

## THE CLIMATE OF THE UNITED STATES.

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to see this disease as a sequence of external wounds or blows, and, except that it arises from inflammation of the sheath after strains or excessive use, and exposure to cold, it is impossible to recognize the cause.

The patients under my observation have complained of considerable pain, increased by pressure and active or passive motion; a considerable swelling has been noticed along the course of the tendon, with some increase in temperature, and, once, a reddening of the skin, disappearing on pressure. The pathognomonic sign of the affection is a dry crepitus, which Nélaton compares to that experienced when starch is rubbed between the fingers, or when snow is crushed beneath the feet; but—substituting touch for sound—it recalls the crepitation of an inflamed serous membrane, as the pleura. The crepitus presents variations in reference to its extent and intensity, but has the same character in all. It can be excited by pressure, or, still better, by moving the tendon in its sheath by passive movements. Velpeau ascribes the crepitus to the friction of the tendon against the dry synovial sheath; its fluid being deficient from the inflammation of the part. The disease terminates by resolution. In the cases under my observation it has disappeared on prescribing rest and the use of evaporating lotions or warm fomentations, or by the use of an external stimulant, such as the application of iodine. Its usual duration is ten days or a fortnight; but, in the cases I have noticed, want of normal power in the limb and a certain amount of tenderness about the part have continued much longer.

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THE CLIMATE OF THE UNITED STATES  
AND ITS EFFECTS ON HABITS OF LIFE  
AND MORAL QUALITIES.

BY M. E. DESOR, of Neufchatel.

WHEN a German or Swiss emigrant lands at New York, he does not perceive that the climate is on the whole very different from that of his own country. Nevertheless, after a while, and when he has established himself permanently, he begins to recognize differences which soon oblige him to modify some of his habits, and, at the end of a certain time, compel him to adopt, whether he will or no, those of the Americans, which had been, at first, the subject of his most bitter criticisms.

This experience which the greater number

of Europeans undergo, does not cease to astonish them after they have reflected upon it. They know that the Northern States are within about the same parallels of latitude as Central Europe. The well educated remember, besides, to have been taught at school that the isothermal lines, or zones of equal temperature, correspond in a still more striking manner. They have besides found by experience that winter in the vicinity of New York or Boston is nearly as cold as that of the environs of Frankfort, Basle, and Zurich, and the summer at least as warm. Nevertheless, the two climates have effects altogether different, for which he cannot account. Hence it was, that when, a few years since, the *élite* of the German population of Boston organized themselves into a lyceum to establish courses of lectures after the custom of the Americans, the principal, if not the only question of general physics upon which they manifested an earnest desire to be enlightened was precisely that of climate.

How was it, they asked, that they were all obliged to modify, after a certain time, their habits of life, and even their modes of proceeding in the different arts and trades?

Having been invited to give some lectures on the comparative climatology of the continents of Europe and America, I was led to investigate in a special manner the nature of those climatic influences and the extent of the modifications which they bring with them.

The phenomena of which we treat are of two kinds: those which relate to common life and which everybody can appreciate, and those which are noticed in the exercise of certain professions.\*

To the first category belong the following phenomena:

1st. German women are all astonished at the facility with which linen dries, even in the depth of winter, so that washing takes in general less than half the time it does in Europe, which makes the custom so general in the United States of washing every week.

2d. On the other hand, those same housekeepers, especially those who live in the country, are in despair at finding how rapidly their bread dries up. Habituated in their native country to making a supply of bread for several weeks, they are in consternation at seeing that their bread, although prepared in the same manner, hardens and

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\* In speaking of the United States in comparison with Europe, we have especially in view the Northern States of the Union, and not Texas or California, where the climatic conditions are altogether different.

becomes uncatable in the course of a few days; they impute it to the quality of the flour, or of the water, they lose their temper, they bemoan themselves, and after awhile they end in adopting the American custom of making bread every day, or at least every other day.

3d. This inconvenience, which is no imaginary one, is compensated in a certain degree by some advantages which we at home do not enjoy. Thus mouldiness is much less to be feared in the United States than with us. It is rare that provisions suffer from it in winter. The cellars, in particular, unless they are in damp and low places, are excellent, whence it is that every kind of food, fruits and vegetables, are preserved much longer and more surely than with us.

4th. The same absence of moisture is observed in a still more striking manner in winter, when the windows of apartments show less moisture upon them than with us. Thus Germans who are accustomed to see at home the window panes covered with arborizations during a great part of the winter, and can hardly conceive of Christmas without frost-flowers, are disappointed at not seeing them more frequently in America; and yet the weather there is as cold at Christmas as it is at Hamburg or Munich.

5th. There are, besides these subjects of common observation, others which bear upon hygiene, and which every one can make in his own person. I will give here but one example, the influence which a residence in the United States has upon the hair, which, at the end of a certain period, loses its moisture to a considerable degree. Thence comes the greater need of oil and pomatum, and consequently the greater number of hair dressers. Many a young man who in Switzerland or Germany would recoil from the idea of using pomade or Macassar oil, from the fear of seeming effeminate, finds his steps taking more and more frequently the path to the hair dresser's, after having lived for some time in the United States.

The experience undergone in the exercise of the different arts and trades is not less significant. Here are a few examples, which I have received from persons of intelligence and reliability.

1st. Builders do not find themselves under any necessity of leaving their houses to dry for a season before surrendering them for occupation. The mason has hardly left, when the occupant enters without any fear of rheumatism or any of those infirmi-

ties which are so liable to be incurred among us in new houses.

2d. House-painters can apply much sooner than with us a second coat of varnish or distemper without their work suffering from it.

3d. On the other hand, cabinet-makers, and above all makers of musical instruments, are obliged to be very careful in the selection of the wood which they work up. Wood which in Europe would be thought abundantly dry, could not be made use of in the cabinet-makers' shops of Boston or New York, where it would crack in a very short time. Inlaid floors, especially, require extreme care, so that they are rarely seen, even in the houses of the most opulent. It is to the same cause that we must attribute the great success of American pianos, while those of Paris and Vienna, perfect as they may be for Europe, deteriorate in America very soon.

4th. Carpenters are obliged to make use of a much stronger glue than in Europe.

5th. The tanners, also, have remarked that their skins dry more easily there, which enables them to carry on their operations farther in a given time. They are particularly astonished at the rapidity with which the desiccation goes on in winter.

6th. Finally, I can cite a fact taken from my own experience as a naturalist. You know what care we have to take in Europe to protect our collections of natural history against dampness; it is only by placing lime or other absorbents in our galleries that we can succeed in protecting them from moisture, especially in new buildings. At Boston, I have seen collections of birds and mammiferous animals deposited in apartments which the plasterer had scarcely left, without any thought of placing absorbents in them. When I remarked upon this to the curator, expressing my solicitude for so many precious objects, which I thought exposed to the risk of being spoilt, "You forget," he replied, "that we are in New England, and not in Europe."

All these different phenomena are referable to one and the same cause, which you have already divined—the greater dryness of the air of the United States. It might even appear idle to dwell as much as I have done upon this peculiarity of the American climate, if this result was not apparently in opposition to the meteorological data which we possess relating to that country.

"You assert," it has been often objected to us, "that the climate of the United States is dryer than that of Europe, nevertheless

we know that it does not rain there any less, nor less often, than with us."

In fact, the quantity of water which falls in the United States, under the form of rain or snow, not only is not less, but it equals and even surpasses that which falls in Europe. Thus, according to the most recent data that we possess, there falls annually,

In Boston, 38 inches of water.

" Phila., 45 " "

" St. Louis, 32 " "

while in Europe, the annual quantity of water which falls at a given point is

In England, 32 inches.

" France, 25 "

" the centre of Germany, 20 inches.

" Hamburg, 17 inches.

The number of rainy days in the United States is also not less than in Europe, with the exception, perhaps, of the British Islands and Norway. On the other hand, it appears to be greater than in Eastern Europe.

Do I need to point out that the contradiction which seems to result from these data is only apparent, and that notwithstanding the greater quantity of water that falls, the climate is, nevertheless, on the whole, drier in the United States than in Europe. The reason of this is very simple: it is that during clear weather the air is less charged with humidity than with us. The atmosphere does not, as in England and the west of Europe, continue in a state nearly that of saturation, but the moment the rain ceases, and a change of wind brings back fine weather, the hygrometer falls immediately, and the dew-point keeps sensibly below the temperature of the surrounding air. There is in this respect a similarity between the climate of the United States and that of the Alps. Our mountains, as you know, have furnished results in appearance not less contradictory. Relying on the fact that it rains oftener there than on the plains, the conclusion has been too hastily drawn that the air in the mountainous region was less dry. Thus we see that in the older meteorological manuals, and even in recent works, the climate of the Alps figures among the moist climates, while in reality the air there is much more dry, a fact which any one may verify on a fine clear day. It is to this very circumstance that we must in great part attribute the fact that we are less fatigued in traversing the mountains than the plains.

The cause of the greater dryness of the American climate it is easy to apprehend. In America, as in Europe, the predominant winds are from the west. On our European

coasts, those winds come charged with the moisture with which they have become saturated by their contact with the ocean; hence it is that they generally bring with them rain. In the United States it is the reverse. The western winds do not reach the Atlantic coast until after having swept over an entire continent, and during that passage they have lost a great part of their moisture. For that reason they are seldom accompanied with rain. They act the same part that the east winds do with us, which for the very reason that they come to us from over the continent, are dry and greedy of moisture. We all know how much more rapidly our roads and our fields dry under the influence of the north wind than that of the south wind [from the Lake].\*

To what degree do atmospheric conditions, so diverse, influence the conditions of animal and vegetable life? Buffon already, in comparing the animals and plants of the new continent with those of the old, had pointed out a double contrast. He had remarked that the animal species of the American continent† were in general smaller than their congeners of the old continent, while nearly the reverse was true of plants. He concluded from this that the new continent was more favorable to the vegetable kingdom, while the old was more so to the animal kingdom.

The history of the United States does not extend over a sufficiently long period to furnish us with conclusive data upon the modifications which the different races of animals imported from Europe may have undergone through the influence of climate. It is man himself who will furnish us with the most instructive facts upon this point.

It is now nearly two hundred and fifty years since the first colonists established themselves on the shores of New England. They were, as is well known, dissenters, who expatriated themselves because they wanted a larger share of religious liberty than the English Church was disposed to allow them. They were in every respect true Englishmen, having all the physical and moral characteristics of the Anglo-saxon race. At the present day, after but little more than two centuries, the inhabitant of the United States is no longer simply an Englishman. He has traits which are pe-

\* By a natural consequence of the contrast which I am enunciating, these same east and northeast winds, which with us are generally dry and cold, are in the United States invariably accompanied with rain. All who have lived in New York and New England know but too well the northeasterly storms (les bourrasques du nord-est) which are so frequent in spring.

† It will suffice to compare the lion with the panther, the rhinoceros with the tapir, the camel with the lama.

cular to himself, and which cannot be mistaken, any more than the English physiognomy could be confounded with the German. He is, in a word, developed as a Yankee or American type. But as this type cannot be the result of a crossing of races, since it is the most marked in the eastern States, precisely where the race is less mixed, it must be the consequence of external influences, among which we must place in the first rank those of climate.

One of the physiological characteristics of the American is the absence of *embonpoint*. Pass through the streets of New York, Boston, or Philadelphia, and you will hardly meet one out of a hundred individuals who elbow you who is corpulent, and that one will most generally be found to be a foreigner or of foreign descent.

What particularly strikes us in the Americans is the length of the neck; not, let it be understood, that they have the neck absolutely longer than ours, but that being more slender it appears longer. In turn, the American easily recognizes Europeans by opposite characters. It has happened to me more than once that in forming conjectures with friends upon the nationality of individuals whom we have met on a public promenade, I had doubts as to their origin, while the Americans decided upon the point without hesitation. "But look," said they, "at the neck. No American has a neck like that."

The same remark applies, and with more strength, to the fair sex; and, what will perhaps astonish us, is that far from complaining of it, they appear to felicitate themselves on this peculiarity. In fact, it is from this that the delicate and ethereal expression arises which is so much vaunted in the American women. But while we may recognize what there may be of attraction in this type, which, with or without reason, the poets characterize as angelic, I think I do not deceive myself in supposing that our European women, in being more robust and plump, have not any less claims on our admiration.

The difference which I have just pointed out between the Americans and the Europeans, is not only the result of a less development of the muscular system; it depends as much if not more, on the reduction of the glandular system, and in this regard it merits serious attention on the part of the physiologist as involving directly the future of the American race. It is this that the most intelligent have foreseen; they have felt that there must be a limit to this excessive delicacy of forms, and it is for this reason

that, notwithstanding their instinctive aversion to the Irish (who furnish the largest contingent of emigration), they are far from being opposed to the immigration of that race, who by the plenitude of their forms and the richness of their glandular system, appear made to resist with better effect the influences of the American climate. The remark has, in fact, often been made that the handsomest women are those born of European parents.

More than this, these influences of climate are observed to operate not only on a new generation, but are seen in many instances in individuals when they change their residence from the eastern to the western continent. Thus it is that few Europeans grow fat in the United States, while Americans who live for a short time in Europe acquire an air of health and well-being which is very remarkable. It is sometimes the same with Europeans who return to Europe after a prolonged residence in the United States. In the person of him who addresses you, nothing would be easier than to furnish a proof of this.

When it is demonstrated that the greater dryness of the air can occasion, under similar latitudes, differences so remarkable as those we have pointed out, why should we refuse to recognize an influence from this cause in a more complex domain, but not less dependent on external circumstances? This leads us to say a word upon the differences which are to be recognized, in a moral point of view, between the Americans and the Europeans.

There is no European who, in landing at New York, Boston or Baltimore, has not been struck with the feverish activity which prevails on all sides. Everybody is in a hurry. Persons on the wharves and on the sidewalks are running rather than walking. If two friends meet in the street, they content themselves with a shake of the hand, but they have, as a general thing, no time for conversation. It is true that something like this can be seen in the seaports and large towns of England; only the activity of the English appears to me more intentional, while that of the Yankee is more instinctive—the result of habit and a natural impatience, rather than of necessity. Hence it is that it betrays itself on occasions when it is absolutely unseasonable. The Americans have been reproached, and justly too, for not allowing time enough for dinner. On the part of persons under the pressure of business, it could be accounted for on that ground, were it not that the habit is so general as to seem in a cer-

tain degree endemic. This is so true, that I have more than once seen passengers on shipboard, who had absolutely nothing to do, who were not the less in a hurry to leave the table. It is only with effort that this impatience has been kept under restraint at the watering-places; but that has been only accomplished by a recourse to what is the most powerful of levers—by stigmatizing this precipitation as unfashionable [*de mauvais ton*].

An impatience so general must necessarily have its source in some general cause. Although we possess as yet no precise data to explain the manner in which a greater or less degree of humidity of the air acts on the nervous system, we think we do not deceive ourselves in attributing this greater nervous irritability of the inhabitants of the United States to the dryness of the American climate. May we not cite in support of this opinion the less durable yet not less constant effect which the northeast wind has upon us? The northeast wind, as we have already remarked, corresponds in its effects to the northwest wind in America. It is the wind blowing over the continent, and we can all confirm its desiccating action. But the influence of our northeast wind, you are aware, does not end here; it is more general. The inhabitants of the Jura know but too well that it acts, also, upon the nervous system, and even upon the disposition of the mind, to such a degree that when the northeast wind, especially a sharp wind [*la bise noire*] blows for a length of time, they feel a kind of disquietude, of irritation, which even degenerates sometimes into ill-humor; and it is not perhaps without reason that it is said in some localities that the northeast wind makes the women out of temper. It is then, too, that we have the least need of stimulants, and I have heard a shrewd observer make the remark that one should never invite friends to dinner during a northeast wind.

But if a dry wind produces such marked effects in our own country, where, nevertheless, it blows only exceptionally, we may conceive that its influence must be very much greater in a country where it is the dominant wind, as is the case along the Atlantic coast of the United States. From this cause there is also there less need in general of stimulants. Shall we err in assuming that it is to the climate that we must refer the much more pernicious effect of fermented liquors in the United States than elsewhere? It is a well-recognized fact that Europeans, and especially the English, who are in the habit of drinking wine

and spirituous liquors at home without being harmed by them, are obliged, if not to renounce them, at least to restrict themselves in the use of them, from the moment that they settle in the United States. It is owing to this experience, that temperance societies have been able to exert so preponderating an influence there, and to dictate legislative measures, which, if they were enacted with us, might well transform into revolutionists some of our most determined conservatives.

So, also, the Americans, notwithstanding their apparent coldness, are constitutionally more irritable than Europeans. Their susceptibility is proverbial. Can it be said that on this account they are more violently irritable than we are?\*

According to this theory, they should be so, and they would perhaps be so, if they had not provided in season against the ill effects of this greater nervous irritability by carefully repressing, more than we do, all movements of impatience. Those who have lived in the United States know what care is there taken in the early instruction of children to inculcate the habit of self-government. Hence it results that a people the most irritable on the face of the earth is found to be at the same time the best disciplined. Liberty, especially, is only possible in the large measure in which it exists there, because each individual has been early accustomed to restrain his impulses. To keep himself in this path the American has no need of a police. Public opinion, besides, is sufficient to recall him within the limits of decorum when he has strayed away from them. It is in the lowest taste for a man who makes any claim to the title of a gentleman to allow himself to get angry, and still more to resort to acts of violence. Thus the Americans take satisfaction in saying, what is but too true, that when two individuals fall to fighting in the street, it may be taken for granted that they are either Irishmen or Germans.

God forbid, nevertheless, that we should assume that the position, the prosperity, and the liberty of a country are the consequences of its climate! The example of England, with its climate directly the reverse of that of America, would confute us, if we were to hazard such a paradox. But we think, on the other hand, that the greatness of a nation does not depend so exclusively on its institutions as some eminent

\* We should here distinguish between vivacity, the dominant trait of the inhabitants of warm countries, which is the effect of temperature, and the irritability which is caused by the dryness of the air.

authors have thought. The climate of the United States, in inducing the adoption of certain principles of education, has perhaps in that way even facilitated the extraordinary development of the American people, under conditions which, otherwise, might have proved fatal to their prosperity, and above all to their liberty.

## Hospital Reports.

### BOSTON CITY HOSPITAL.

Surgical Cases in the Service of CHAS. D. HOMANS, M. D.  
Reported by Mr. W. P. BOLLES, House Surgeon.

**CASE I.**—*Comminuted Fracture into the Shoulder-joint, becoming Compound.*—S. A. V., mulatto, æt. 27 years, temperate. Patient was thrown from and was struck by the front of a horse-car. At the time of entrance there was such excessive effusion about the right shoulder-joint that no satisfactory examination could be made. One fracture of the humerus, below the neck, however, was evident. The hand was badly crushed throughout its whole back, and the adductor pollicis forced out between the thumb and index finger. Pulse 100. Shock alarming. On the third day after entrance, the swelling was still enormous. Eleventh day.—Hand and arm painful; the former sloughing in spots over the back, and presenting fatty looking ulcers. The patient could move all the fingers a little. Swelling of shoulder three-fourths gone. From this time he improved slowly, although his appetite still continued very poor, and on the twenty-first and twenty-second days he sat up a little; but a light delirium had been present for a night or two, and on the twenty-second day an erysipelatous patch, as large as the two hands, appeared in front of the shoulder, and rapidly extended down the arm to the wrist, over the front of the chest and upon the face up to the eyes. The general condition at the same time became very critical; the delirium appeared through the day also, and the patient made frequent attempts to get up. Micturition was involuntary, and the pulse, at night, was 124. Then the skin yielded just below the outer half of the clavicle, and about three ounces of thin, brownish fluid, mixed with oily globules, was discharged. The opening was enlarged next day, and two or three ounces more of pus liberated. A small piece of the humerus was found in the cavity and removed, and a second frac-

ture of the bone then discovered, extending into the joint. The erysipelas disappeared, and profuse suppuration followed.

By the thirtieth day the parts around the opening became very sloughy; the base looked like wet brown tissue-paper, and the patient's condition seemed hopeless. The tongue was dry and hard, and articulation became so indistinct that it could not be understood. During the two following days, the ulceration increased to a length of four and a half inches, and undermined the skin extensively in several directions. The pulsations of the subclavian were distinctly seen lifting the slough covering its base. He was still delirious on the thirty-seventh day, with the same rapid pulse and dry tongue. The discharge was abundant from both hand and shoulder. Arm œdematous. Forty-second day.—Gaining. Forty-seventh day.—An incision was made in the posterior fold of the axilla, which liberated a large quantity of offensive pus.

From this time the patient continued to improve. In the course of a week he was again rational; the pulse had fallen below 100, and the tongue became more moist.

By the sixty-third day he sat up. His hand had nearly healed, and the shoulder was granulating finely. He ate well, and, for the first time since his entrance, only at regular meal-times. Shortly after, his stimulants, which had been freely given since his entrance, were omitted.

Seventy-two days after his accident, he was discharged, with the fractures united and the shoulder healing slowly.

Five weeks afterwards, he appeared for examination. The ulceration on the shoulder was still two inches long by a half inch in width. The deltoid muscle was atrophied, and the acromion process prominent. Arm slightly longer than the other. A large callus surrounded the upper third of the humerus. He has some power of motion over the shoulder, and can lift a five-pound weight to the umbilicus with his right hand. Is in good general health, and walks two or three miles without fatigue. The only apparatus used was a tin trough while he was in bed, and afterwards a simple sling.

**CASE II.**—*Perinephritic Abscess.*—John S., æt. 40 years, Swiss, slipped while carrying a light load down stairs, and fell upon the nates and right side. At the time of entrance, he had a general sprain of hip and back, and a very tender spot was noticed over right twelfth rib, with pain on moving, or deep inspiration. No fracture was detected, but the rib seemed more movable than its fellow.