

## OUR CLIMATE.

By "THE NEW DOCTOR."

"*UNCERTAIN as weather*" is an old saw, but it is none the less expressive for being old. Most of us are inclined to grumble at this uncertainty and, truly, it proves sometimes very unkind. When you have arranged a picnic for Tuesday; when Monday and Wednesday are gloriously sunny and bright, but on the Tuesday, the only day you care about, it pours in torrents all day long, you do wish that our summer was a little more settled.

But there is another side to the question. Settled weather is not synonymous with pleasant weather. The climate of parts of Norway and Scotland is settled—settled rain for three hundred and fifty days out of the three hundred and sixty-five. Nothing can be more settled than the climate of the Sahara or the great Australian deserts, but it does not seem particularly pleasant for all its sunshine.

Foreigners, especially Americans, are always maligning our weather. Let Brother Jonathan say what he likes about our "samples," they are quite as good as his, and if they do not last quite so long, well—we have greater variety!

By the way, talking of weather samples reminds me that a friend of mine, just returned from America, told me that there was little to choose between New York and London as regards weather. Both are subject to the same sudden variations of temperature and atmospheric pressure; in both to-day is as totally unlike yesterday as it will be to-morrow; but in the western land the weather is, on the whole, less pleasant.

Until the "influenza" came to take its place nearly every form of illness that affected us was put down to "our wretched climate." If we had a sore throat, a toothache, a headache, rheumatism, a boil or a corn it was due to the weather. It was "the heat yesterday" or "the cold last night," or "that thunder-storm last week."

Let us think about what the weather can do and what it cannot. But before we consider these points, it is as well to remember that we cannot alter it. We may condemn but we cannot reform it. If, therefore, we are to avoid its pernicious effects we must learn how to combat them, and this we can do.

The weather alone cannot be the cause of any illness or affection, not even that of the most trivial kind. It requires some other factor besides; that factor is resident in ourselves, it is—well—I don't know, neither does anyone even though he gives it a name. Call it individual peculiarity, idiosyncrasy, inherent disposition, liability to certain diseases or what you will. As none of these expressions mean anything definite you do not commit yourself by using them.

When we say the climate is the cause of an affection we therefore mean that the climate together with an unknown factor caused that illness. The latter factor being unknown, we cannot combat it; so we must confine our attention to the former and do our best to render ourselves free from its evil effects.

The conditions of the climate which have an influence upon health may be divided into three groups: first, the state of the weather, for instance, heat, cold, mist, rain and electrical conditions; secondly, those due to position and the local conditions of the soil, such as a marshy, seaside, or mountainous district or a clay or sandy soil, etc., and lastly, some germ or factor residing in the soil which produces some special disease, for example, goitre, malaria or cretinism.

I wish it to be clearly understood that my remarks refer only to the British Isles. Some conditions of the weather, which I have described below as being practically harmless in England, are often exceedingly dangerous in the tropics.

Excessive droughts are not common in England. When they do occur they are accompanied by great heat, and the two together do produce certain disquieting symptoms. Lassitude, giddiness, indigestion and sickness are attributed to this cause. The epidemics and more serious diseases that so often follow great heat or droughts are due to interference with the water supply.

Typhoid fever and hydrophobia are thought by most people to be due to heat, but both of these are due to germs, and the weather is a very secondary matter, if indeed, it has any causal influence.

Constant rain, and consequently a prolonged moist condition of the atmosphere is held to be the cause of about nine-tenths of the diseases of mankind. Moisture of itself can do little harm. The body is always moist; the skin is never dry during life, it would die if it were. Four-sevenths of the body consists of water, so what harm can the extra moist condition of the air do?

But I do not wish you to say that I disbelieve in the effect of damp in producing illness. I do nothing of the kind. I only say that of itself dampness is not important. It is the combination of damp with cold that does harm. When we come to speak of cold I shall show you what serious results may follow exposure to cold and wet.

Mist may be defined as cold, damp air, and it produces many affections of the lungs, due chiefly, if not entirely, to its coldness.

Cold is really a very fertile cause of illness. Its method of action has been "explained" in many ways, but as none of these explanations are satisfactory I shall not trouble you with them.

Cold and damp together produce what are popularly called "chills." These chills are very dangerous and often form the starting-point of many ailments, both trivial and serious. You might live constantly in the rain, if you never got cold, and it would do you no harm, but when once you become cold it is another matter altogether.

We all know how common it is to get a sore throat or a head-cold after being exposed to inclement weather. When one comes to more serious affections, such as pneumonia, it must be remembered that a chill is one of the symptoms, and so one must be very careful not to consider the chill, which is a symptom, as the cause of the disease. We know now that pneumonia is caused by an organism.

Great heat is often responsible for very serious results, not so much in this country as abroad. Sunstroke or heat-stroke is perhaps the most important of these. It is singular, however, that a disease almost precisely similar is sometimes produced by sleeping in the light of the full moon in tropical climes. This rather suggests that it is the light and not the heat which produces this affection. Sunstroke is mentioned twice in the Bible, and is probably one of the oldest known diseases, though for a long time it was confounded with apoplexy.

Besides the ever-varying weather, soil and locality, which are stationary factors, are also important from the point of view of the physician.

There are, as every one knows, malarial

districts, goitrous districts, fever districts, etc., in almost every part of the world.

The Fen country is the last home of malaria in England, and even there it is becoming rarer every year. Doubtless before many years are accomplished it will become, like the "large copper" butterfly of the same country, a thing of the past.

There are many districts in England where goitre or "Derbyshire neck" is common. The best known of these districts is, as its name suggests, Derbyshire. Cretinism, a form of idiocy, also occurs in the same places, and as both this and goitre are due to affection of the thyroid gland, both have doubtless the same cause. This cause is usually said to be excess of lime in the water, but it is doubtful if this explanation is correct.

What can we do to prevent the deleterious effects of climate? When it is hot you can dress lightly; when cold clad yourself warmly, and if it is wet you must do the best you can to remain dry. If you are unfortunate enough to have malaria or goitre you should remove from the district where it was developed. This is all. It needs no physician to tell you that. Your own intelligence could direct you so far.

Everyone seems to know by instinct how to dress lightly when the weather is warm, but it is surprising how ignorant most persons are when it comes to warmth.

The popular idea seems to be that warmth can only be obtained by heavy clothing, and the heavier the clothes are the warmer they must be. As a general rule this is correct, but the proposition upon which it is founded is incorrect. If you were to dress in silver mail and go out into the frost, you would quickly freeze to death, notwithstanding the weight of your garment.

It is not upon the weight but upon the conductivity to heat of the material used that its warmth depends. Most of our clothes are bad conductors of heat. Flannel is one of the worst possible; it is, therefore, one of the best of all materials to wear. It keeps out the heat of the sun in the summer and keeps in the heat of the body during winter.

Another point about clothing. We talk of a warm coat, etc., but no substance used as clothing possesses or gives any warmth of its own. It only prevents the heat manufactured by the body from escaping. Air is a bad conductor of heat, and therefore loose clothing is warmer than is usually supposed.

Singular as it may appear, white is the best colour to wear both in summer and winter, but its extreme impracticability during the rainy months prevents it from being used during winter.

The animals that live in the frozen North change the colour of their costume during winter, becoming white. This is chiefly as a protection against enemies, but it also helps to keep them warm.

The seaside does not agree with everybody. Gouty or asthmatic persons do not as a rule get on well near the sea. This fact is said to be due to excess of ozone in the air.

Talking of ozone, what pretty and romantic tales we hear of this substance. I have heard of it as "The essence of life," "The element upon which health is dependent," that "Life was impossible without it," that "though a gas like the air, it was of a deep and beautiful azure colour," that it had "a most fragrant smell," and that it possessed other virtues as great and many as those of the philosopher's stone!

Always ready to learn and deeply impressed

by the accounts of this most wonderful substance, I determined to make some ozone. I made some, a large bottle full, by no means without trouble or expense. Having taken the bottle full of oxygen and converted as much as possible into ozone, I tightly corked the bottle and took it out of my room into the sunlight so as to be better able to appreciate its "deep and beautiful azure colour." I must have made a mistake! It differed in no way from the air outside the bottle! Perhaps the quantity was insufficient to present the "deep azure colour."

Recollecting the story of the 'Efreet who was imprisoned in the copper bottle, I thought perhaps my ozone might treat me in the same manner as the above-mentioned 'Efreet did the fisherman. But this substance apparently only possessed good qualities, so curiosity got the better of prudence, and I returned to my room and opened the bottle.

A smell something between that of lucifer matches and chlorinated lime filled the room. I began to sneeze and cough. Tears rolled down my cheeks and I felt half suffocated. I opened the window and threw out the bottle. I must have made a mistake somewhere! But no, I took some of the ozone to one of the most celebrated chemists then alive, and was told "that is ozone sure enough."

I have never used ozone medicinally and I never shall.

Ozone is produced by lightning, and it is said to be the cause of the unpleasant feelings that distress so many people during a thunderstorm. Except at the seaside and during a storm, ozone is very rarely present in the air in an appreciable quantity.

The seaside is not the panacea for all conditions of mind and body that it is supposed to be. I like the seaside immensely myself, and like to see children paddling. But what-

ever may be said to the contrary, man is not a wader, and it can do children no good to paddle all day long—as most mothers consider essential when they take their children to the seaside. A physician once told me that he believed more harm than good resulted from allowing children to run about with their feet in the water. There is another danger in this amusement and one that I personally believe to be far more important; that is that broken bottles are by no means rare at the seaside, and they can inflict wounds of a most serious nature. Children who paddle ought to wear light boots or shoes to protect their feet. Sandals would be splendid things for the purpose. If this matter were seen to and visitors at the seaside would not be so wickedly thoughtless as to throw bottles, sardine-tins and other rubbish into the sea close to the shore half the disadvantages of a seaside holiday would be abolished.

## A GROUP OF SCHOOL-BOYS.

By K. E. COLEMAN, Author of "Little Leo," "The Red Topaz," etc.

### CHAPTER III.

#### THE END OF ROBIN KING.

It was the middle of July; it only wanted a week to the midsummer holidays, and the choicer spirits of the Paxton Grammar School were in more than their usual high spirits. Such boys as Robin King, for instance, seemed absolutely to suffer through the impossibility of finding sufficient vent for their exuberant youth.

It was one Saturday morning, and the great school-room was filled with a restless crowd who were counting the half-hours and even the minutes to twelve o'clock, when they would be released.

A sudden inspiration as to how to spend the afternoon came to Robin King as he sat with a sum in front of him, and his thoughts anywhere except with the problem in his exercise-book. The idea was too good to be kept to himself, so Robin surreptitiously tore a leaf from his book, scribbled down the message, wrapped it round a marble, and threw it dexterously across the room to Fergus Hume. Unfortunately Fergus did not see the missile, which, Robin's aim being good, hit him on the nose, and provoked a natural exclamation, which attracted the attention of the master, whose desk was nearest.

"What was that, Hume?" he asked sharply.

"I don't know, sir. Something hit me," replied Fergus; then, catching Robin's eye, he looked hastily round, spied the missile, which had rolled under the form, secreted the paper in his pocket, and innocently held up the marble for the master's inspection.

"Who threw that?" was the very natural inquiry. A dead silence was the only answer. Robin King would have scorned to tell a lie to save his skin; but his code of honour was not sufficiently quixotic to lead him to incriminate himself needlessly, so he fixed his attention on his sum with praiseworthy diligence.

"If I catch a boy throwing anything in school again, I shall cane him," said the master, and Robin winked at Fergus to emphasise the if.

How little did he or anyone think that that was the last prank he would ever play in school!

Twelve o'clock struck at last, and the boys rushed out with shouts of glee.

"Turning to mirth all things of earth,  
As only boyhood can."

It was a lovely morning, the first fine day after an unusually long spell of wet weather, so no wonder they were jubilant.

Robin linked his arm in that of Fergus. "Well," he inquired, "what do you think of it?"

"First rate. Who shall we ask to go with us?"

"Wilson, of course, and Jimmy Short, and Spider, and Percy Young, and Dobbie Minor."

"No, not little Dobbie. He's sure to tell his brother, and, if that sneak comes, I for one won't go."

"We'll make him promise not to say anything about it. I like little Dobbie. If it hadn't been for him, I shouldn't be alive now, no more would Spider."

"All right, let him come, only mind you impress upon him that he's not to tell his brother. Hi there, Wilson!"

"What's up?"

"We're going to Bramstone Woods this afternoon. Will you come?"

"Rather! Which way shall we go—by the road or the cliffs?"

"The cliffs, the cliffs!" cried Robin excitedly. "It will be awful sport."

"They're awfully dangerous, you know, especially after rain. I think we had much better not," said Fergus.

"Rubbish! they're safe enough. And I say, boys, if we go that way we shall go through Bramstone, and there's the jolliest little inn, where you can get a ripping tea for ninepence."

That settled it. Six out of the seven boys interested voted unanimously for the cliffs, and even Fergus gave way, only stipulating that they should go by the road so as to have a chance of reaching the woods alive.

"Mother," said Robin when he had reached home, "can you spare me ninepence? I'm going with some fellows to Bramstone Woods this afternoon, and we're going to have tea at the inn afterwards, and I haven't a penny."

His mother sighed a little as she handed him the desired amount. It was so very hard to make both ends meet, and Robin always spent the modest sum she allowed him for pocket-money the day he received it, so that these additional calls for sixpence here or a shilling there were frequent enough to be felt as a burden. But Robin pocketed the coins with a careless "thanks, mother," little

dreaming of the self-sacrifice which the gift entailed.

He was very much excited at dinner-time, and went off immediately afterwards in the highest spirits. His mother kissed him tenderly at parting. "Take care of yourself, my Robin," she said, little thinking that that was the last time she would see her darling in health and strength.

Robin ran whistling down the road to the appointed meeting-place, and the seven boys started off for their six miles walk in the most exuberant spirits, making the quiet country road echo with their mirth, so that everyone they passed turned to watch them with a smile.

Bramstone Woods were reached at last, and here the boys became riotous. The place was a rocky gorge cleft in two by a brawling little stream, and there were big rocks to scramble over, trees to climb, and here and there an adventurous leap over the foaming beck to be attempted. Robin, always the foremost in danger, insisted on risking his life by climbing an oak-tree, which his six companions all voted as impossible; however, he reached the ground in safety with no worse mishap than torn breeches, a catastrophe of too frequent occurrence to disturb him at all, though it might give his mother some hours of patient toil to mend them.

At length they grew tired of scrambling, and, with thoughts of tea in their minds, set off for the village of Bramstone, which lay a couple of miles distant on their homeward way.

"Tea for seven, with lots of jam and cake, and as quick as ever you can, please," was Fergus Hume's comprehensive order, and the landlady, who had some knowledge of the grammar-school boys, bustled about and did her best to satisfy her impatient guests.

They were so uproarious over their tea, that she put her head into the room more than once in fear for her crockery; but, wonderful to state, nothing was broken, and at last, their appetites satisfied, and full of the satisfaction which a full stomach affords to a boy all the world over, the party prepared to set out on their homeward journey, leaving the landlady to contemplate the ravages they had made in her provisions, and lament over the smallness of her profits.

"Now for the cliffs!" cried Percy Young, as they filed out of the doorway.

(To be concluded.)