting a residence for a delicate invalid. Its liability to stationary mists is, it is true, to a certain extent mitigated by the same circumstances; but it cannot be supposed, that the air in this valley is so free from moisture, and

miasm, as in the elevated parts of the body of the town. Neither are these objections incompatible with the fact, that this picturesque spot offers no marks of unhealthiness in the condition of its inhabitants, who, on the contrary, are said to be remarkably robust, and exempt from many of the common diseases of confined situations. The question here relates not so much to its own inhabitants, as to persons, who, in resorting to this neighbourhood, might do so for the benefit of change of air in convalescences, or chronic affections. The most eligible part of the town, for the latter description of persons, is, unquestionably, the principal street. It is elevated, sheltered from the north, has a southern aspect, and is, by no means, deficient in suitable accommodations. In the other branch of this little town,—that which turns to the east,—there are, likewise, some excellent houses, whose elevation and less exposure to the mid-day sun, might even, in some cases, render them preferable to those on the other side. But these are points

on which the opinion of a resident practitioner should be consulted.

The central parts of St. Helier's, with their narrow confined streets, dense population, imperfect drainage, and other objectionable points, would ill bear a comparison with the quiet, cleanliness, and superior ventilation, which characterises St. Aubin's. Therefore, it may be well to observe, in order to prevent misapprehension, that whatever may be susceptible of a practical application in the foregoing remarks, touching the two localities, should only relate to those districts of St. Helier's, which are removed from the influence of the nuisances, with which it abounds in other quarters. Unquestionably, such nuisances are as inconsistent with general salubrity, as they are opposed to the improvement of health under disease. With this conviction, derived from actual experience, it can hardly be supposed that I should deem any degree of excellence, founded on meteorological phenomena, sufficient to overthrow objections of so grave a

nature. Let it, then, be understood, that St. Helier's, viewed generally, cannot be brought into competition with St. Aubin's, in regard to salubrity; and that the preference, which it possesses, in point of temperature, and shelter, can have no weight, except in its most eligible districts.

The environs of St. Aubin's are truly delightful and varied. Above the hill, on which the town reclines, is a piece of moorland, crossed by fine military roads, where, in clear weather, the most healthful exercise may be taken. This tract, from its wild uncultivated state, forms a striking contrast with the general aspect of the island. And, although a feeling of astonishment and regret be almost inseparable from a view of so much waste land, in an island that has none to spare, still, abstracting such reflections, the mind experiences a sort of relief from the sameness, which exists in the other parts of this grove-like country, as we perambulate the elevated open space just described. The diversion attendant upon an entire change of scene, can

hardly fail to be found in an excursion to this peculiar spot. The long avenue to Noirmont House, which commands a magnificent view of the greatest part of the southern coast, and its two principal bays, offers another excellent exercising ground, which, if I mistake not, is at all times accessible to the public. Again, the winding valley of '*Les Vaux*,'—the sweet little bay of St. Brelade, not far distant,—the shady lanes in the neighbourhood of '*Le Coin*,'—each, and all, bestow on the vicinity of St. Aubin's a degree of variety and beauty, seldom equalled within so small a compass.

The other spots, which I am about to describe, will, I think, be found worthy of particular attention, in connection with the object of this work.

COAST OF ST. CLEMENT.

1.—*The Coast of St. Clement.*—For various reasons, but chiefly on account of its convenient distance from St. Helier's, and the superior accommodations which it offers, the coast of St.

Clement, on the south-side of the island, seems to have acquired the preference over all other situations, as a watering-place. Thither many citizens are in the habit of removing every summer with their families, with a view to an unrestrained enjoyment of the pleasures and benefits of a residence on the sea-shore, which are denied them in the immediate vicinity of the town, for the want of the necessary retirement. This district is a flat, but well cultivated and woody country; and the marked predilection shown for it by our town-folks, has had the natural effect of inducing many of its inhabitants to fit up lodgings, for the temporary accommodation of visiters, in the summer season. This is a recommendation which is wanting in most of our rural districts, many of which, though abounding in natural attractions, can only be casually resorted to, on account of that deficiency. Moreover, this locality commands a degree of retirement which may be regulated at pleasure. A noted house of entertainment, called Pontac, presents a means of diversion to those who may

require some distraction from the serenity of a country life. Hither numerous parties constantly resort, to indulge in that species of free gaiety and sport, which the wild scenery of the spot is well calculated to promote. Indeed, in the summer evenings, the beautiful sand on this part of the coast, far from being deserted, often becomes a fashionable promenade; and, twice a year, nearly the whole of our farming population is drawn to this spot, for the purpose of gathering the *vraic*, a species of fucus, extensively used for manuring the land. On these occasions, the innumerable rocks in the distance present a most animated spectacle, from the immense throng of individuals of both sexes, and all ages, busily engaged in the above occupation: while a proportionate number of carts, heavily laden with the valuable produce, form a long chain backwards and forwards, giving to the whole scene a degree of interest which cannot be depicted. For these reasons, and others of a more private nature, a greater number of British residents have settled in this parish than

in any other purely rural situation in the island: and this is hardly to be wondered at, when it is considered, that the spot in question combines, in proportions convenient to many persons, the social attractions of the town, with the advantages of a retired and inexpensive mode of living.

The tract just described, which includes nearly one-half of the entire superficies of the parish in which it is situated, being, as I have already stated, low and flat, is of necessity damp during the rainy seasons. It lies without the least shelter from the southern and western breezes, or the abundant rains which accompany them; while, on the other hand, the inconsiderable height of the neighbouring hills leaves it equally void of adequate protection from the keen blasts of the northern and easterly winds. Consequently, there are, but few spots in this locality suited to the wants of delicate invalids, to whom, at best, it could offer a proper residence, during a short portion of the year only. It is, unquestionably, better adapted to the wants of those,

who, in changing air, are principally actuated by a desire to counteract the deteriorating tendency of sedentary habits, confined air, late hours, and other evils, attendant on a residence in town. For occasional recreation, this marine situation is justly entitled to attention, on account of the accommodations it commands, and its short distance from town. It also affords every *natural* facility for bathing in the open sea.

BAY OF GROUVILLE, AND VILLAGE OF GOREY.

This spot in tolerably well adapted for a temporary residence, and, likewise, for the reception of parties of pleasure. But it offers no shelter for bathing, and little more for pleasant exercise, being low and flat for a considerable distance on all sides, and, consequently, extremely exposed, both in summer and winter. Nevertheless, the bay is pretty, and much enlivened by the activity which prevails in its little harbour. It is also a place of much resort, on account of Mount

Orgueil Castle, which stands at its northern extremity, and is the most interesting of the few objects of antiquity still extant in the island. From this point, to the church of Grouville, a distance of nearly two miles, in nearly a straight line, the table land describes a beautiful curve, of considerable depth, the sloping sides of which exhibit a fine assemblage of rich pasturage, arable land, and wood, forming a magnificent landscape. It is much to be regretted that there is hardly a house to be seen in this declivity : for no spot, that I am aware of, enjoys a climate so distinct from that of the island in general, nor so likely to supply additional resources in the treatment of certain diseases. Situated on the extreme east of the island, and looking outwards on the sea, it might, indeed, almost be said to be removed out of the pale of the local influences, which characterise our climate,—being much more independent of the atmospheric agencies in which those influences take their origin, than any other locality. The bracing qualities of the air of Gorey, have, of late years, been very generally

admitted by the Jersey practitioners, who would, doubtless, turn them to good account in many cases, did not the limited accommodations the place as yet possesses often frustrate their intentions, by rendering a removal hither impossible to their patients. A part of this village, it is true, is built on a terrace, a little way up the cliff, where some few convenient lodgings may be found. The remainder of Gorey stands on a low sandy ground, near the beach, and has nothing to recommend it as a residence.

ST. CATHERINE'S BAY.

This is a lovely, sequestered, little cove, facing the east, and behind which a dry, rocky, but fertile ground, whose declivity is moderate, displays all the luxuriancy of inland scenery. The approach to it is good, along the side of one of the prettiest vallies in the island. In no part is it altogether without sun and shade; and, therefore, at all hours, it offers some delightful resting places, whence the visiter, breathing the purest air, may

view, in tranquil enjoyment, the splendid marine prospect before him. For here is no bustle to disturb the soothing serenity of the scene; and I know of few retreats, where, in the summer season, the middle hours of a fine day,—devoting them to bathing, a light repast, and moderate exercise on the surrounding cliffs, or in the shade of the adjacent dell,—might be passed with greater advantage by a numerous class of invalids. It is only distant from town five miles; and in the cases to which the hint here thrown out might apply, the drive to and fro, would rather promote, than mar, the object in view.

CONCLUDING REMARKS.

The spots here described, though, in my opinion, the most deserving of special notice, as offering superior resources to the resident invalid, are far from being the only ones which possess similar advantages. Many others, on the contrary, might be added to the list, if *natural* attractions were the only points upon

which the selection rested. But in directing the attention to a few only, I have been governed by a regard to convenience, and ready accommodation; though, even in these respects, I have been forced to admit these favoured situations were still very deficient. The benefits which might accrue to the island, by multiplying its attractions in this way, seem not, as yet, to have been contemplated by the inhabitants, or to have formed the basis of any speculation. There are, however, sound reasons for thinking, that, were such an impulse once taken, in the investment of capital, new channels of wealth would speedily be opened, by an increase in the number of permanent residents. Many visiters land on these shores, quite undecided as to the length of time they will remain; leaving that matter to be determined by the impressions which a glance at the island, or, some inquiry into its merits as a watering-place, may make on their minds. If it happen,—as doubtless, it often does,—that such travellers see no inducements for prolonging their sojourn in the island, beyond a few days,

the cause of this is the more to be lamented, as it consists of local deficiences, which a little more public spirit would easily remove. All attempts tending to enlarge the attractions of this delightful island, such as promenades, bathing machines, and all public improvements generally, should therefore be promoted by the inhabitants, not merely on private, but, likewise, on public grounds. Lacking this spirit, the rich and independent view such matters in reference to their own wants; and fashion does the rest. Hence the fatal indifference so often shown by this class, for things that have nothing to recommend them, but a prospective advantage to the community at large. But in our public bodies, and the trading classes, with whose duty and interest questions of public good are closely identified, a similar apathy admits of no justification, and ought, by this time, to have yielded to a more liberal feeling.

In surveying a small island like Jersey, with respect to the modifications of its climate, by causes confined to particular localities, the atten-

tion is principally engrossed by the coasts, whose various aspects must naturally establish corresponding peculiarities for each, and more or less deviation from the rule which obtains generally.

The interior of the country seems, at all events, to merit less separate consideration. Indeed, with the exception of some slight distinctions founded on different degrees of shelter, reclination, exposition, and the nature of the vicinity, it cannot be expected, within such narrow boundaries, the general climate will undergo any remarkable changes from locality. It needs only to be observed, that from the undulated character of the surface of the island, differences do exist in this respect; and that, though the climate is under the immediate influence of the surrounding sea, the scenery in most of the central spots is such, as completely to abstract the mind from the idea of a marine situation. I need scarcely add, that the mildness of our climate will be felt, in proportion to the degree of shelter which a locality enjoys from the counteracting agencies, which have been the subjects

of examination in another place. These general observations will be enough to show, that to enlarge upon this topic would be a tedious and useless task.

CHAP. V.

OBSERVATIONS ON THE DISEASES OF THE ISLAND.

PREFATORY REMARKS.

BEFORE proceeding to investigate the characters of diseases in this island, whether as to prevalence, or distinctive features, the following facts claim a portion of our attention.

1.—The population is very far from being purely native. On the contrary, it has, at all times, but particularly of late years, consisted, in a large proportion, of adventitious inhabitants, most of whom could not be properly assimilated to the native class in a medico-statistical inquiry. 2.—In the higher orders of society, the number of temporary residents is at

least equal to that of families strictly belonging to the island. 3.—It is clear, on reflection, that the list of diseases, in a community so composed, includes many not fairly chargeable to the island; and that due allowance ought to be made for this peculiar organization, in drawing inferences from statistical facts. Without such a precaution, the result of our investigation would, assuredly, be fallacious in the highest degree. 4.—A very fertile source of disease, in this otherwise happy spot, arises from an excessive use of ardent spirits, the mean price of which is attended by the double evil of increasing temptation, and facilitating indulgence. Among the labouring classes, especially, this disgraceful and ruinous habit produces incalculable mischief. But this remark does not, I am sorry to say, apply to that portion of our little community only; and it is a melancholy truth, that superior education,—which ought to open the mind to a due sense of decorum, consequences, and moral obligations,—does not always effectually guard it against this debasing propensity. On the

contrary, instances are not wanting, here, of men, who after an honorable and active life, find in the comfort and retirement formerly desired, and to which this favoured spot is so well adapted, nothing but monotony, and insufferable dullness. For the want of intellectual resources, they seek, by the stimulus of liquor, to dissipate the *ennui* which oppresses their vacant minds. And, even, when this dangerous practice does not draw such persons into habitual drunkenness, it most commonly forms an error in diet, the effects of which are, sooner or later, displayed in a variety of consequent disorders. 5.—The spirit of industry which animates our farmers, frequently leads them to excessive exertion, and their saving habits to a degree of abstemiousness, by which constitutions, originally robust, become damaged at an early age. Instances of this may be witnessed daily. Many cases of stomach affections, so prevalent among that sober class, in both sexes, may, with equal reason, be referred to the same cause. Here, again, the climate of the island may be considered perfectly innocent of

any share in the production of a numerous group of prevalent disorders. 6.—With respect to the state of its community, the nature of its relations, and other considerations, Jersey cannot, with any propriety, be assimilated to the provincial districts of large countries; for, within its narrow boundaries, it enjoys a sort of individual existence, comparable to that of a distinct nation. Has it not its towns, its coasts, and inland country; its own laws, and, in many respects, peculiar usages; its internal, and foreign traffic? In a word, Jersey is a miniature realm; a small theatre, on which the various scenes of larger societies are enacted; but with this distinguishing feature, that, by more than a common share of general prosperity, affluence is not contrasted by extreme poverty, and the upper, middle, and lower classes run into each other, as it were, by insensible gradations.

Having premised the foregoing observations, and restricted my inquiry into the diseases of the island to those questions only which strictly relate to climate and topography, I need not

stop to explain why, in handling this important subject, I shall not follow any nosological order.

There is no disease which is peculiar to Jersey : consequently my subject will here limit itself to two questions, namely,—what are the diseases, which, by reason of a relative frequency, seem to be favoured in their development by local influences, and—what are the modifications in disease generally, which may be referred to a similar agency. With regard to the first of these problems, I believe the following rule obtains, with slight exceptions. 1.—In *infancy* catarrhal affections ; remittent fever, often complicated by acute hydrocephalus. 2.—In *childhood*, catarrhal affections ; subacute inflammation of the bowels. 3.—In *adolescence*, continued fever ; pleurisy. 4.—In the *adult age*, gastric affections ; bronchitis ; rheumatism ; chronic bronchitis ; chronic pleurisy, with effusion ; dilatation of the right cavities of the heart, without hypertrophy ; ascites. It may be proper to observe that the place assigned to each disease, under the above heads, has not been de-

termined by the positive number of cases, but rather by their relative frequency in this island, compared with other places. But it is hardly necessary to add, that, if so few forms of disease have been here brought under notice, it is because they are those which seem chiefly to be affected by locality, in their development, march, and termination; and, assuredly, not on account of a supposed immunity enjoyed by the island, from a multitude of others, equally important in themselves, though less directly connected with the history of this climate. On the contrary, there are few communities, of equal number, which offer so extensive a field of observation as our own, a great proportion of which consists, as before hinted, of persons, whose healths have been affected, more or less, by many and various causes of deterioration. Therefore, it is only a natural consequence of the mixed nature of the population, that the catalogue of its diseases should be marked by a more than ordinary degree of variety: in other words, that a vast number of imported cases should swell the ge-

neral list of diseases in this island. Let it be remembered, also, that the native of Jersey is a great traveller, being to be met with almost everywhere, toiling for independence, whether in private enterprises, or in the public service of the mother country; and that, arrived at the gaol of his ambition, the fruits of his enterprise and industry, are too often rendered unavailing to himself by a shattered constitution, and untimely infirmities.

The modifications of diseases, in general, which, in Jersey, may be traced to local and peculiar agencies, will here receive their only illustration from incidental remarks, in the progress of the preceding investigation. And, as a complement to my observations under those two heads, I shall devote a separate section to a third question, of great interest, viz. the degree in which scrofula, and consumption, prevail, comparatively, among the inhabitants of the island: in doing which, I shall have to refute an erroneous assertion, repeated by more than one writer, though, as will, I think, be proved, it cannot

have originated in a philosophical view of the subject to which it relates. I here allude to the superior prevalence of scrofulous complaints, falsely imagined to exist in the population of this country.

By the foregoing particulars, touching the components of its population, the impossibility of throwing light on the pathology of this island, by the aid of bills of mortality, and similar sources of statistical information, will have been made sufficiently obvious. Indeed, such documents, were they procurable, would be of questionable value, on account of the endless qualifications and allowances, with which it would be requisite to accompany them, so as to render them, in a degree, deserving of confidence.

SECTION I.—PREVALENT DISEASES IN INFANCY AND CHILDHOOD.

Among the diseases incidental to *infancy* and *childhood*, I have allotted the first rank, in the order of comparative prevalence, to catarrhal affections, and intestinal irritation. In the first

of these tender ages, especially, bronchitis and laryngitis are sometimes so acute, as to be confounded with genuine croup, which, however, if I may judge from twelve years of general practice, is of rare occurrence under this climate. The distinction is not unimportant: for simple inflammation of the air passages, though sufficiently dangerous, is, nevertheless, more under the control of art than the specific disease here mentioned. Croup is almost necessarily fatal, by reason of its characteristic phenomena; whereas the other disorders may yield to early, and active treatment. Unfortunately, it often happens, that, the symptoms of the latter having been mistaken for those of a common cold in the beginning, medical aid is only had recourse to, at a time when irremediable mischief has already taken place. In instances of this kind, the physician cannot view the fatal termination, without deeply regretting, that a better opportunity was not offered him, of rescuing the innocent sufferer from the untimely death, which delay has rendered unavoidable.

That acute inflammation of the air-passages is a prominent disease among children in this island, cannot admit of a doubt. Consequently, some inquiry into the causes of its frequency, and the means by which the latter might be counteracted, seems to be rendered necessary by the statement of the fact. And, as in prosecuting this inquiry, I shall have to point out popular errors of a very injurious tendency, I trust on the indulgence of professional readers for any details, which to them might appear trite, or superfluous.

The most common cause of the diseases included in the above generic denomination, is a cold damp air, acting on the surface of the body. The morbid effect on the respiratory tubes is, for the most part, only secondary, and consequent to the intimate sympathies, which exist between the common integument, and the lining membrane of those same tubes. But these membranes being concerned in one grand excretionary function, it follows, as a physiological law, that the state of each is never totally independent of that

of the other: therefore, any cause, which diminishes vital action in the one, throws an additional burden upon the other, and *vice versa*. Now, it will be readily understood, that the combined action of moisture and cold on the skin, will be attended by a corresponding effect of an opposite kind on the membrane of the air-passages: in other words, increased exhalation in the latter quarter will compensate for diminished perspiration on the surface of the body. Other physiological actions, it is true, tend to the same end; but they are purposely kept out of view, in order to simplify the present question as much as possible. Compensating actions of the kind here noticed, are constantly taking place in the animal economy, without any perceptible disturbance of the healthy state: reaction follows depression, and thus relief is given to the over-excited organ. But if this be tardy, from some cause or another, irritation, or inflammation is the result. The particular part of the respiratory apparatus, which, under such circumstances, becomes the seat of these morbid phe-

nomena, depends on predispositions of age, or constitution, not so easily accounted for as the general effect. In infancy, and childhood, the larynx, and trachea seem peculiarly liable to them. At the same time, these affections are attended by much greater danger at those periods of life, than at a more advanced age; for the extreme narrowness of the glottis, joined to a greater vascularity of its lining membrane, which makes it more susceptible of swelling, and consequent occlusion, may convert a slight degree of inflammation of that part into a very urgent cause of suffocation.

Popular opinion refers a great deal more mischief to a direct action of the air upon the respiratory organs, than to its secondary effects upon the latter, after having first affected the surface of the body. Hence, it is commonly imagined, that the thing most to be avoided by persons of delicate lungs, is the breathing of a cold air. Upon this false principle, such individuals are often unnecessarily kept confined to close apartments, who, might, not only with safety,

but, also, with evident advantage, be allowed exercise in the open air. Generally speaking, however, if the surface of the body be well protected, there will be little to dread from the mere respiration of cold air. For, let it be remembered, that the function of the lungs being respiration, they have been endowed with the means of enduring the changes, which are constantly taking place in the condition of the atmosphere, Were it not for this natural adaptation of the means to the end, so admirably exemplified in this, and all our other functions, how little would man's ingenuity avail him against the numberless agents of destruction by which he is surrounded! But I have gone far enough into this subject to show that the popular opinion here alluded to will not bear examination.

If it be true, as I believe, that the causes of catarrhal diseases, in this island, most commonly produce their effects, by acting first upon the external surface, it will follow, that precautions tending to guard the skin against such influences, form the best means of lessening the prevalence

of those disorders. Our climate is, assuredly, mild; the winter season, in particular, is the least severe possible, consistently with the geographical position of the island. But this fact ought not to make us indifferent to certain objectionable points, which, if not attended to, may oftentimes more than counterbalance the benefit flowing out of the good qualities. This observation applies to all climates; and how far it may apply to this climate in particular, will be easily ascertained, by turning back to the details given in Chapter 2.

I have long since entertained a fixed opinion on the sort of apparel best suited to young children, in this climate. As a general rule, no child should be without flannel next to the skin, during winter, and spring; and, at the close of the latter season, that portion of the dress should not be cast off without attention to the actual state of the weather. For this period of the year is extremely variable, one day wearing, as if by anticipation, the cheering attractions of a summer sky; whilst the next, cold, dark, and rainy, turns

the disappointed mind back to the irksomeness of an inclement season. By reason of these variations, which, undoubtedly, take from the superior character of our climate, for mildness and stability, the fashion of low dresses, short sleeves, and bare legs, for children, is admissible on no sound principles, in this island. On the contrary, it cannot fail to be a prolific source of danger, and mortality, by exposing the robust to unnecessary trials, and the delicate to fatal diseases. This conclusion, indeed, is fully borne out by the fact, that among our rural population, the diseases whose prevalence has led to this discussion, are by no means so remarkable as in town, where fashion is allowed more sway, and becomingness of dress more slavishly consulted. Our country people have their infants, and young children, very warmly clad: indeed, ridiculously so, in the eyes of many persons. However, it may be said, in defence of this custom, that a comparative freedom from one of the most dangerous diseases of infancy and childhood is gained by it; and, therefore, it would

be folly to object to it, merely on the score of its being carried to greater lengths than is perhaps altogether necessary. Extremes in popular habits are with difficulty prevented; and the pointing out of an abuse in a salutary practice, is never free from the hazard of driving people into the opposite extreme. To avoid both only belongs to superior minds. Consequently, in questions of this nature, the good tendency of the general principle being admitted, the thing to be next considered, is, whether its abuse be innocent or otherwise; and if it be found innocent, there is, certainly, more wisdom in allowing it to subsist, than in attempting to correct it.

Subacute inflammation of the bowels is also a prevalent affection of infancy, and childhood, in this island. It is marked by restlessness, loss of appetite, furred tongue, fever, and constipation. The fever is of the remittent type, the child being at one moment pale, cool, and tranquil, and at the next, flushed, burning, and irritable. These collapses, and reactions, may alternate

many times in the twenty-four hours; but, in general, the night is passed in a continued state of excitement. This morbid affection is, not unfrequently, the concomitant of the disease of the respiratory organs just described; but, in that case, the latter complaint does not assume its most dangerous form. A co-existence of both, however, places the life of the little sufferer in imminent peril. Too often it happens, that parents and nurses take one of the first symptoms of the disease, constipation, for the cause of all the rest; and, from this erroneous view, they are apt to think lightly of the matter, at first, referring the ailment to teething, or some other natural agency. A little 'opening medicine' is thought to be all the child wants; and he is, accordingly, well purged by means of resinous powders, procured from the druggist, before being submitted to regular treatment. This is most commonly the plan pursued during the period of irritation; and the disease is thus more or less aggravated, in proportion to the number of times the drug has been administered in the

manner stated. If any alleviation seem to follow this ill-timed stimulation of the bowels, such alleviation is generally found to be momentary, and deceitful ; and, is presently succeeded by unequivocal signs of increased mischief. The natural termination of this disorder is by a secretion of mucus, rendering the stools loose, and glairy, and causing a great prostration of strength ; which effects, however, yield in a few days to diet, and a mild course of medicine. When, on the contrary, it has been made worse by improper management, it may become difficult of cure, or eventually prove fatal, either by extreme exhaustion, or by complications in other organs. With respect to its most frequent cause, I need only refer the reader to what has been said touching that of catarrhal diseases, all which applies with equal reason to the present affection.

Remittent Fever is seldom, if ever, independent of a local affection. But as it is a frequent disease among children, in this island, it has appeared more consistent with the plan of this

little work, to allow it a separate existence, than to omit it altogether, on the ground of its being nothing more than the general symptoms of a localised disorder. Moreover, the latter doctrine is, by no means, universally assented to by pathologists. Whatever be the real nature of the fever, it is certain that inflammatory irritation of the bowels, or of the brain, or of both, is its usual concomitant. To be sure, in many cases, no strong indication is manifested of the presence of these local diseases, before the fever has arrived at its acme, or touches already to a fatal termination; and, therefore, the theorist may think himself free to consider them either as causes, or complications, as may best suit his favorite doctrine. The doctrine, which views this fever as symptomatic only, would supply an easy explanation of its prevalence in the island. If, on the contrary, we suppose it to be idiopathic, the means of accounting for its frequent occurrence, by surrounding agencies, do not so readily suggest themselves.

As before observed, in reference to all ages

generally, Jersey can boast of no exemption from the other diseases incidental to the two periods just examined. It may be said of the epidemics, that *measles* is by far the most frequent, and is attended by as high a rate of mortality as is experienced in any part of the United Kingdom. Up to a late period, *scarlatina* might have been considered of comparatively rare occurrence; but, within the last few years, a change would seem to have taken place in that respect, which there is reason to ascribe to an increased intercourse with England, and France. For eighteen months, dating from the spring of 1835, it certainly prevailed in a very unusual degree; and, even to this day, it is not quite extinct, contagion being still active in inducing sporadic cases of it. In the autumn of 1833, *roseola*, and *urticaria*, broke out epidemically, and prevailed almost universally among children, though they did not respect grown-up persons either. This occurrence formed the subject of a note in my register, chiefly on account of the mistakes which were then made, as to roseola,

by the vulgar, who could not, without much difculty, be persuaded that the thing was not measles, or scarlatina. Somehow or another, the latter name has received a singular acceptation in this island, being only bestowed on the milder cases, whilst the severe are denominated *scarlet fever!* Well, indeed, might this novel, and *mild* acceptation be given to the name, when applied to roseola; for the disease required no treatment, and was free from all inconvenience, save the momentary discoloration of the skin, and a slight itching.

We now come to the consideration of the diseases assigned to the third division.

SECTION II.—PREVALENT DISEASES IN ADOLESCENCE.

From my own experience, I am inclined to look upon *continued fever* as being very prevalent among the population of this little island. It especially affects youths and adults of the male sex. And, indeed, if we reflect on the la-

borious habits of our people, and their constant exposure to the vicissitudes of the atmosph ere, of which no inurement can render them totally independent: if, I say, we reflect for a moment on the nature of these causes, it will not be difficult to perceive how they may predispose the labouring classes to the fever in question. A large portion of our mechanics,—and the country absolutely teems with them, even the agricultural classes furnishing a great number,—begin and terminate their hard day's work by a walk of three or four miles to and fro; which, besides imposing extra fatigue, shortens the interval of well-earned repose. So long as youth, and vigour are able to withstand this extraordinary waste of strength, the liability to fever thus induced, displays itself by the development of benignant cases only; but, sooner or later, under the operation of such debilitating causes, will be induced a predisposition to a species of fever, which instead of being characterized by strong reaction, is marked, on the contrary, by *asthenia* or weakness. Thus, then, according to consti-

tutional differences, similar causes will, here as every where else, give birth to one, or the other, of the two principal forms of continued fever, viz., the inflammatory and the typhoid.

If to the predisposing causes of continued fever I have already noticed be added the too general abuse of ardent spirits, the mind will, undoubtedly, be less inclined to fill itself with astonishment, at the frequency of this disease among our industrious classes, than at its not being still more commonly observed. Moreover, the town of St. Helier, from its low level, its narrow streets, dense population, and imperfect drainage, would seem, at first sight, to be in any state but that of security from the action of marsh, and human miasms; so that almost every circumstance relating to its topography would appear to conspire towards the production of the disease in question. Yet, it is only when the degree to which continued fever prevails is considered *positively*, and without reference to the numerous agents tending to induce it, that the frequency of its occurrence is remarkable. A

more comprehensive view of the subject will lead to a very different conclusion. No unprejudiced observer can be blind to the fact, that many and fertile sources of febrile miasm, exist in St. Helier's : a fact, which, if it do not agree with the sanitary state of the town, is not the less deserving of serious attention on that account, the seeming contradiction being solely owing to the neutralizing effects of free ventilation. This could hardly fail to be the case in a town, situated on the coast of a small island, and scarcely sheltered in any quarter from the currents of pure ocean-air, which perpetually move over its surface. But, that, independently of other considerations, this forms no just ground of indifference to means of improvement, was woefully proved by the rapidity with which Asiatic Cholera spread its fatal ravages in this place. An enormous proportion of its inhabitants fell a prey to the direful pestilence, whose mysterious cause acted on them like fire on a mass of the most combustible matter !

The study of climate has a very important re-

lation to the science of medicine, widening its field of utility, by the extension of its precepts to a greater variety of circumstances. Man's natural history furnishes proofs without number of the general fact, that his constitution is continually acted upon by external agencies, and that he is less adapted by physical, than by moral attributes, for the entire range of his terrestrial habitation. Nothing renders this fact more obvious than a view of the diseases of human nature, some of which are restricted to particular regions of the earth, whilst all are, more or less, modified by local influences. Under the disturbance, which accompanies disease, the constitution often betrays peculiarities, not easily discernible in the physiological or healthy state. For example, a Jerseyman cannot bear much bleeding ; nor do his diseases require that degree of depletion which is practised, with propriety, in climates not strikingly different from his own. This position may be laid down as an axiom of medical practice in this little island. But it may be doubted whether the knowledge of it would

have resulted from mere inductive reasoning; or, in other words, whether an acquaintance with the nature of our climate would alone have suggested a modification of the general rules of the healing art. The observation, however, places the effects of this mild and humid climate on disease in a very strong light; and it, moreover, leads to the inference that such effects are exemplified in a morbid condition of the body, because of a previous, though less sensible, action on the system, in the healthy state.

I have been led into these reflections by a desire to show upon what grounds a free use of the lancet, and other modes of depletion, ought, in this island, to form the exceptions, not the rules, of medical treatment, in the commencement of continued inflammatory fever. In most cases, a bold application of such measures, however successful in other places, is here found injurious, whenever it fails to arrest the disease altogether, at the onset. A mild course of the fever through its different stages is less often the result of such treatment, than

an increased tendency to degenerate into typhus. The late Dr. Edwards, a shrewd, and highly esteemed practitioner of this island, was so convinced of the mischievous effects of such practice, that he never lost an opportunity of making known his opinion to his brethren. And, indeed, to a young practitioner the hint was of the greatest value, although subsequent experience could not have failed to render the fact equally obvious to him. It is preferable, however, that practical knowledge should be thus handed down, than that it should be acquired by each medicalman, at the expense of his first patients. By the same fact we may, also, explain how the immoderate administration of brandy, in the typhoid stage of this fever, was formerly successful in some cases apparently desperate; and how such an empirical practice became generally adopted, with little or no discrimination, by the older practitioners of this island. For, as exhaustion was readily induced, by too liberal an application of antiphlogistic measures in the inflammatory, so,

in the collapse stage, re-action was seldom brought about, except by the exhibition of the most powerful stimulants.

Before concluding my remarks on continued fever, it may be proper to notice its mildest form, viz, *diary fever*, which is by far the most frequent of any, in this island. Generally, the symptoms of this ephemeral affection are too slight, and evanescent, to lead the sufferer to call for medical advice; and, therefore, although the cases be very common, the opportunity of observing one from beginning to end, is not often afforded us. Its connection with sudden changes of weather, is, for the most part, very evident; and, consequently, the frequent occurrence of this disease,—however insignificant it may appear, when estimated by its transient existence, and mild symptoms only,—is a circumstance of no small importance, in regard to the general character of the climate. Few persons, in any class of this community, have not had more or less personal experience of this fever, though perhaps, as few have ever thought

of distinguishing it by any graver appella tion than that of a 'mere cold.' The hot stage, which is the most strongly marked, is accompanied by headache, general languor, quick pulse, loss of appetite, and sometimes sickness. It is seldom preceded by a decided rigor; but there is a very great disposition to it upon the action of slight causes. For example, the act of getting in and out of bed may be attended with a fit of shivering, severe enough to make by-standers fear, for a moment, the development of a more formidable disease. Unless promoted by a warm bed, diaphoretic medicine, or some such means, the sweating stage is likewise slight, or may altogether escape notice; but, after a night of heavy unrefreshing sleep, the urine passed in the morning is found to be scanty, high coloured, with an abundant lateritious sediment. When produced by the cause to which I have here specially alluded, sudden variations in the weather, the duration of this fever does not exceed twenty-four hours, and its occurrence leads to no further consequences in healthy subjects. With

the other causes of this species of fever I have nothing to do, in this place.

Pleurisy is, according to my experience, much more common here than *pneumonia*. In other respects, it offers no peculiarities referrible to locality. Those very acute cases of pneumonia, which nothing short of excessive bloodletting can controul, are, certainly, rarely met with in the native inhabitants, whose attacks of this formidable disease, except in old age, usually terminate kindly, under the effects of much milder treatment. It was, long ago, observed, that, in drunkards, pneumonia was almost invariably fatal, unless it were limited to a very inconsiderable portion of the lungs. Monsieur Chomel, an eminent lecturer in the Paris school of medicine, ascribed the superior mortality of the disease, in such individuals, to the practice of placing them under the same rigid discipline, as to regimen, as more sober patients. He, however, acknowledged himself indebted to a fortunate hazard for the

proof of what he advanced on this subject. A noted drunkard was brought into the hospital, the third or fourth day of an attack of pneumonia, up to which moment he had continued to drink three pints of wine a day: blood was drawn once only, and, in thirty-six hours, the patient was convalescent. From that time the professor made it a rule to allow drunkards, labouring under the disease in question, a moderate portion of their habitual stimulus; from which practice he, subsequently, derived much satisfaction. Not a few of the instances, which he adduced in support of his position, had come under his notice, and been treated on this principle, from the very beginning. I may be pardoned for introducing this observation; since, as I have already stated more than once, the abuse of ardent spirits forms a very conspicuous evil in the habits of this community, and, consequently, frequent opportunities must here offer themselves of putting Monsieur Chomel's conclusion to the test of practical experience.

SECTION III.—PREVALENT DISEASES IN ADULT AGE.

Gastric Affections.—Under this denomination is included a various and important group of diseases, more popularly known under the names 'indigestion,' 'bilious,' 'stomach,' or dyspeptic complaints. Every practitioner must, certainly, admit, that, here, the slighter bilious disorders are remarkably common; partly from atmospheric causes, and partly from causes chargeable to errors of diet, or vitiated habits of life. But the form of gastric affection which I intend noticing, more particularly, in this place, is that which authors have distinguished by the name of *Nervous Dyspepsia.* Its prevalence among a class of our inhabitants, which seldom exhibits it in other countries, is a fact so remarkable, that it would lead one to seek its explanation in special agencies of a local nature. Many of these, unquestionably, are identical with the effects of a mild humid climate; but they do not completely account for the superior liability to the disease, shewn by our agriculturists, and

our rural population in general. As formerly stated, (page 46,) this class of people carry their industry, and spirit of economy, to an excessive pitch; scarcely allowing themselves time for repose, and contenting themselves with a sort of fare, by no means proportioned to their bodily wants. There is, indeed, the more reason to look to the latter circumstance for what climate fails to explain, in regard to the disease in question, as an equal degree of prevalence does not belong to it, among the other classes of the community. And, moreover, in the rural districts, it preferably attacks the women, who, it is well known, are here engaged in harder work, and subject to greater privations, than in almost any other civilized country. I may mention in passing, that from the latter cause, procidentia, and prolapsus uteri, are very common infirmities in this island, even in very young persons.

Concerning *bronchitis* I have nothing to state beyond the fact of its great prevalence. In the adult age, however, it seldom degenerates into the chronic form.

Rheumatism is so general in these parts that it might, with some reason, be viewed in the light of an endemical complaint. In youth, it frequently breaks out in the acute form, and differs in no point from its general characteristics in other countries. I cannot imagine on what sort of authority it was lately stated, that it is, here, rarely complicated by pericarditis : for no assertion could be made more at variance with fact. The chronic form, however, is the one, which the disease assumes most frequently in this spot, being already established, in many cases, even at a very early age. In the male sex, excepting hernia, no single disease constitutes so frequent a cause of disability for the military service, to which, as before mentioned, the law subjects every native. The exemptions, owing to this cause, may, without exaggeration, be estimated at one-tenth of the whole number of those which are final. The physical nature of the climate presents an obvious explanation of this fact ; but there is little doubt the tendency of that agent is greatly promoted in our country districts, by unnecessary

exposure, and contempt of ordinary precautions, in and out of doors.

Having already entered into some details touching continued fever, pleurisy, and pneumonia, it would be superfluous to re-examine them in this place. Let it suffice to have assigned them their proper rank among the diseases most commonly incidental to the period of life, to which the present section has been devoted.

SECTION IV.—PREVALENT DISEASES IN OLD AGE.

In classing the diseases of old age, most prevalent in this island, I have paid no regard to the tendency of each in affecting the duration of life; although, in whatever relates to that and the opposite limit of earthly existence,—the beginning, and the end of the living state,—the mind cannot, without difficulty, abstract itself from the consideration of the comparative degree of danger, belonging to the various agents of destruction by which man is surrounded. Chronic

rheumatism, to which, on the rule of relative frequency, I have assigned the first rank, is, by far, less dangerous, than any of the other diseases enumerated under the same head. Nevertheless, it is a prolific source of infirmity, and suffering; and, as such, it cannot fail, indirectly perhaps, to militate against longevity. I have witnessed not a few instances of complete loss of motion in the extremities, and almost as complete rigidity of the trunk, from the accumulated ravages of this inveterate disease. It ought to be observed, however, that, in this island, chronic rheumatism is viewed as a very ordinary occurrence, against which medical aid can do little: hence, as long as it does not amount to a permanent, or serious infirmity, is borne with stoic endurance, and allowed to grow into a morbid condition, beyond the power of art to palliate,—much less to cure.

Chronic bronchitis, chronic pleurisy, and dilatation of the right cavities of the heart, in this island, setting aside their relative frequency, present no characters different from those which

they possess generally. A common symptom, viz. dyspnæa, or shortness of breath, causes them to be confounded together, under the appellation of asthma, which strictly belongs to neither. The first is strictly referrible to the agency of climate; the second not so clearly;—and, as to the last, it might, I believe, often be justly considered as the effect of repeated attacks of bronchitis, or inordinate exertion of the body. There would be more difficulty in finding a satisfactory reason for the prevalence of ascites. Anasarca, though common, has not been specified, being, in most instances, a mere symptom of one or other of the diseases before alluded to.

SECTION V.—OF SCROFULA AND CONSUMPTION.

1.—*Scrofula.*—It has been asserted, and very generally credited, that scrofula is more frequently the object of observation in this island, than in most places; but there appears no just grounds for such an opinion. On the contrary, were the population tried on this point, by a

scientific criterion, I believe the charge of a greater liability to that disorder would be easily refuted. The cause of truth has, in all ages, been much injured by hasty generalizations; and (what is still worse) honesty of purpose could not, in every instance, be offered as the apology of misrepresentation. Various causes may, doubtless, here, as in similar contracted spots, have caused the scrofulous diathesis to run into extensive ramifications in some families, whether by actual degeneracy, or hereditary transmission. But, would it be fair, on that account, to reflect on a whole population a peculiarity assignable to a few groups only, however numerous individually? In 1833, medical boards were formed by order of Major General Thornton, the lieutenant governor, for inquiring into the disabilities of all such persons as enjoyed, or claimed exemption from military duty. By consulting the returns made on that occasion, I have succeeded in making the following summary of the diseases therein enumerated: which summary, considering the nature of the

documents from which it has been drawn up, exhibits a statistical fact, of unquestionable authenticity, and capable of throwing some light on the present question.

Summary of the diseases, admitted as grounds of final *exemption from duty in the ranks of the Royal Jersey Militia, in* 1833*: at which period, (according to a recent census,) the male population of the island, including all ages, was* 17,006*—and the total effective force of the militia* 4017*.**

Hernia	47
Scrofulous Affections	17
Chronic Rheumatism	22
Pulmonic Affections	37
Epilepsy	16
Debility	21
Mechanical Injuries, Deformities, and Lameness, from unspecified causes	47
Varicose veins	12
Ulcerated legs	12
Impaired Vision, and Blindness, from Opacities, and Amaurosis	13
Hematemesis	3
Urinary Diseases	5
Disabled Hands, from retraction of the flexor tendons, (some of which cases probably originated in rheumatism)	10
Dropsical Affections	4
Deafness	6
Opthalmia (chronic)	3
Liver Complaints (chronic)	2
Stomach Affections (inveterate ?)	4
Necrosis	2
Diseases of the Brain	1
Do. of the Testes	3
Paralysis	1
Cancer	1
Gout	2
Hemorrhoids, habitual and severe	1
Cutaneous Affections	2
Total	294

* This number includes only the Lads under Drill, and the Men who have clothing.

Supposing a large portion, (say 12,) of the cases of deformity, and lameness, together with one half of those of impaired vision, and all those of chronic opthalmia, and necrosis, to be referrible to scrofula,—which computation would, doubtless, go far beyond the real fact,—even then, the number of scrofulous affections would only be in the proportion of thirteen per cent, on all inveterate diseases, brought under medical inspection, on the above occasion. And, assuredly, in the face of such a fact, it would be difficult to uphold any longer the opinion, that scrofula is remarkably prevalent in the population of this island. At all events, setting aside the general question, it can hardly be denied, that, in whatever degree the disease may prevail, its effects do not appear, in this country, often to incapacitate men for the extraordinary duty here alluded to. In addition to the foregoing data, it may not be unimportant to mention, that, in upwards of twelve years, during which I have performed the duty of surgeon to the Town Battalion, which draws on one half of the entire

population, I have only exempted one individual from duty in the ranks, on account of cicatrices about the neck, from scrofulous ulcers.

With respect to the female part of our community, I have it not in my power to supply any such statistical information; but, considering the hereditary nature of the disease in question, I think we may safely infer, from what has been stated, touching the opposite sex, that the opinion, which has called forth the preceding remarks, has no better foundation in the one case, than in the other.

The facts here set forth will, it is hoped, go far to prove the futility of the assertion, by which Jersey has been represented as peculiarly liable to scrofulous complaints. In fact, they would rather incline a dispassionate inquirer to the opposite conclusion,—which would, doubtless, receive additional support, from a review of the most general causes of those morbid actions. Many of those causes operate but partially in the island; while not a few of them, such as sedentary, or unhealthy occupations, in crowded

factories, bad, or insufficient food, from poverty, &c., &c., may here be considered as almost entirely absent. The abuse of spirituous liquors forms the strongest exception to this favorable state of things.

2. *Consumption.*—After much reflection on the statistical history of this most fatal of all diseases, I feel no hesitation in asserting that, in this island, the number of deaths referrible to it, falls considerably below the general average. There are few, if any, genuine cases of that malady, whose origin could be held strictly independent of a scrofulous habit of body; though, in some, the exciting, or determining cause, has been so prominent as to appear to have acted directly, without the aid of any sort of predisposition. Nevertheless, the latter is considered, by modern pathologists, the almost absolute condition of the development of the particular disease of the lungs, denominated tuberculous consumption. Be that as it may, the identity of the specific characters of the latter affection, with those of other local disorders, evidently the

effects of scrofulous action, is too plain to admit of a doubt. Supposing this doctrine to be correct, therefore, the rarity of the scrofulous diathesis would naturally imply a proportionate rarity of consumption, as one of the many morbid results, to whose occurrence it is deemed essential, upon the surest principles of scientific deduction. The degree of immunity from consumption, which, I believe, cannot be fairly disputed to Jersey, is the more remarkable, as it exists in spite of a great prevalence of the most common of the exciting causes, pulmonary catarrh. This circumstance may, I think, be viewed as additional evidence of the necessity of predisposition: for, in no other way, could we reconcile the unfrequency of the one disease, with the prevalence of the other.

I have met with many specimens of chronic consumption, chiefly in the country parishes of the island. Some of these cases, in persons originally robust, did not appear incompatible with a long life. An alarming aggravation of symptoms did occasionally occur, from various

causes; but I have known the intervening periods to appear so promising as to create doubts touching the correctness of the diagnosis, by which the disease had been pronounced incurable. During such intervals, the patient has been seen to resume his ordinary occupations; a result which, though it was anomalous, was well calculated to teach the medicalman prudence, in delivering an opinion on the probable duration of life, under such circumstances. It is easy to account for the exacerbations. In cases of this description, the tubercles, few in number, pass through their changes slowly, and without much general disturbance, until they have become completely softened. At this crisis, acute inflammation is set up in the adjacent substance of the lung, previous to the evacuation of the liquified product; a neighbouring artery, involved in the inflammation, and losing, of a sudden, all support, by the destruction of the tissure in which it was formerly imbedded, may yield to the impetus of the blood, and thus give rise to dangerous hemorrhage. Other local, or general

actions, may also, for the moment, place the patient in the most imminent peril. But if the constitution resists these severe inroads, the symptoms gradually subside; the site of the evacuated tubercle becomes a permanent cavity, secreting more or less mucus; and, under this dilapidated state of the respiratory organs, the invalid may yet spin out a precarious existence to an advanced age.

Before passing to the next chapter, I may once more observe, that in the foregoing brief notice of the prevalent diseases of Jersey, I have endeavoured, as much as possible, to confine my remarks to those morbid phenomena, whose study was calculated to throw light on the leading object of my inquiry, viz. the climate of the island.

CHAP. VI.

REMEDIAL PROPERTIES OF THE CLIMATE OF JERSEY.

THE principal, and most useful object of researches into climate, is, undoubtedly, the elucidation of its effects on the organization, in health, and disease. Consequently, though the present essay has extended much beyond its original plan, I cannot conclude it without adverting to this important subject. Touching the diseases, which may be considered peculiarly prevalent, among the native population, and the stationary residents, I have already gone into as much detail, as the extent of my information would justify. Therefore, it now only remains for me to submit the results of my observations on the

merits of this climate, as a remedial agent. Of this part of my task, I shall acquit myself as briefly as will appear consistent with its importance.

It ought to be recollected, that a knowledge of the prevalent diseases of a locality, furnishes no certain criterion of the tendency of its climate, with respect to diseases developed in other situations. Otherwise, the application of climate, as a remedy, would be still more limited than it is; and its study would but ill repay the inquirer for the perseverance, and attention which it necessitates.

The best observers have shown themselves very cautious in drawing any but the most general conclusions on this delicate question. However, from some of the foregoing details, I think it might safely be inferred, that for all diseases whose cure may be facilitated by a mild climate, this island presents many advantages over almost any situation, with which it would be reasonable to compare it. To avoid endless explanations, let me here remind the reader,

that, in any thing I may advance, concerning the character of this climate, as a residence for invalids, my statements shall, of course, be made with reference to geographical position. For, it is only on comparative merits, as one of the English climates, that a claim to consideration can be founded, in behalf of Jersey.

To say, with Dr. Scholefield, that the climate of Jersey is the most suitable, for those labouring under pulmonic diseases, *of any in Europe*, would be to repeat an extravagant assertion, difficult to support by any argument, however specious, and still more by authentic facts. The superiority of the island, as a climate, lies within much narrower limits.

I have already said, (page 73,) that under the influence of the mild and soft qualities of this climate, chronic diseases, generally, proceed slowly; and, being less liable to exacerbations, from atmospheric variations, the chances of a favorable termination are proportionally increased, in cases whose nature does not preclude all hope of ultimate restoration to health. In

another place, also, (page 85,) I have alluded to the advantages the island offers, as a sort of initiatory climate, for individuals, who, from a protracted sojourn in tropical latitudes, have been rendered unable to resist the inclemencies of less favored situations. These are, undoubtedly, points of no mean importance, and as to which, (if I may trust to my own observation, during thirteen years of general practice,) a very high character may be conceded to Jersey, compared with the principal watering places, in the south of England. I need scarcely pause to qualify this opinion, after the details already entered into, concerning the character of the climate, in the different seasons of the year: for, having, as I think, unsparingly pointed out its objectionable qualities, it cannot be supposed that I aim at placing it in a light more favorable than it deserves. Enough has been said to show, that, in order to derive any benefit from the genial properties of this clime, some caution is necessary, against the countervailing tendency of other qualities of a very different nature.

With this understanding, I shall now proceed to the further consideration of the cases of disease in which more or less advantage may be expected from a residence in this island.

During nearly three-fourths of the year, the soft and equable character of this climate, joined to a moderate temperature in the two extremes, will, generally, prove beneficial in the incipient stage of pulmonary consumption, when the subjects of that most fatal of all human diseases, have, hitherto, lived in less temperate regions. This affection is, most commonly, ushered in by a marked period of irritation, requiring depletion, and sedative remedies; both of which means will take greater, and more durable effects under our sky, than in situations subject to more extensive variations, and ranges of atmospheric heat. It would be difficult to understand upon what just grounds this climate could have been supposed unfavorable to invalids liable to hæmoptysis, unless it was in the last stage of tuberculous consumption. For the truth is, hæmoptysis, whether as an idiopathic disease, or as a com-

plication of phthisis, is, here, comparatively rare, local agencies tending much more to prevent, than to induce a plethoric state of the system. And, indeed, many instances have come under my observation, of hæmoptysis having been effectually checked by a residence of one or more winters in this island, when no organic disease of the lungs existed, and when the hemorrhage was simply the result of local congestion. From the lesser intensity of the predisposing causes of hæmoptysis, in this place, its occurrence in the progress of tuberculous consumption is by no means common; and, thus, the latter affection frequently passes into the last stage, free from any other symptoms, but a stubborn cough, and frequent pulse, accompanied by loss of flesh, and, in females, suppressed menstruation. The cough is here observed to be attended by mucous expectoration, very early in phthisis, long before the tuberculous pus is thrown off; and, oftentimes, up to this moment, no degree of emaciation has taken place, such as to create serious apprehensions. Even as one

of the consequences of organic disease of the lungs, hæmoptysis scarcely ever fails to be alleviated by a winter passed in this island; and the liability to inflammatory action in the neighbourhood of tubercles being lessened by the same causes, which diminish the tendency to local plethora, the pulse is, not unfrequently, improved, It need scarcely be said, that the hopes raised in the patient's mind, by such a mitigation of his sufferings, must soon vanish, in so inveterate a disease as pulmonary consumption. He cannot get the better of his cough; and, although he is often heard to express satisfaction at its having become less hard, and fatiguing, the 'phlegm' now being ejected with less difficulty, this change, on which he lays so much stress, is merely the deceitful effect of the milder and softer climate, in which he now breathes, and which has bestowed a catarrhal character on this symptom of his fatal complaint. It is far from my intention, in offering the foregoing remarks, to insinuate, that to this climate belongs the inestimable privilege of alleviating, in any essential degree, a

malady, which, in spite of the rapid advancement of medical science, still bids defiance to all human skill. What is here aimed at, is to place Jersey in its true position, among climates of a similar nature, and to draw inferences of practical value, concerning particular morbid actions, which, though sometimes the consequences of phthisis, have, not unfrequently, a separate existence, and admit of a successful treatment. Of this kind is hæmoptysis. I believe it to be generally admitted, by modern pathologists, that the latter disease, when simple, is very rarely occasioned by the erosion of a large bloodvessel; and that, in the majority of cases, the hemorrhage results from an exhalation of blood on some part of the mucous membrane of the respiratory channels. Now, the state of the mucous membrane predisposing to this affection, is certainly not common in this island; a state widely different from that which induces the diseases, known by the general term *catarrhal*, prevalent under the meteorological influences which characterise this climate.

From the preceding observations, it may be seen that I consider Jersey entitled to a very high character, among the English climates most suited to invalids labouring under incipient pulmonary consumption, and idiopathic hæmoptysis.

Strange as it must appear, considering the frequency of those diseases among the inhabitants themselves, catarrhal affections, when imported into this island, are more commonly improved than aggravated, if the invalid have been duly mindful of the necessity of not trusting too implicitly to superior mildness, and equability of temperature. Nor would I restrict this position to cases of *dry* bronchial irritation only: for I have noticed numerous instances of chronic bronchitis,—accompanied by so profuse an expectoration, that no other means, but the stethoscope, could have enabled the practitioner to distinguish them, with certainty, from consumption,—which, nevertheless, have terminated favorably, during a season passed in this climate. But, it should be observed, that, whatever inducement might arise to the contrary, from this, or other reasons,

such invalids ought, by no means, to postpone their departure hence, beyond the period of their restoration to health : for, as the effect of change becomes neutralized by habit, they come to share, more or less, the liabilities of the inhabitants themselves; added to which, their own predisposition, from previous attacks, render them still more vulnerable to the common causes of the same disorders. The objections entertained against this, and the other Channel Islands, in regard to the present diseases, are chiefly founded on the supposition, that their climates are peculiarly relaxing, and, moreover, deteriorated by exposure to frequent high winds. With regard to the first of these objections, I have already laboured to show (page 77,) how far it agrees with direct observation : and, with regard to the second,—as, in assigning a place to this climate, I have confined myself to comparing it with those of the south, and south-west coasts of England,—I may say, with Dr. Young, op. cit. " the further we go up the channel, the " more remote we become from the mild gales

" of the Atlantic, while the prevalent south-
" westerly winds, in passing over a considerable
" part of the continent, must have lost much of
" their warmth."

I have stated, elsewhere, that gastric affections hold a prominent rank among the diseases incident to this population. Nevertheless, experience has, long ago, convinced me, that our climate shows itself by no means adverse to invalids, labouring under certain forms of that class of diseases, and who have come hither with a view to the alleviation of their sufferings. This observation applies chiefly to nervous dyspepsia, which, it is well known, is more readily influenced by change of air, scene, or habits, than perhaps any other ill ' that flesh is heir to.' Among the great number of persons, who, annually, visit this island, there are many dyspeptics; and, consequently, the local practitioner has frequent opportunities of trying his skill against the protean disease in question. From the success which attends his endeavours, he may safely draw an inference as to the influence of

the climate: for, most commonly, the cases which thus come under his notice, have been submitted to various methods of treatment; and it would be difficult for him to suggest any remedy, which had not already become familiar to his patient. Under these disadvantages, whatever might be the ingenuity of the medicalman, in modifying principles of treatment, previously tried without success, if he succeed, he cannot justly pretend to the whole credit of the cure; for a candid review of the history of such cases, cannot fail to convince him, that change of climate, and reformed habits of life, have been the chief instruments of the amelioration, which has taken place under his managemeut. This has been my impression in many instances of this kind, that have occurred in my own practice.

With respect to hepatic diseases, except in so far as they are frequently connected, as complications, with the preceding disorders,—in which case, they are, for the most part, only functional,—they are neither to be considered prevalent in this country, nor likely to be preju-

diced in their terminations, by the action of the climate. Here, again, my opinion is at variance with that of the able contributor to Mr. Inglis' work; but a long, and tolerably extensive, personal experience, forming the ground of my sentiments on this, as well as the other subjects of this essay, I cannot sacrifice them even to the high opinion I entertain of that physician's literary acquirements, and philosophical spirit of observation. Structural disease of the liver, is of very rare occurrence in Jersey, among the native inhabitants; and the cases I have noticed in the other class, most of which owed their development to a residence in tropical latitudes, far from appearing to be unfavourably affected by the climate, have, generally, improved under its influence, when extensive disorganization of the viscus did not preclude the possibility of such a result.

For the scientific explanation of what I have here advanced concerning the remedial properties of this climate, I must invite the medical reader to take a retrospect of its physical qua-

lities, as detailed in Chapter 2, from observations, which, though confined to a period of five years only, furnish, I believe, the only information of a conclusive nature, hitherto laid before the public. The few facts of a similar kind, made known by Mr. Inglis, in his 'Channel Islands,' were borrowed from my register, and constituted a part of the mass of those, from which I have drawn my conclusions.

The further application of this climate in the treatment of the many diseases not mentioned in this place, will flow out of the incidental observations offered in various parts of this work. I need only observe, for that purpose, that in considering this locality, with regard to its merits as a residence for invalids, the *general* features of its climate should stand foremost among the facts, from which *general* inferences are to be drawn. And, in concluding this essay, may I be allowed to express a hope, that I may share the privilege of indulgence, commonly granted to authors, who have written in the midst of professional occupations, which leave but rare and

uncertain leisure for literary pursuits. I cannot pretend to the merit of having exhausted the subject of the foregoing investigation, being fully aware that I leave it still open to much interesting research. But, should the facts which I have collected, and brought together, appear calculated to aid materially in the more complete elucidation of the climate of this island,—which has, of late years, acquired a great degree of importance among the places most resorted to by invalids, and travellers of every description,—I may say, in perfect candour, that the full of my ambition shall have been gratified.

THE END.

TABLE 1.—*Shewing the mean temperature of the months, seasons, and whole year; averaged on the years* 1831—32—33—34—*and* 35.

March	45,75			
April	50,09	Spring	50,97	
May	57,08			
June	61,31			
July	63,50	Summer	62,84	
August	63,72			
				53,06
September	59,82			
October	55,65	Autumn	54,63	
November	48,42			
December	45,27			
January	41,58	Winter	43,82	
February	44,62			

TABLE 2.—*Shewing the mean ranges of temperature of the months, in the different seasons, and whole year; averaged on the years* 1831—32—33—34 *and* 35.

March	24,80			
April	31,80	Spring	30,13	
May	33,80			
June	35,20			
July	34,80	Summer	33,73	
August	31,20			
				28,34
September	29,30			
October	27,10	Autumn	27,37	
November	25,70			
December	22,50			
January	22,10	Winter	22,13	
February	21,80			

TABLE 3.—*Shewing the mean daily range of temperature of the months, seasons, and whole year; averaged on the years* 1831—32—33—34 *and* 35.

March	10,39			
April	13,11	Spring	12,60	
May	14,30			
June	15,33			
July	16,50	Summer	15,93	
August	15,97			
				11,64
September	13,96			
October	9,95	Autumn	10,60	
November	7,91			
December	6,88			
January	6,80	Winter	7,42	
February	8,58			

TABLE 4.—*Shewing the mean variation of temperature from day to day, in the different months, seasons, and whole year, averaged on the years* 1831—32—33—34 *and* 35.

March	2,13			
April	2,40	Spring	2,42	
May	2,75			
June	2,46			
July	2,66	Summer	2,53	
August	2,49			
				2,41
September	2,41			
October	2,20	Autumn	2,39	
November	2,56			
December	2,34			
January	2,36	Winter	2,30	
February	2,19			

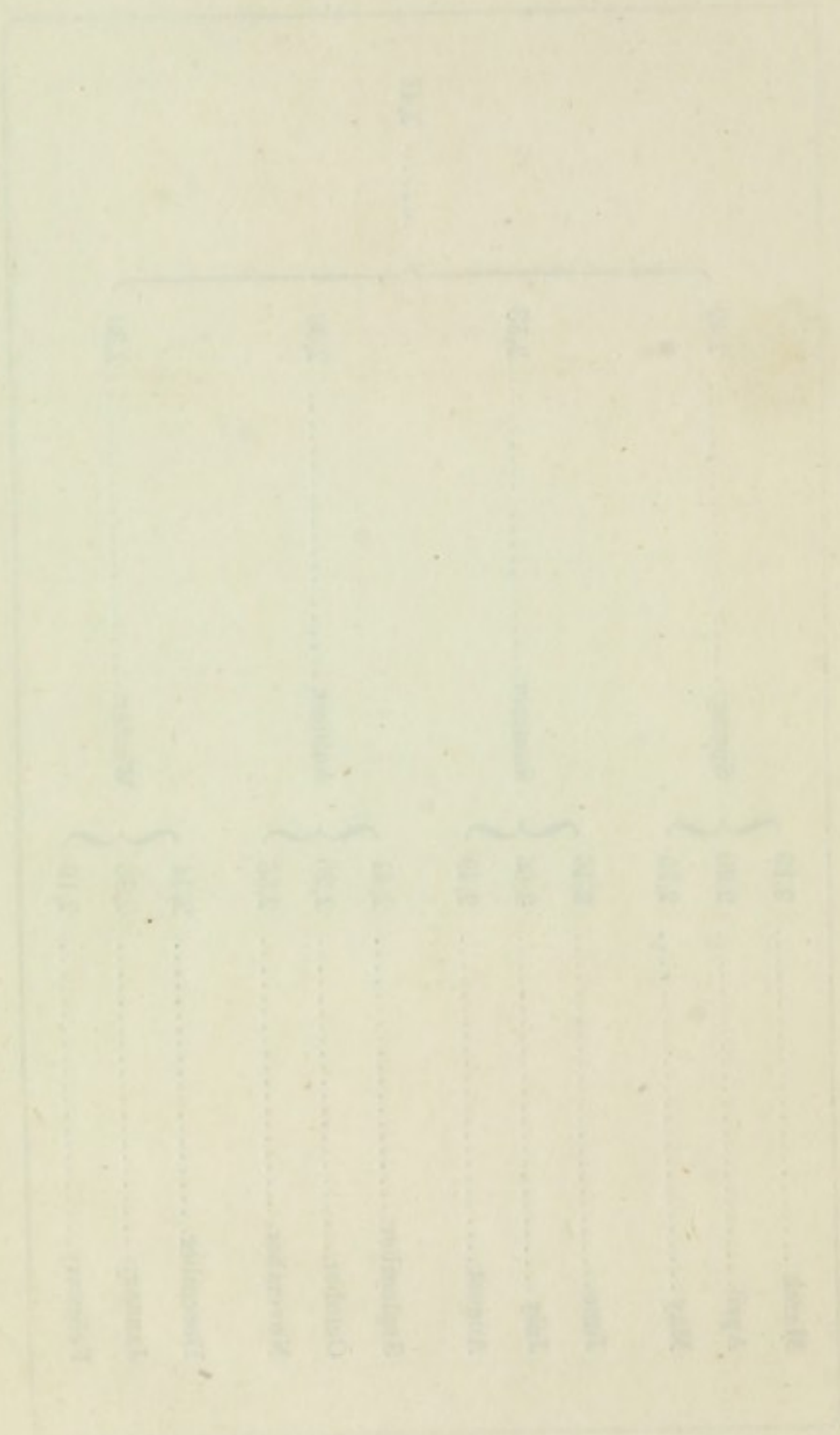

TABLE 5.—*Shewing the mean daily range of Temperature of five successive years, in the different months, seasons, and whole year.*

Mean daily *Ranges of the Months.*

		1831.	1832.	1833.	1834.	1835.
DAILY RANGES.	March	11,15	12,12	9,43	10,09	9,17
	April.....	12,68	15,00	11,32	13,34	13,23
	May.....	14,38	15,87	16,05	14,06	11,17
	June.....	15,98	16,29	13,60	15,08	15,71
	July.....	15,60	19,95	15,16	13,74	18,08
	August....	22,75	14,50	14,90	13,11	14,63
	September.	16,66	18,66	11,51	12,31	10,65
	October....	11,79	9,62	9,51	10,39	8,45
	November.	9,72	6,78	8,91	7,46	6,70
	December.	6,01	8,18	5,98	7,36	
	January...	6,46	8,68	6,93	5,16	6,81
	February..	7,76	13,44	6,64	8,18	6,91

Mean daily *Ranges of the Seasons.*

	1831.	1832.	1833.	1834.	1835.
Spring..	12,73	14,33	12,27	12,49	11,19
Summer.	18,11	16,91	14,55	13 97	16,14
Autumn.	12,72	11,69	9,97	10,05	8,60
Winter..	6,74	10,10	6,51	6,90	

Mean daily *Ranges of the Years.*

1831.	1832.	1833.	1834.	1835.
12,57	13,25	10,82	10,85	11,05

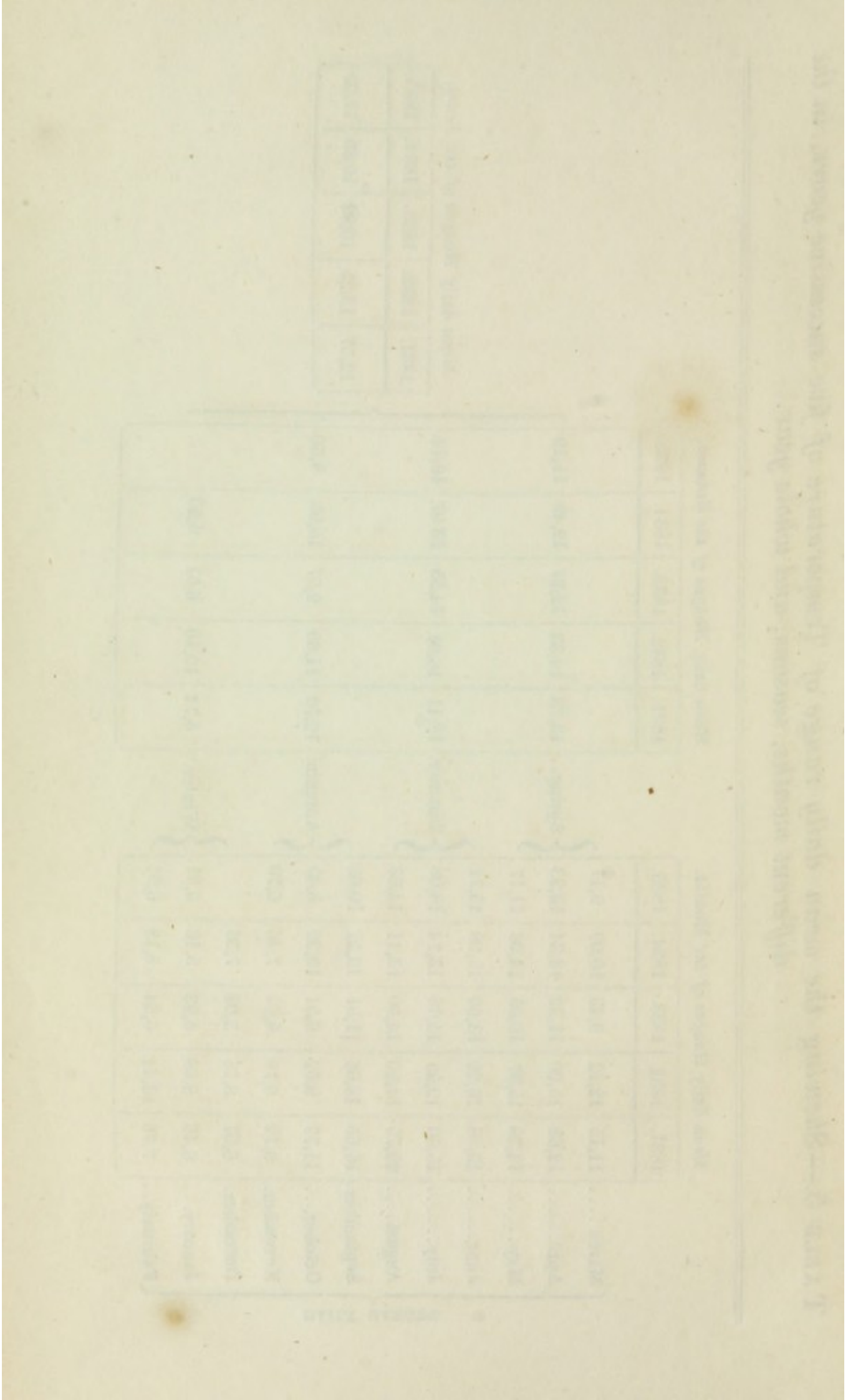

TABLE 6.—*Shewing the mean daily variations of Temperature of five successive years, in the different months, seasons, and whole year.*

Mean daily *Variations of the Months.*

		1831.	1832.	1833.	1834.	1835.
DAILY VARIATIONS.	March	2,46	2,14	2,11	2,09	1,86
	April.....	2,64	2,37	2,06	2,34	2,58
	May.....	2,50	2,61	3,59	2,73	2,34
	June.....	2,32	2,17	2,64	2,87	2,30
	July.....	2,25	2,25	2,63	2,47	3,70
	August....	2,09	3,14	2,04	2,27	2,93
	September.	2,37	2,65	1,82	2,86	2,38
	October....	2,17	2,16	1,95	2,39	2,34
	November.	3,45	2,37	2,54	2,42	2,05
	December.	2,20	2,32	2,15	2,70	
	January...	2,83	2,25	2,30	1,56	2,85
	February..	2,35	2,29	1,76	2,53	2,03

Mean daily *Variations of the Seasons.*

	1831.	1832.	1833.	1834.	1835.
Spring..	2,53	2,37	2,58	2,38	2,59
Summer.	2,22	2,52	2,43	2 53	2,94
Autumn.	2,66	2,39	2,10	2,55	2,25
Winter..	2,46	2,28	2,07	2,26	

Mean daily *Variations of the Years.*

1831.	1832.	1833.	1834.	1835.
2,47	2,38	2,29	2,43	2,48

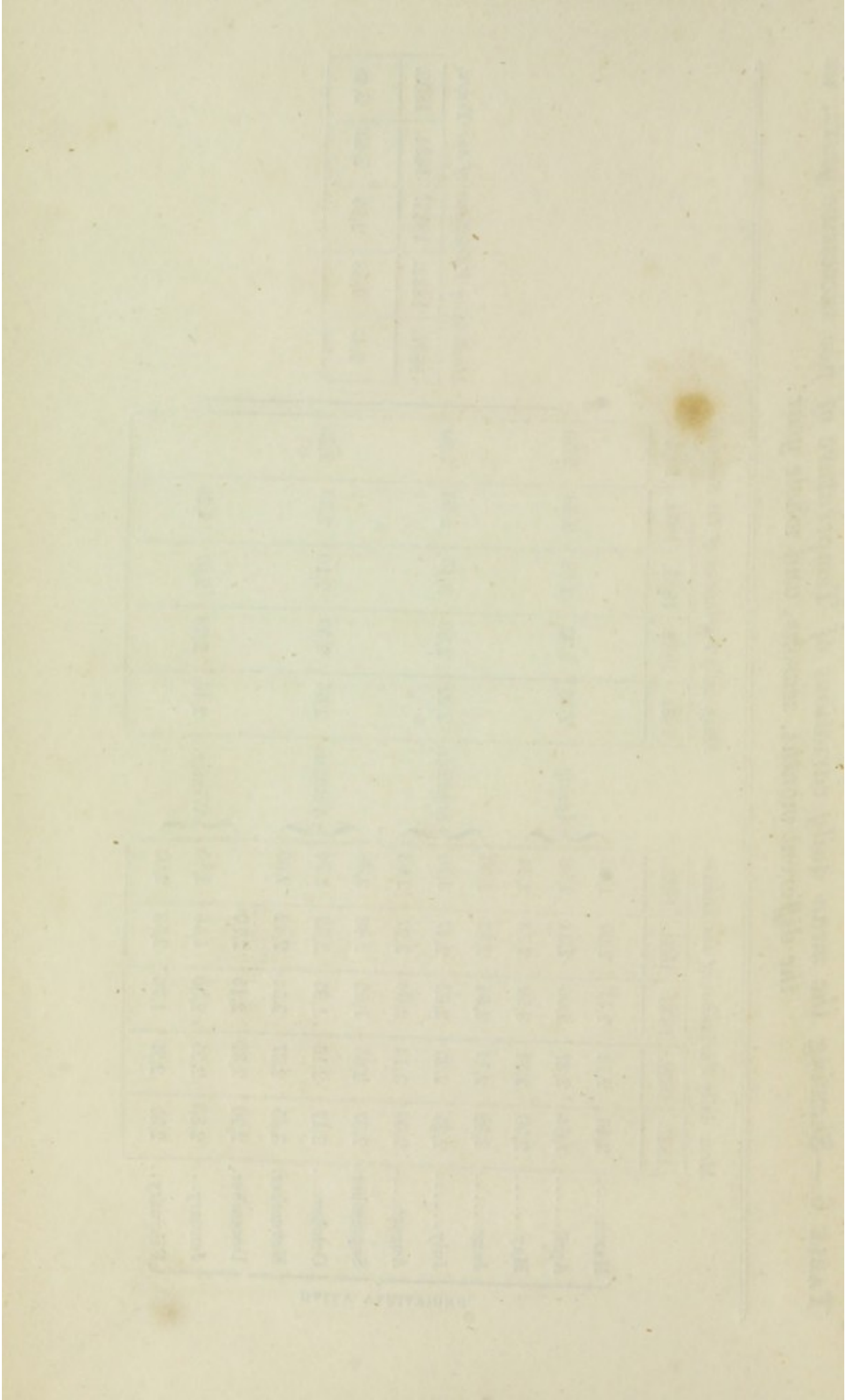

TABLE 7.—*Shewing the particulars of five successive years, in regard to mean temperature.*

MEAN TEMPERATURE.

Mean Temperature of the Months.

	1831.	1832.	1833.	1834.	1835.
March	48,08	44,03	42,76	47,32	46,47
April.....	51,42	49,97	48,99	49,93	50,15
May.....	56,28	53,14	60,30	59,54	56,14
June.....	60,70	59,57	60,98	63,09	62,22
July.....	63,97	59,90	62,66	65,51	65,49
August....	64,34	62,45	60,65	65,63	65,56
September.	58,80	58,53	57,27	63,76	60,75
October....	57,63	54,24	56,34	56,87	53,19
November.	47,72	49,56	48,02	48,67	48,13
December.	45,80	46,52	49,74	44,36	39,92
January...	39,86	38,67	38,51	48,24	42,64
February..	45,53	41,66	45,74	44,35	45,82

Mean Temperature of the Seasons.

	1831.	1832.	1833.	1834.	1835.
Spring..	51,92	49,04	50,68	52,26	50,92
Summer.	63,00	60,64	61,43	64,74	64,42
Autumn.	54,71	54,11	53,87	56,43	54,02
Winter..	43,73	42,28	44,66	45,65	42,79

Mean Temperature of the Years.

1831.	1832.	1833.	1834.	1835.
53,34	51,51	52,66	54,77	53,01

TABLE 8.—*Shewing the degree of prevalence of each wind, in days and fractional parts of days, for the different months, and the whole year—averaged on five successive years.*

	N.	N. E.	N. W.	W.	E.	S. E.	S. W.	S.
January	0,90	4,20	2,90	3,20	4,80	5,50	8,50	0,50
February		3,20	5,50	5,70	2,30	2,40	7,90	1,20
March	1,40	6,10	5,60	4,20	4,80	2,70	4,30	1,70
April	0,80	11,90	4,70	4,60	2,50	2,10	2,30	1,10
May	0,70	7,10	3,30	5,80	3,90	2,40	5,80	0,80
June	0,70	4,70	4,60	10,10	0,70	2,20	5,90	0,70
July	0,60	7,30	4,80	10,30	2,70	1,30	3,00	0,60
August	1,00	6,30	6,90	6,00	1,80	0,70	5,90	0,40
September	0,20	5,20	5,90	4,40	3,00	3,10	7,20	0,60
October		5,70	6,20	5,60	2,00	1,80	7,30	2,40
November		7,00	4,40	6,10	2,40	2,50	6,90	0,70
December	0,20	6,40	5,80	6,00	2,00	3,00	8,10	0,40
Totals	6,50	75,10	60,60	72,00	32,90	29,70	73,10	11,10